

Safety Data Sheet

acc. to OSHA HCS

Printing date 09/11/2018

Reviewed on 09/11/2018

1 Identification

- **Product identifier**
- **Trade name:** Acetone, Reagent Grade
- **Article number:** 10000, 10014, 10010, 10012
- **CAS Number:**
67-64-1
- **EC number:**
200-662-2
- **Index number:**
606-001-00-8
- **Application of the substance / the mixture** Laboratory chemicals
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
Electron Microscopy Sciences
1560 Industry Road
USA-Hatfield, PA 19440
Tel: 215-412-8400 Fax: 215-412-8450
email: sgkcck@aol.com
www.emsdiasum.com
- **Information department:** Product safety department
- **Emergency telephone number:**
ChemTrec 1-800-424-9300 Contract CCN7661
1-703-527-3887

2 Hazard(s) identification

- **Classification of the substance or mixture**



GHS02 Flame

Flam. Liq. 2 H225 Highly flammable liquid and vapor.



GHS07

Acute Tox. 4 H302 Harmful if swallowed.

Eye Irrit. 2A H319 Causes serious eye irritation.

STOT SE 3 H336 May cause drowsiness or dizziness.

- **Label elements**
- **GHS label elements** The substance is classified and labeled according to the Globally Harmonized System (GHS).
- **Hazard pictograms**



GHS02



GHS07

- **Signal word** *Danger*
- **Hazard statements**
Highly flammable liquid and vapor.
Harmful if swallowed.
Causes serious eye irritation.

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May cause drowsiness or dizziness.

· **Precautionary statements**

Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

Ground/bond container and receiving equipment.

Use explosion-proof electrical/ventilating/lighting/equipment.

Use only non-sparking tools.

Take precautionary measures against static discharge.

Avoid breathing dust/fume/gas/mist/vapors/spray

Wash thoroughly after handling.

Do not eat, drink or smoke when using this product.

Use only outdoors or in a well-ventilated area.

Wear protective gloves/protective clothing/eye protection/face protection.

If swallowed: Call a poison center/doctor if you feel unwell.

Rinse mouth.

If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

IF INHALED: Remove person to fresh air and keep comfortable for breathing.

If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.

Continue rinsing.

If eye irritation persists: Get medical advice/attention.

In case of fire: Use for extinction: CO₂, powder or water spray.

Store in a well-ventilated place. Keep container tightly closed.

Store in a well-ventilated place. Keep cool.

Store locked up.

Dispose of contents/container in accordance with local/regional/national/international regulations.

· **Classification system:**

· **NFPA ratings (scale 0 - 4)**



Health = 2

Fire = 3

Reactivity = 0

· **HMIS-ratings (scale 0 - 4)**



Health = 2

Fire = 3

Reactivity = 0

· **Other hazards**

· **Results of PBT and vPvB assessment**

· **PBT:** Not applicable.

· **vPvB:** Not applicable.

3 Composition/information on ingredients

· **Chemical characterization: Substances**

· **CAS No. Description**

67-64-1 Acetone, Reagent Grade

· **Identification number(s)**

· **EC number:** 200-662-2

· **Index number:** 606-001-00-8

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4 First-aid measures

- **Description of first aid measures**
- **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- **After skin contact:** Generally the product does not irritate the skin.
- **After eye contact:**
Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
- **After swallowing:** If symptoms persist consult doctor.
- **Information for doctor:**
- **Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:**
CO₂, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** No special measures required.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
Wear protective equipment. Keep unprotected persons away.
- **Environmental precautions:**
Dilute with plenty of water.
Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Ensure adequate ventilation.
- **Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.
- **Protective Action Criteria for Chemicals**
- **PAC-1:** 200 ppm
- **PAC-2:** 3200* ppm
- **PAC-3:** 5700* ppm

7 Handling and storage

- **Handling:**
- **Precautions for safe handling** No special precautions are necessary if used correctly.
- **Information about protection against explosions and fires:**
Keep ignition sources away - Do not smoke.
Protect against electrostatic charges.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** Store in a cool location.

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- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:**
 Keep receptacle tightly sealed.
 Store in cool, dry conditions in well sealed receptacles.
- **Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see item 7.
- **Control parameters**

- **Components with limit values that require monitoring at the workplace:**

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PEL	Long-term value: 2400 mg/m ³ , 1000 ppm
REL	Long-term value: 590 mg/m ³ , 250 ppm
TLV	Short-term value: 1187 mg/m ³ , 500 ppm
	Long-term value: 594 mg/m ³ , 250 ppm
BEI	

- **Ingredients with biological limit values:**

67-64-1 Acetone, Reagent Grade

BEI	50 mg/L
	Medium: urine
	Time: end of shift
	Parameter: Acetone (nonspecific)

- **Additional information:** The lists that were valid during the creation were used as basis.

- **Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:**
 Keep away from foodstuffs, beverages and feed.
 Immediately remove all soiled and contaminated clothing.
 Wash hands before breaks and at the end of work.
 Avoid contact with the eyes.
 Avoid contact with the eyes and skin.
- **Breathing equipment:** Not required.
- **Protection of hands:**
 The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
 Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.
 Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation
- **Material of gloves**
 The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.
- **Penetration time of glove material**
 The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

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· Eye protection:



Tightly sealed goggles

9 Physical and chemical properties

· Information on basic physical and chemical properties

· General Information

· Appearance:

Form:	Liquid
Color:	Colorless
Odor:	Acetone-like
Odor threshold:	Not determined.

· pH-value: Not determined.

· Change in condition

Melting point/Melting range:	-94.7 °C (-138.5 °F)
Boiling point/Boiling range:	56.5 °C (133.7 °F)

· Flash point: -20 °C (-4 °F)

· Flammability (solid, gaseous): Not flammable.

· Ignition temperature: 465 °C (869 °F)

· Decomposition temperature: Not determined.

· Auto igniting: Not determined.

· Danger of explosion: Product is not explosive. However, formation of explosive air/vapor mixtures are possible.

· Explosion limits:

Lower:	2.6 Vol %
Upper:	13 Vol %

· Vapor pressure at 20 °C (68 °F): 233 hPa (174.8 mm Hg)

· Density at 20 °C (68 °F): 0.79 g/cm³ (6.59255 lbs/gal)

· Relative density: Not determined.

· Vapor density: Not determined.

· Evaporation rate: Not determined.

· Solubility in / Miscibility with

Water: Fully miscible.

· Partition coefficient (n-octanol/water): Not determined.

· Viscosity:

Dynamic at 20 °C (68 °F):	32 mPas
Kinematic:	Not determined.

· Other information: No further relevant information available.

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10 Stability and reactivity

- **Reactivity** No further relevant information available.
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**

· **LD/LC50 values that are relevant for classification:**

Oral	LD50	5,800 mg/kg (rat)
Dermal	LD50	20,000 mg/kg (rabbit)

- **Primary irritant effect:**
- **on the skin:** No irritant effect.
- **on the eye:** Irritating effect.
- **Sensitization:** No sensitizing effects known.
- **Additional toxicological information:**
- **Carcinogenic categories**
- **IARC (International Agency for Research on Cancer)** Substance is not listed.
- **NTP (National Toxicology Program)** Substance is not listed.
- **OSHA-Ca (Occupational Safety Health Administration)** Substance is not listed.

12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behavior in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:**
Water hazard class 1 (Assessment by list): slightly hazardous for water
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

13 Disposal considerations

- **Waste treatment methods**
- **Recommendation:**
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

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- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.
- **Recommended cleansing agent:** Water, if necessary with cleansing agents.

14 Transport information

· **UN-Number**
 · **DOT, ADR, IMDG, IATA** UN1090

· **UN proper shipping name**
 · **DOT** Acetone
 · **ADR** 1090 Acetone
 · **IMDG, IATA** ACETONE

· **Transport hazard class(es)**

· **DOT**



· **Class** 3 Flammable liquids
 · **Label** 3

· **ADR, IMDG, IATA**



· **Class** 3 Flammable liquids
 · **Label** 3

· **Packing group**
 · **DOT, ADR, IMDG, IATA** II

· **Environmental hazards:** Not applicable.

· **Special precautions for user** Warning: Flammable liquids
 · **Danger code (Kemler):** 33
 · **EMS Number:** F-E,S-D
 · **Stowage Category** E

· **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code** Not applicable.

· **Transport/Additional information:**

· **DOT**
 · **Quantity limitations** On passenger aircraft/rail: 5 L
On cargo aircraft only: 60 L
 · **Hazardous substance:** 5000 lbs, 2270 kg

· **ADR**
 · **Excepted quantities (EQ)** Code: E2
Maximum net quantity per inner packaging: 30 ml
Maximum net quantity per outer packaging: 500 ml

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- | | |
|--|---|
| <ul style="list-style-type: none"> · IMDG · Limited quantities (LQ) · Excepted quantities (EQ) | <p>1L
Code: E2
Maximum net quantity per inner packaging: 30 ml
Maximum net quantity per outer packaging: 500 ml</p> |
| <ul style="list-style-type: none"> · UN "Model Regulation": | <p>UN 1090 ACETONE, 3, II</p> |

15 Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **Sara**
- **Section 355 (extremely hazardous substances):** Substance is not listed.
- **Section 313 (Specific toxic chemical listings):** Substance is not listed.
- **TSCA (Toxic Substances Control Act):** Substance is listed.
- **Proposition 65**
- **Chemicals known to cause cancer:** Substance is not listed.
- **Chemicals known to cause reproductive toxicity for females:** Substance is not listed.
- **Chemicals known to cause reproductive toxicity for males:** Substance is not listed.
- **Chemicals known to cause developmental toxicity:** Substance is not listed.
- **Carcinogenic categories**
- **EPA (Environmental Protection Agency) I**
- **TLV (Threshold Limit Value established by ACGIH) A4**
- **NIOSH-Ca (National Institute for Occupational Safety and Health)** Substance is not listed.
- **GHS label elements** The substance is classified and labeled according to the Globally Harmonized System (GHS).
- **Hazard pictograms**



GHS02 GHS07

- **Signal word** *Danger*
- **Hazard statements**
 - Highly flammable liquid and vapor.*
 - Harmful if swallowed.*
 - Causes serious eye irritation.*
 - May cause drowsiness or dizziness.*
- **Precautionary statements**
 - Keep away from heat/sparks/open flames/hot surfaces. - No smoking.*
 - Ground/bond container and receiving equipment.*
 - Use explosion-proof electrical/ventilating/lighting/equipment.*
 - Use only non-sparking tools.*
 - Take precautionary measures against static discharge.*
 - Avoid breathing dust/fume/gas/mist/vapors/spray*
 - Wash thoroughly after handling.*
 - Do not eat, drink or smoke when using this product.*
 - Use only outdoors or in a well-ventilated area.*
 - Wear protective gloves/protective clothing/eye protection/face protection.*
 - If swallowed: Call a poison center/doctor if you feel unwell.*
 - Rinse mouth.*
 - If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.*

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Trade name: Acetone, Reagent Grade

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IF INHALED: Remove person to fresh air and keep comfortable for breathing.

If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

If eye irritation persists: Get medical advice/attention.

In case of fire: Use for extinction: CO₂, powder or water spray.

Store in a well-ventilated place. Keep container tightly closed.

Store in a well-ventilated place. Keep cool.

Store locked up.

Dispose of contents/container in accordance with local/regional/national/international regulations.

· **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Date of preparation / last revision** 09/11/2018 / -

· **Abbreviations and acronyms:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

ACGIH: American Conference of Governmental Industrial Hygienists

EINECS: European Inventory of Existing Commercial Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

NIOSH: National Institute for Occupational Safety

OSHA: Occupational Safety **Health**

TLV: Threshold Limit Value

PEL: Permissible Exposure Limit

REL: Recommended Exposure Limit

BEI: Biological Exposure Limit

Flam. Liq. 2: Flammable liquids – Category 2

Acute Tox. 4: Acute toxicity – Category 4

Eye Irrit. 2A: Serious eye damage/eye irritation – Category 2A

STOT SE 3: Specific target organ toxicity (single exposure) – Category 3

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1 Identification

· **Product identifier**

· **Trade name:** Acetone, Reagent Grade

· **Article number:** 10000, 10014, 10010, 10012

· **CAS Number:**

67-64-1

· **EC number:**

200-662-2

· **Index number:**

606-001-00-8

· **Relevant identified uses of the substance or mixture and uses advised against**

No further relevant information available.

· **Application of the substance / the mixture** Laboratory chemicals

· **Details of the supplier of the safety data sheet**

· **Manufacturer/Supplier:**

Electron Microscopy Sciences

1560 Industry Road

USA-Hatfield, PA 19440

Tel: 215-412-8400 Fax: 215-412-8450

email: sgkcck@aol.com

www.emsdiasum.com

ProSciTech Pty Ltd

11 Carlton Street, Kirwan QLD 4817 Australia

Telephone Number: (07) 4773 9444 - 8:30am - 5:00pm, Monday to Friday (excluding Public Holidays)

Emergency Contact: (07) 4773 9444 - 8:30am - 5:00pm, Monday to Friday (excluding Public Holidays)

Website: ems.proscitech.com

Emgrid Australia Pty. Ltd.

P.O. Box 118

The Patch VIC 3792

Australia

Tel: 03 9752 1785

Fax: 03 9752 1784

Website: www.emgrid.com.au

· **Further information obtainable from:** Product safety department

· **Emergency telephone number:**

ChemTrec 1-800-424-9300 Contract CCN7661

1-703-527-3887

2 Hazard(s) Identification

· **Classification of the substance or mixture**



GHS02 flame

Flam. Liq. 2 H225 Highly flammable liquid and vapour.



GHS07

Acute Tox. 4 H302 Harmful if swallowed.

Eye Irrit. 2A H319 Causes serious eye irritation.

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STOT SE 3 H336 May cause drowsiness or dizziness.

- **Label elements**
- **GHS label elements**

The substance is classified and labelled according to the Globally Harmonised System (GHS).

- **Hazard pictograms**



GHS02 GHS07

- **Signal word** *Danger*

- **Hazard statements**

Highly flammable liquid and vapour.

Harmful if swallowed.

Causes serious eye irritation.

May cause drowsiness or dizziness.

- **Precautionary statements**

Keep away from heat/sparks/open flames/hot surfaces. No smoking.

Ground/bond container and receiving equipment.

Use explosion-proof electrical/ventilating/lighting equipment.

Use only non-sparking tools.

Take precautionary measures against static discharge.

Avoid breathing dust/fume/gas/mist/vapours/spray.

Wash thoroughly after handling.

Do not eat, drink or smoke when using this product.

Use only outdoors or in a well-ventilated area.

Wear protective gloves/protective clothing/eye protection/face protection.

IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.

Rinse mouth.

IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.

Continue rinsing.

If eye irritation persists: Get medical advice/attention.

In case of fire: Use for extinction: CO2, powder or water spray.

Store in a well-ventilated place. Keep container tightly closed.

Store in a well-ventilated place. Keep cool.

Store locked up.

Dispose of contents/container in accordance with local/regional/national/international regulations.

- **Additional information:**

Repeated exposure may cause skin dryness or cracking.

- **Other hazards**

- **Results of PBT and vPvB assessment**

- **PBT:** Not applicable.

- **vPvB:** Not applicable.

3 Composition and Information on Ingredients

- **Chemical characterisation: Substances**

- **CAS No. Description**

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- **Identification number(s)**
- **EC number:** 200-662-2
- **Index number:** 606-001-00-8

4 First Aid Measures

- **Description of first aid measures**
- **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- **After skin contact:** Generally the product does not irritate the skin.
- **After eye contact:**
Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
- **After swallowing:** If symptoms persist consult doctor.
- **Information for doctor:**
- **Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

5 Fire Fighting Measures

- **Extinguishing media**
- **Suitable extinguishing agents:**
CO₂, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** No special measures required.

6 Accidental Release Measures

- **Personal precautions, protective equipment and emergency procedures**
Wear protective equipment. Keep unprotected persons away.
- **Environmental precautions:**
Dilute with plenty of water.
Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Ensure adequate ventilation.
- **Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

7 Handling and Storage

- **Handling:**
- **Precautions for safe handling** No special precautions are necessary if used correctly.
- **Information about fire - and explosion protection:**
Keep ignition sources away - Do not smoke.
Protect against electrostatic charges.

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- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** Store in a cool location.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:**
Keep container tightly sealed.
Store in cool, dry conditions in well sealed receptacles.
- **Specific end use(s)** No further relevant information available.

8 Exposure controls and personal protection

- **Additional information about design of technical facilities:** No further data; see item 7.
- **Control parameters**

· **Ingredients with limit values that require monitoring at the workplace:**

67-64-1 Acetone, Reagent Grade

NES	Short-term value: 2375 mg/m ³ , 1000 ppm Long-term value: 1185 mg/m ³ , 500 ppm
WES	Short-term value: 2375 mg/m ³ , 1000 ppm Long-term value: 1185 mg/m ³ , 500 ppm

- **Additional information:** The lists valid during the making were used as basis.
- **Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:**
Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing
Wash hands before breaks and at the end of work.
Avoid contact with the eyes.
Avoid contact with the eyes and skin.
- **Respiratory protection:** Not required.
- **Protection of hands:**
The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation
- **Material of gloves**
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.
- **Penetration time of glove material**
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
- **Eye protection:**



Tightly sealed goggles

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9 Physical and Chemical Properties

· Information on basic physical and chemical properties	
· General Information	
· Appearance:	
Form:	Liquid
Colour:	Colourless
· Odour:	Acetone-like
· Odour threshold:	Not determined.
· pH-value:	Not determined.
· Change in condition	
Melting point/freezing point:	-94.7 °C
Initial boiling point and boiling range:	56.5 °C
· Flash point:	-20 °C
· Flammability (solid, gas):	Not applicable.
· Ignition temperature:	465 °C
· Decomposition temperature:	Not determined.
· Auto-ignition temperature:	Not determined.
· Explosive properties:	Product is not explosive. However, formation of explosive air/vapour mixtures are possible.
· Explosion limits:	
Lower:	2.6 Vol %
Upper:	13 Vol %
· Vapour pressure at 20 °C:	233 hPa
· Density at 20 °C:	0.79 g/cm ³
· Relative density	Not determined.
· Vapour density	Not determined.
· Evaporation rate	Not determined.
· Solubility in / Miscibility with water:	Fully miscible.
· Partition coefficient: n-octanol/water:	Not determined.
· Viscosity:	
Dynamic at 20 °C:	32 mPas
Kinematic:	Not determined.
· Other information	No further relevant information available.

10 Stability and Reactivity

- **Reactivity** No further relevant information available.
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.

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· **Hazardous decomposition products:** No dangerous decomposition products known.

11 Toxicological Information

· **Information on toxicological effects**

· **Acute toxicity**

· **LD/LC50 values relevant for classification:**

Oral	LD50	5,800 mg/kg (rat)
Dermal	LD50	20,000 mg/kg (rabbit)

· **Primary irritant effect:**

· **Skin corrosion/irritation** No irritant effect.

· **Serious eye damage/irritation** Irritating effect.

· **Respiratory or skin sensitisation** No sensitising effects known.

12 Ecological Information

· **Toxicity**

· **Aquatic toxicity:** No further relevant information available.

· **Persistence and degradability** No further relevant information available.

· **Behaviour in environmental systems:**

· **Bioaccumulative potential** No further relevant information available.

· **Mobility in soil** No further relevant information available.

· **Additional ecological information:**

· **General notes:**

Water hazard class 1 (German Regulation) (Assessment by list): slightly hazardous for water

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

· **Results of PBT and vPvB assessment**

· **PBT:** Not applicable.

· **vPvB:** Not applicable.

· **Other adverse effects** No further relevant information available.

13 Disposal considerations

· **Waste treatment methods**

· **Recommendation**

Must not be disposed together with household garbage. Do not allow product to reach sewage system.

· **Uncleaned packaging:**

· **Recommendation:** Disposal must be made according to official regulations.

· **Recommended cleansing agents:** Water, if necessary together with cleansing agents.

14 Transport information

· **UN-Number**

· **ADG, IMDG, IATA**

UN1090

· **UN proper shipping name**

· **ADG**

· **IMDG, IATA**

1090 ACETONE

ACETONE

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· Transport hazard class(es)

· ADG, IMDG, IATA



· Class

3 Flammable liquids.

· Label

3

· Packing group

· ADG, IMDG, IATA

II

· Environmental hazards:

Not applicable.

· Special precautions for user

Warning: Flammable liquids.

· Danger code (Kemler):

33

· EMS Number:

F-E,S-D

· Stowage Category

E

· Transport in bulk according to Annex II of Marpol and the IBC Code

Not applicable.

· Transport/Additional information:

· ADG

· Limited quantities (LQ)

1L

· Excepted quantities (EQ)

Code: E2

Maximum net quantity per inner packaging: 30 ml

Maximum net quantity per outer packaging: 500 ml

· Transport category

2

· Tunnel restriction code

D/E

· IMDG

· Limited quantities (LQ)

1L

· Excepted quantities (EQ)

Code: E2

Maximum net quantity per inner packaging: 30 ml

Maximum net quantity per outer packaging: 500 ml

· UN "Model Regulation":

UN 1090 ACETONE, 3, II

15 Regulatory information

· Safety, health and environmental regulations/legislation specific for the substance or mixture

· Australian Inventory of Chemical Substances Substance is listed.

· Standard for the Uniform Scheduling of Medicines and Poisons S5

· GHS label elements

The substance is classified and labelled according to the Globally Harmonised System (GHS).

· Hazard pictograms



GHS02 GHS07

· Signal word Danger

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Trade name: Acetone, Reagent Grade

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· **Hazard statements**

Highly flammable liquid and vapour.

Harmful if swallowed.

Causes serious eye irritation.

May cause drowsiness or dizziness.

· **Precautionary statements**

Keep away from heat/sparks/open flames/hot surfaces. No smoking.

Ground/bond container and receiving equipment.

Use explosion-proof electrical/ventilating/lighting equipment.

Use only non-sparking tools.

Take precautionary measures against static discharge.

Avoid breathing dust/fume/gas/mist/vapours/spray.

Wash thoroughly after handling.

Do not eat, drink or smoke when using this product.

Use only outdoors or in a well-ventilated area.

Wear protective gloves/protective clothing/eye protection/face protection.

IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.

Rinse mouth.

IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.

Continue rinsing.

If eye irritation persists: Get medical advice/attention.

In case of fire: Use for extinction: CO₂, powder or water spray.

Store in a well-ventilated place. Keep container tightly closed.

Store in a well-ventilated place. Keep cool.

Store locked up.

Dispose of contents/container in accordance with local/regional/national/international regulations.

· **Directive 2012/18/EU**

· **Named dangerous substances - ANNEX I** Substance is not listed.

· **Seveso category P5c FLAMMABLE LIQUIDS**

· **Qualifying quantity (tonnes) for the application of lower-tier requirements** 5,000 t

· **Qualifying quantity (tonnes) for the application of upper-tier requirements** 50,000 t

· **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Abbreviations and acronyms:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

EINECS: European Inventory of Existing Commercial Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

Flam. Liq. 2: Flammable liquids – Category 2

Acute Tox. 4: Acute toxicity – Category 4

Eye Irrit. 2A: Serious eye damage/eye irritation – Category 2A

STOT SE 3: Specific target organ toxicity (single exposure) – Category 3

Safety Data Sheet

acc. to OSHA HCS

Printing date 09/11/2018

Reviewed on 09/11/2018

1 Identification

- **Product identifier**
- **Trade name:** Acetone, Reagent Grade
- **Article number:** 10000, 10014, 10010, 10012
- **CAS Number:**
67-64-1
- **EC number:**
200-662-2
- **Index number:**
606-001-00-8
- **Application of the substance / the mixture** Laboratory chemicals
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
Electron Microscopy Sciences
1560 Industry Road
USA-Hatfield, PA 19440
Tel: 215-412-8400 Fax: 215-412-8450
email: sgkcck@aol.com
www.emsdiasum.com
- **Information department:** Product safety department
- **Emergency telephone number:**
ChemTrec 1-800-424-9300 Contract CCN7661
1-703-527-3887

2 Hazard(s) identification

- **Classification of the substance or mixture**



GHS02 Flame

Flammable Liquids - Category 2

H225 Highly flammable liquid and vapour.



GHS07

Acute Toxicity (Oral) - Category 4

H302 Harmful if swallowed.

Eye Irritation - Category 2A

H319 Causes serious eye irritation.

Specific Target Organ Toxicity - Single Exposure -
Category 3

H336 May cause drowsiness or dizziness.

- **Label elements**

- **GHS label elements** The substance is classified and labeled according to the Globally Harmonized System (GHS).

- **Hazard pictograms**



GHS02



GHS07

- **Signal word** Danger

- **Hazard statements**

Highly flammable liquid and vapour.

Harmful if swallowed.

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Causes serious eye irritation.

May cause drowsiness or dizziness.

· Precautionary statements

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

Ground and bond container and receiving equipment.

Use explosion-proof [electrical/ventilating/lighting] equipment.

Use non-sparking tools.

Take actions to prevent static discharges.

Avoid breathing dust/fume/gas/mist/vapours/spray.

Wash thoroughly after handling.

Do not eat, drink or smoke when using this product.

Use only outdoors or in a well-ventilated area.

Wear protective gloves/protective clothing/eye protection/face protection.

If swallowed: Call a poison center/doctor if you feel unwell.

Rinse mouth.

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].

IF INHALED: Remove person to fresh air and keep comfortable for breathing.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.

Continue rinsing.

If eye irritation persists: Get medical advice/attention.

In case of fire: Use for extinction: CO₂, powder or water spray.

Store in a well-ventilated place. Keep container tightly closed.

Store in a well-ventilated place. Keep cool.

Store locked up.

Dispose of contents/container in accordance with local/regional/national/international regulations.

· Classification system:

· NFPA ratings (scale 0 - 4)



Health = 2

Fire = 3

Reactivity = 0

· HMIS-ratings (scale 0 - 4)



Health = 2

Fire = 3

Reactivity = 0

3 Composition/information on ingredients

· Chemical characterization: Substances

· CAS No. Description

67-64-1 Acetone, Reagent Grade

· Identification number(s)

· EC number: 200-662-2

· Index number: 606-001-00-8

4 First-aid measures

· Description of first aid measures

· After inhalation: Supply fresh air; consult doctor in case of complaints.

· After skin contact: Generally the product does not irritate the skin.

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Trade name: Acetone, Reagent Grade

(Contd. of page 2)

- **After eye contact:**
Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
- **After swallowing:** If symptoms persist consult doctor.
- **Information for doctor:**
- **Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:**
CO₂, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** No special measures required.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
Wear protective equipment. Keep unprotected persons away.
- **Environmental precautions:**
Dilute with plenty of water.
Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Ensure adequate ventilation.
- **Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

7 Handling and storage

- **Handling:**
- **Precautions for safe handling** No special precautions are necessary if used correctly.
- **Information about protection against explosions and fires:**
Keep ignition sources away - Do not smoke.
Protect against electrostatic charges.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** Store in a cool location.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:**
Keep receptacle tightly sealed.
Store in cool, dry conditions in well sealed receptacles.
- **Specific end use(s)** No further relevant information available.

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(Contd. on page 4)

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Trade name: Acetone, Reagent Grade

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8 Exposure controls/personal protection

· **Additional information about design of technical systems:** No further data; see item 7.

· **Control parameters**

· **Components with limit values that require monitoring at the workplace:**

67-64-1 Acetone, Reagent Grade

EL Short-term value: 500 ppm
Long-term value: 250 ppm

EV Short-term value: 750 ppm
Long-term value: 500 ppm

· **Additional information:** The lists that were valid during the creation were used as basis.

· **Exposure controls**

· **Personal protective equipment:**

· **General protective and hygienic measures:**

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing.

Wash hands before breaks and at the end of work.

Avoid contact with the eyes.

Avoid contact with the eyes and skin.

· **Breathing equipment:** Not required.

· **Protection of hands:**

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

· **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

· **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

· **Eye protection:**



Tightly sealed goggles

9 Physical and chemical properties

· **Information on basic physical and chemical properties**

· **General Information**

· **Appearance:**

Form: Liquid

Color: Colorless

· **Odor:** Acetone-like

· **Odor threshold:** Not determined.

· **pH-value:** Not determined.

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Trade name: Acetone, Reagent Grade

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· Change in condition	
Melting point/Melting range:	-94.7 °C
Boiling point/Boiling range:	56.5 °C
· Flash point:	-20 °C
· Flammability (solid, gaseous):	Not flammable.
· Ignition temperature:	465 °C
· Decomposition temperature:	Not determined.
· Auto igniting:	Not determined.
· Danger of explosion:	Product is not explosive. However, formation of explosive air/vapor mixtures are possible.
· Explosion limits:	
Lower:	2.6 Vol %
Upper:	13 Vol %
· Vapor pressure at 20 °C:	233 hPa
· Density at 20 °C:	0.79 g/cm ³
· Relative density	Not determined.
· Vapor density	Not determined.
· Evaporation rate	Not determined.
· Solubility in / Miscibility with Water:	Fully miscible.
· Partition coefficient (n-octanol/water):	Not determined.
· Viscosity:	
Dynamic at 20 °C:	32 mPas
Kinematic:	Not determined.
· Other information	No further relevant information available.

10 Stability and reactivity

- **Reactivity** No further relevant information available.
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**

· **LD/LC50 values that are relevant for classification:**

Oral	LD50	5,800 mg/kg (rat)
Dermal	LD50	20,000 mg/kg (rabbit)

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- **Primary irritant effect:**
- **on the skin:** No irritant effect.
- **on the eye:** Irritating effect.
- **Sensitization:** No sensitizing effects known.
- **Additional toxicological information:**
- **Carcinogenic categories**
- **IARC (International Agency for Research on Cancer)** Substance is not listed.
- **NTP (National Toxicology Program)** Substance is not listed.

12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behavior in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:**
Water hazard class 1 (Assessment by list): slightly hazardous for water
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

13 Disposal considerations

- **Waste treatment methods**
- **Recommendation:**
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.
- **Recommended cleansing agent:** Water, if necessary with cleansing agents.

14 Transport information

- | | |
|----------------------------------|--------------|
| · UN-Number | |
| · DOT, TDG, IMDG, IATA | UN1090 |
| · UN proper shipping name | |
| · DOT | Acetone |
| · TDG | 1090 Acetone |
| · IMDG, IATA | ACETONE |

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Trade name: Acetone, Reagent Grade

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· **Transport hazard class(es)**· **DOT**

· **Class** 3 Flammable liquids
 · **Label** 3
 · **TDG, IMDG, IATA**



· **Class** 3 Flammable liquids
 · **Label** 3

· **Packing group**· **DOT, TDG, IMDG, IATA** II· **Environmental hazards:** Not applicable.· **Special precautions for user** Warning: Flammable liquids· **Danger code (Kemler):** 33· **EMS Number:** F-E,S-D· **Stowage Category** E· **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code** Not applicable.· **Transport/Additional information:**· **DOT**· **Quantity limitations** On passenger aircraft/rail: 5 L

On cargo aircraft only: 60 L

· **Hazardous substance:** 5000 lbs, 2270 kg· **TDG**

· **Excepted quantities (EQ)** Code: E2
 Maximum net quantity per inner packaging: 30 ml
 Maximum net quantity per outer packaging: 500 ml

· **IMDG**· **Limited quantities (LQ)** 1L

· **Excepted quantities (EQ)** Code: E2
 Maximum net quantity per inner packaging: 30 ml
 Maximum net quantity per outer packaging: 500 ml

· **UN "Model Regulation":** UN 1090 ACETONE, 3, II

15 Regulatory information

· **Safety, health and environmental regulations/legislation specific for the substance or mixture**· **Sara**· **Section 355 (extremely hazardous substances):** Substance is not listed.· **Section 313 (Specific toxic chemical listings):** Substance is not listed.

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Trade name: Acetone, Reagent Grade

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- **TSCA (Toxic Substances Control Act):** Substance is listed.
- **Canadian substance listings:**
- **Canadian Domestic Substances List (DSL)** Substance is listed.
- **Canadian Ingredient Disclosure list (limit 0.1%)** Substance is not listed.
- **Canadian Ingredient Disclosure list (limit 1%)** Substance is listed.
- **GHS label elements** The substance is classified and labeled according to the Globally Harmonized System (GHS).
- **Hazard pictograms**



GHS02 GHS07

- **Signal word** *Danger*
- **Hazard statements**
Highly flammable liquid and vapour.
Harmful if swallowed.
Causes serious eye irritation.
May cause drowsiness or dizziness.
- **Precautionary statements**
Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
Ground and bond container and receiving equipment.
Use explosion-proof [electrical/ventilating/lighting] equipment.
Use non-sparking tools.
Take actions to prevent static discharges.
Avoid breathing dust/fume/gas/mist/vapours/spray.
Wash thoroughly after handling.
Do not eat, drink or smoke when using this product.
Use only outdoors or in a well-ventilated area.
Wear protective gloves/protective clothing/eye protection/face protection.
If swallowed: Call a poison center/doctor if you feel unwell.
Rinse mouth.
IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].
IF INHALED: Remove person to fresh air and keep comfortable for breathing.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.
Continue rinsing.
If eye irritation persists: Get medical advice/attention.
In case of fire: Use for extinction: CO2, powder or water spray.
Store in a well-ventilated place. Keep container tightly closed.
Store in a well-ventilated place. Keep cool.
Store locked up.
Dispose of contents/container in accordance with local/regional/national/international regulations.
- **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- **Date of the latest revision of the safety data sheet** 09/11/2018 / -
- **Abbreviations and acronyms:**
IMDG: International Maritime Code for Dangerous Goods
DOT: US Department of Transportation
IATA: International Air Transport Association
EINECS: European Inventory of Existing Commercial Chemical Substances

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Reviewed on 09/11/2018

Trade name: Acetone, Reagent Grade

CAS: Chemical Abstracts Service (division of the American Chemical Society)
NFPA: National Fire Protection Association (USA)
HMIS: Hazardous Materials Identification System (USA)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative

(Contd. of page 8)

CA

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 11.09.2018

Revision: 11.09.2018

1 Identification of the substance/mixture and of the company/undertaking

- **Product identifier**
- **Trade name:** Acetone, Reagent Grade
- **Article number:** 10000, 10014, 10010, 10012
- **CAS Number:**
67-64-1
- **EC number:**
200-662-2
- **Index number:**
606-001-00-8
- **Relevant identified uses of the substance or mixture and uses advised against**
No further relevant information available.
- **Application of the substance / the mixture** Laboratory chemicals
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
Electron Microscopy Sciences
1560 Industry Road
USA-Hatfield, PA 19440
Tel: 215-412-8400 Fax: 215-412-8450
email: sgkcck@aol.com
www.emsdiasum.com
- **Further information obtainable from:** Product safety department
- **Emergency telephone number:**
ChemTrec 1-800-424-9300 Contract CCN7661
1-703-527-3887

2 Hazards identification

- **Classification of the substance or mixture**



flame

Flam. Liq. 2 H225 Highly flammable liquid and vapour.



Acute Tox. 4 H302 Harmful if swallowed.

Eye Irrit. 2A H319 Causes serious eye irritation.

STOT SE 3 H336 May cause drowsiness or dizziness.

Acute Tox. 5 H333 May be harmful if inhaled.

- **Label elements**
- **GHS label elements**
The substance is classified and labelled according to the Globally Harmonised System (GHS).
- **Hazard pictograms**



GHS02

GHS07

(Contd. on page 2)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 11.09.2018

Revision: 11.09.2018

Trade name: Acetone, Reagent Grade

(Contd. of page 1)

- **Signal word** *Danger*
- **Hazard statements**
Highly flammable liquid and vapour.
Harmful if swallowed.
May be harmful if inhaled.
Causes serious eye irritation.
May cause drowsiness or dizziness.
- **Precautionary statements**
Keep away from heat/sparks/open flames/hot surfaces. No smoking.
Use explosion-proof electrical/ventilating/lighting equipment.
IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.
Continue rinsing.
Store locked up.
Dispose of contents/container in accordance with local/regional/national/international regulations.
- **Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

3 Composition/information on ingredients

- **Chemical characterisation: Substances**
- **CAS No. Description**
67-64-1 Acetone, Reagent Grade
- **Identification number(s)**
- **EC number:** 200-662-2
- **Index number:** 606-001-00-8

4 First aid measures

- **Description of first aid measures**
- **After inhalation:** *Supply fresh air; consult doctor in case of complaints.*
- **After skin contact:** *Generally the product does not irritate the skin.*
- **After eye contact:**
Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
- **After swallowing:** *If symptoms persist consult doctor.*
- **Information for doctor:**
- **Most important symptoms and effects, both acute and delayed** *No further relevant information available.*
- **Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

5 Firefighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:**
CO₂, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **Special hazards arising from the substance or mixture** *No further relevant information available.*

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Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 11.09.2018

Revision: 11.09.2018

Trade name: Acetone, Reagent Grade

(Contd. of page 2)

- **Advice for firefighters**
- **Protective equipment:** No special measures required.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
Wear protective equipment. Keep unprotected persons away.
- **Environmental precautions:**
Dilute with plenty of water.
Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Ensure adequate ventilation.
- **Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

7 Handling and storage

- **Handling:**
- **Precautions for safe handling** No special precautions are necessary if used correctly.
- **Information about fire - and explosion protection:**
Keep ignition sources away - Do not smoke.
Protect against electrostatic charges.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** Store in a cool location.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:**
Keep container tightly sealed.
Store in cool, dry conditions in well sealed receptacles.
- **Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

- **Additional information about design of technical facilities:** No further data; see item 7.
- **Control parameters**
- **Ingredients with limit values that require monitoring at the workplace:** Not required.
- **Additional information:** The lists valid during the making were used as basis.
- **Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:**
Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing
Wash hands before breaks and at the end of work.
Avoid contact with the eyes.
Avoid contact with the eyes and skin.
- **Respiratory protection:** Not required.

(Contd. on page 4)

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- **Protection of hands:**

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

- **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

- **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

- **Eye protection:**



Tightly sealed goggles

9 Physical and chemical properties

- **Information on basic physical and chemical properties**

- **General Information**

- **Appearance:**

Form: Liquid

Colour: Colourless

- **Odour:** Acetone-like

- **Odour threshold:** Not determined.

- **pH-value:** Not determined.

- **Change in condition**

Melting point/freezing point: -94.7 °C

Initial boiling point and boiling range: 56.5 °C

- **Flash point:** -20 °C

- **Flammability (solid, gas):** Not applicable.

- **Ignition temperature:** 465 °C

- **Decomposition temperature:** Not determined.

- **Auto-ignition temperature:** Not determined.

- **Explosive properties:** Product is not explosive. However, formation of explosive air/vapour mixtures are possible.

- **Explosion limits:**

Lower: 2.6 Vol %

Upper: 13 Vol %

- **Vapour pressure at 20 °C:** 233 hPa

- **Density at 20 °C:** 0.79 g/cm³

- **Relative density** Not determined.

- **Vapour density** Not determined.

- **Evaporation rate** Not determined.

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- | | |
|--|--|
| · Solubility in / Miscibility with water: | Fully miscible. |
| · Partition coefficient: n-octanol/water: | Not determined. |
| · Viscosity: | |
| Dynamic at 20 °C: | 32 mPas |
| Kinematic: | Not determined. |
| · Other information | No further relevant information available. |

10 Stability and reactivity

- **Reactivity** No further relevant information available.
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity**

- **LD/LC50 values relevant for classification:**

Oral	LD50	5,800 mg/kg (rat)
Dermal	LD50	20,000 mg/kg (rabbit)

- **Primary irritant effect:**
- **Skin corrosion/irritation** No irritant effect.
- **Serious eye damage/irritation** Irritating effect.
- **Respiratory or skin sensitisation** No sensitising effects known.

12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behaviour in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:**
Water hazard class 1 (German Regulation) (Assessment by list): slightly hazardous for water
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

(Contd. on page 6)

Safety data sheet
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Printing date 11.09.2018

Revision: 11.09.2018


Trade name: Acetone, Reagent Grade

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13 Disposal considerations

- **Waste treatment methods**
- **Recommendation**
Must not be disposed together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.
- **Recommended cleansing agents:** Water, if necessary together with cleansing agents.

14 Transport information

· UN-Number · ADR, IMDG, IATA	UN1090
· UN proper shipping name · ADR · IMDG, IATA	1090 ACETONE ACETONE
· Transport hazard class(es) · ADR, IMDG, IATA	
· Class · Label	3 Flammable liquids. 3
· Packing group · ADR, IMDG, IATA	II
· Environmental hazards:	Not applicable.
· Special precautions for user · Danger code (Kemler): · EMS Number: · Stowage Category	Warning: Flammable liquids. 33 F-E,S-D E
· Transport in bulk according to Annex II of Marpol and the IBC Code	Not applicable.
· Transport/Additional information:	
· ADR · Limited quantities (LQ) · Excepted quantities (EQ)	1L Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· Transport category · Tunnel restriction code	2 D/E
· IMDG · Limited quantities (LQ)	1L

(Contd. on page 7)

IL

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Trade name: Acetone, Reagent Grade

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· Excepted quantities (EQ)	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· UN "Model Regulation":	UN 1090 ACETONE, 3, II

15 Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **GHS label elements**
The substance is classified and labelled according to the Globally Harmonised System (GHS).
- **Hazard pictograms**



GHS02 GHS07

- **Signal word** *Danger*
- **Hazard statements**
Highly flammable liquid and vapour.
Harmful if swallowed.
May be harmful if inhaled.
Causes serious eye irritation.
May cause drowsiness or dizziness.
- **Precautionary statements**
Keep away from heat/sparks/open flames/hot surfaces. No smoking.
Use explosion-proof electrical/ventilating/lighting equipment.
IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.
Continue rinsing.
Store locked up.
Dispose of contents/container in accordance with local/regional/national/international regulations.
- **Directive 2012/18/EU**
- **Named dangerous substances - ANNEX I** Substance is not listed.
- **Seveso category** P5c FLAMMABLE LIQUIDS
- **Qualifying quantity (tonnes) for the application of lower-tier requirements** 5,000 t
- **Qualifying quantity (tonnes) for the application of upper-tier requirements** 50,000 t
- **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- **Abbreviations and acronyms:**
ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
EINECS: European Inventory of Existing Commercial Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent

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Trade name: Acetone, Reagent Grade

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*PBT: Persistent, Bioaccumulative and Toxic**vPvB: very Persistent and very Bioaccumulative**Flam. Liq. 2: Flammable liquids – Category 2**Acute Tox. 4: Acute toxicity – Category 4**Acute Tox. 5: Acute toxicity – Category 5**Eye Irrit. 2A: Serious eye damage/eye irritation – Category 2A**STOT SE 3: Specific target organ toxicity (single exposure) – Category 3*

IL

Safety data sheet
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SECTION 1: Identification of the substance/mixture and of the company/undertaking

- **1.1 Product identifier**
- **Trade name:** Acetone, Reagent Grade
- **Article number:** 10000, 10014, 10010, 10012
- **CAS Number:**
67-64-1
- **EC number:**
200-662-2
- **Index number:**
606-001-00-8
- **1.2 Relevant identified uses of the substance or mixture and uses advised against**
No further relevant information available.
- **Application of the substance / the mixture** Laboratory chemicals
- **1.3 Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
Electron Microscopy Sciences
1560 Industry Road
USA-Hatfield, PA 19440
Tel: 215-412-8400 Fax: 215-412-8450
email: sgkcck@aol.com
www.emsdiasum.com
- **Further information obtainable from:** Product safety department
- **1.4 Emergency telephone number:**
ChemTrec 1-800-424-9300 Contract CCN7661
1-703-527-3887

SECTION 2: Hazards identification

- **2.1 Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**



Flam. Liq. 2 H225 Highly flammable liquid and vapour.



Acute Tox. 4 H302 Harmful if swallowed.
Eye Irrit. 2 H319 Causes serious eye irritation.
STOT SE 3 H336 May cause drowsiness or dizziness.

- **2.2 Label elements**
- **Labelling according to Regulation (EC) No 1272/2008**
The substance is classified and labelled according to the CLP regulation.
- **Hazard pictograms**



- **Signal word** *Danger*

(Contd. on page 2)

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Trade name: Acetone, Reagent Grade

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- **Hazard statements**

H225 Highly flammable liquid and vapour.

H302 Harmful if swallowed.

H319 Causes serious eye irritation.

H336 May cause drowsiness or dizziness.

- **Precautionary statements**

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

P241 Use explosion-proof electrical/ventilating/lighting equipment.

P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P405 Store locked up.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

- **Additional information:**

EUH066 Repeated exposure may cause skin dryness or cracking.

- **2.3 Other hazards**

- **Results of PBT and vPvB assessment**

- **PBT:** Not applicable.

- **vPvB:** Not applicable.

SECTION 3: Composition/information on ingredients

- **3.1 Chemical characterisation: Substances**

- **CAS No. Description**

67-64-1 Acetone, Reagent Grade

- **Identification number(s)**

- **EC number:** 200-662-2

- **Index number:** 606-001-00-8

SECTION 4: First aid measures

- **4.1 Description of first aid measures**

- **After inhalation:** Supply fresh air; consult doctor in case of complaints.

- **After skin contact:** Generally the product does not irritate the skin.

- **After eye contact:**

Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.

- **After swallowing:** If symptoms persist consult doctor.

- **4.2 Most important symptoms and effects, both acute and delayed** No further relevant information available.

- **4.3 Indication of any immediate medical attention and special treatment needed**

No further relevant information available.

SECTION 5: Firefighting measures

- **5.1 Extinguishing media**

- **Suitable extinguishing agents:**

CO₂, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

- **5.2 Special hazards arising from the substance or mixture** No further relevant information available.

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according to 1907/2006/EC, Article 31

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Trade name: Acetone, Reagent Grade

(Contd. of page 2)

- **5.3 Advice for firefighters**
- **Protective equipment:** No special measures required.

SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**
Wear protective equipment. Keep unprotected persons away.
- **6.2 Environmental precautions:**
Dilute with plenty of water.
Do not allow to enter sewers/ surface or ground water.
- **6.3 Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Ensure adequate ventilation.
- **6.4 Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

SECTION 7: Handling and storage

- **7.1 Precautions for safe handling** No special precautions are necessary if used correctly.
- **Information about fire - and explosion protection:**
Keep ignition sources away - Do not smoke.
Protect against electrostatic charges.
- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** Store in a cool location.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:**
Keep container tightly sealed.
Store in cool, dry conditions in well sealed receptacles.
- **7.3 Specific end use(s)** No further relevant information available.

SECTION 8: Exposure controls/personal protection

- **Additional information about design of technical facilities:** No further data; see item 7.

· 8.1 Control parameters

- **Ingredients with limit values that require monitoring at the workplace:**

67-64-1 Acetone, Reagent Grade

WEL	Short-term value: 3620 mg/m ³ , 1500 ppm Long-term value: 1210 mg/m ³ , 500 ppm
-----	--

- **Additional information:** The lists valid during the making were used as basis.

· 8.2 Exposure controls

- **Personal protective equipment:**
- **General protective and hygienic measures:**
Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing
Wash hands before breaks and at the end of work.
Avoid contact with the eyes.

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Trade name: Acetone, Reagent Grade

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Avoid contact with the eyes and skin.

· **Respiratory protection:** Not required.

· **Protection of hands:**

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

· **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

· **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

· **Eye protection:**



Tightly sealed goggles

SECTION 9: Physical and chemical properties

· **9.1 Information on basic physical and chemical properties**

· **General Information**

· **Appearance:**

Form: Liquid

Colour: Colourless

· **Odour:** Acetone-like

· **Odour threshold:** Not determined.

· **pH-value:** Not determined.

· **Change in condition**

Melting point/freezing point: -94.7 °C

Initial boiling point and boiling range: 56.5 °C

· **Flash point:** -20 °C

· **Flammability (solid, gas):** Not applicable.

· **Ignition temperature:** 465 °C

· **Decomposition temperature:** Not determined.

· **Auto-ignition temperature:** Not determined.

· **Explosive properties:** Product is not explosive. However, formation of explosive air/vapour mixtures are possible.

· **Explosion limits:**

Lower: 2.6 Vol %

Upper: 13 Vol %

· **Vapour pressure at 20 °C:** 233 hPa

· **Density at 20 °C:** 0.79 g/cm³

· **Relative density** Not determined.

· **Vapour density** Not determined.

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Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 11.09.2018

Revision: 11.09.2018

Trade name: Acetone, Reagent Grade

(Contd. of page 4)

· Evaporation rate	Not determined.
· Solubility in / Miscibility with water:	Fully miscible.
· Partition coefficient: n-octanol/water:	Not determined.
· Viscosity:	
Dynamic at 20 °C:	32 mPas
Kinematic:	Not determined.
· 9.2 Other information	No further relevant information available.

SECTION 10: Stability and reactivity

- **10.1 Reactivity** No further relevant information available.
- **10.2 Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **10.3 Possibility of hazardous reactions** No dangerous reactions known.
- **10.4 Conditions to avoid** No further relevant information available.
- **10.5 Incompatible materials:** No further relevant information available.
- **10.6 Hazardous decomposition products:** No dangerous decomposition products known.

SECTION 11: Toxicological information

- **11.1 Information on toxicological effects**
- **Acute toxicity**
Harmful if swallowed.

· **LD/LC50 values relevant for classification:**

Oral	LD50	5,800 mg/kg (rat)
Dermal	LD50	20,000 mg/kg (rabbit)

- **Primary irritant effect:**
- **Skin corrosion/irritation** Based on available data, the classification criteria are not met.
- **Serious eye damage/irritation**
Causes serious eye irritation.
- **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.
- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**
- **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
- **Carcinogenicity** Based on available data, the classification criteria are not met.
- **Reproductive toxicity** Based on available data, the classification criteria are not met.
- **STOT-single exposure**
May cause drowsiness or dizziness.
- **STOT-repeated exposure** Based on available data, the classification criteria are not met.
- **Aspiration hazard** Based on available data, the classification criteria are not met.

SECTION 12: Ecological information

- **12.1 Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **12.2 Persistence and degradability** No further relevant information available.
- **12.3 Bioaccumulative potential** No further relevant information available.
- **12.4 Mobility in soil** No further relevant information available.

(Contd. on page 6)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 11.09.2018

Revision: 11.09.2018

Trade name: Acetone, Reagent Grade


(Contd. of page 5)

- **Additional ecological information:**
- **General notes:**
Water hazard class 1 (German Regulation) (Assessment by list): slightly hazardous for water
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
- **12.5 Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **12.6 Other adverse effects** No further relevant information available.

SECTION 13: Disposal considerations

- **13.1 Waste treatment methods**
- **Recommendation**
Must not be disposed together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.
- **Recommended cleansing agents:** Water, if necessary together with cleansing agents.

SECTION 14: Transport information

- | | |
|---|-----------------------------|
| · 14.1 UN-Number | UN1090 |
| · ADR, IMDG, IATA | |
| · 14.2 UN proper shipping name | 1090 ACETONE |
| · ADR | ACETONE |
| · IMDG, IATA | |
| · 14.3 Transport hazard class(es) | |
| · ADR, IMDG, IATA | |
|  | |
| · Class | 3 Flammable liquids. |
| · Label | 3 |
| · 14.4 Packing group | II |
| · ADR, IMDG, IATA | |
| · 14.5 Environmental hazards: | Not applicable. |
| · 14.6 Special precautions for user | Warning: Flammable liquids. |
| · Danger code (Kemler): | 33 |
| · EMS Number: | F-E,S-D |
| · Stowage Category | E |
| · 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code | Not applicable. |

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Safety data sheet

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Trade name: Acetone, Reagent Grade

(Contd. of page 6)

· **Transport/Additional information:**

· **ADR**

- | | |
|-----------------------------------|--|
| · Limited quantities (LQ) | 1L |
| · Excepted quantities (EQ) | Code: E2 |
| | Maximum net quantity per inner packaging: 30 ml |
| | Maximum net quantity per outer packaging: 500 ml |
| · Transport category | 2 |
| · Tunnel restriction code | D/E |

· **IMDG**

- | | |
|-----------------------------------|--|
| · Limited quantities (LQ) | 1L |
| · Excepted quantities (EQ) | Code: E2 |
| | Maximum net quantity per inner packaging: 30 ml |
| | Maximum net quantity per outer packaging: 500 ml |

- | | |
|---------------------------------|------------------------|
| · UN "Model Regulation": | UN 1090 ACETONE, 3, II |
|---------------------------------|------------------------|

SECTION 15: Regulatory information

- **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **Directive 2012/18/EU**
- **Named dangerous substances - ANNEX I Substance is not listed.**
- **Seveso category P5c FLAMMABLE LIQUIDS**
- **Qualifying quantity (tonnes) for the application of lower-tier requirements 5,000 t**
- **Qualifying quantity (tonnes) for the application of upper-tier requirements 50,000 t**
- **REGULATION (EC) No 1907/2006 ANNEX XVII Conditions of restriction: 3, 40**
- **15.2 Chemical safety assessment: A Chemical Safety Assessment has not been carried out.**

SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Abbreviations and acronyms:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
 IMDG: International Maritime Code for Dangerous Goods
 IATA: International Air Transport Association
 GHS: Globally Harmonised System of Classification and Labelling of Chemicals
 EINECS: European Inventory of Existing Commercial Chemical Substances
 CAS: Chemical Abstracts Service (division of the American Chemical Society)
 LC50: Lethal concentration, 50 percent
 LD50: Lethal dose, 50 percent
 PBT: Persistent, Bioaccumulative and Toxic
 vPvB: very Persistent and very Bioaccumulative
 Flam. Liq. 2: Flammable liquids – Category 2
 Acute Tox. 4: Acute toxicity – Category 4
 Eye Irrit. 2: Serious eye damage/eye irritation – Category 2
 STOT SE 3: Specific target organ toxicity (single exposure) – Category 3

化学品安全技术说明书

根据 GB/T 16483-2008, GB/T 17519-2013

打印日期 2018.09.11

在 2018.09.11 审核

1 化学品及企业标识

- 产品识别者
- 化学品中文(英文)名称, 化学品俗名或商品名: **二甲基酮**
- 商品编号: 10000, 10014, 10010, 10012
- CAS 编号:
67-64-1
- 欧盟编号:
200-662-2
- 欧盟编号:
606-001-00-8
- 相应纯物质或者混合物的相关下位用途及禁止用途 无相关详细资料。
- 原材料的应用/准备工作进行 实验室化学物
- 安全技术说明书内供应商详细信息
- 企业名称:
Electron Microscopy Sciences
1560 Industry Road
USA-Hatfield, PA 19440
Tel: 215-412-8400 Fax: 215-412-8450
email: sgkcck@aol.com
www.emsdiasum.com
- 可获取更多资料的部门: Product safety department
- 紧急联系电话号码:
ChemTrec 1-800-424-9300 Contract CCN7661
1-703-527-3887

2 危险性概述

· 紧急情况概述:

无色的, 液体, 高度易燃液体和蒸气。 吞咽有害。 吸入可能有害。 造成严重眼刺激。 可引起昏睡或眩晕。

· GHS危险性类别



火焰

易燃液体 第2类

H225 高度易燃液体和蒸气



急性毒性(径口) 第4类

H302 吞咽有害

严重眼损伤/眼刺激 类别2A

H319 造成严重眼刺激

特定靶器官系统毒性(单次接触) 第3类

H336 可引起昏睡或眩晕

急性毒性(吸入) 第5类

H333 吸入可能有害

· 标签因素

- GHS卷标要素 本化学物质根据化学物质分类及标记全球协调制度(GHS)进行了分类及标记。

(在 2 页继续)

化学品安全技术说明书

根据 GB/T 16483-2008, GB/T 17519-2013

打印日期 2018.09.11

在 2018.09.11 审核

化学品中文(英文)名称, 化学品俗名或商品名: 二甲基酮

(在 1 页继续)

· 图示



GHS02 GHS07

· 名称 危险

· 危险字句

高度易燃液体和蒸气
 吞咽有害
 吸入可能有害
 造成严重眼刺激
 可引起昏睡或眩晕

· 警戒字句

· 预防措施

远离热源/火花/明火/热表面。禁止吸烟
 使用防爆的电气/通风/照明/设备

· 事故响应

如皮肤(或头发)沾染:立即脱掉所有沾染的衣服。用水清洗皮肤/淋浴
 如进入眼睛:用水小心冲洗几分钟。如戴隐形眼镜并可方便地取出,取出隐形眼镜。继续冲洗

· 安全储存

存放处须加锁

· 废弃处置

处置内装物/容器按照地方/区域/国家/国际规章

· 其他有害性

· PBT(残留性、生物浓缩性、毒性物质) 及 vPvB(高残留性、高生物浓缩性物质)评价结果

· PBT(残留性、生物浓缩性、毒性物质) 不适用的

· vPvB(高残留性、高生物浓缩性物质): 不适用的

3 成分/组成信息

· 纯品

· CAS号 化学名, 通用名

67-64-1 二甲基酮

· 鉴别编号:

· 欧盟编号: 200-662-2

· 欧盟编号: 606-001-00-8

4 急救措施

· 应急措施要领

- 吸入: 供给新鲜空气;如果病人感到不适时要询问医生。
- 皮肤接触: 一般的产品不会刺激皮肤。
- 眼睛接触: 张开眼睛在流水下冲洗数分钟。如果症状仍然持续,请咨询医生。
- 食入: 如果症状仍然持续,请咨询医生。
- 给医生的资料:
- 最重要的急慢性症状及其影响 无相关详细资料。
- 需要及时的医疗处理及特别处理的症状 无相关详细资料。

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5 消防措施

- **灭火方法**
- **灭火的方法和灭火剂:** 二氧化碳 (CO₂)、灭火粉末或洒水. 使用洒水或抗酒精泡沫灭火剂扑灭较大的火种.
- **特别危险性** 无相关详细资料。
- **特殊灭火方法**
- **消防人员特殊的防护装备:** 没有要求特别的措施.

6 泄漏应急处理

- **保护措施** 带上保护仪器. 让未受到保护的人们远离.
- **环境保护措施:**
用大量的水进行稀释.
切勿让其进入下水道/水面或地下水.
- **密封及净化方法和材料:**
吸收液体粘合原料 (沙粒、硅藻土、酸性粘合剂、通用粘合剂、锯屑).
确保有足够的通风装置.
- **参照其他部分**
有关安全处理的资料请参阅第 7 节.
有关个人防护装备的资料请参阅第 8 节.
有关弃置的资料请参阅第 13 节.

7 操作处置与储存

- **操作处置**
- **储存** 如果正确使用便不需特别的预防措施.
- **有关火灾及防止爆炸的资料:**
远离火源 - 切勿吸烟.
防静电.
- **混合危险性等安全储存条件**
- **储存:**
- **储存库和容器须要达到的要求:** 储存在阴凉的位置.
- **有关使用一个普通的储存设施来储存的资料:** 不需要.
- **有关储存条件的更多资料:**
将容器密封.
储存密封的贮藏器内, 并放在阴凉、干爽的位置.
- **具体的最终用户** 无相关详细资料.

8 接触控制和个体防护

- **工程控制方法:** 没有进一步数据; 见第 7 项.
- **控制变数**

· **在工作场需要监控的限值成分**

67-64-1 二甲基酮

OEL (CN)	PC-STEL: 450 mg/m ³ PC-TWA: 300 mg/m ³
PEL (TW)	PC-TWA: 475 mg/m ³ , 200 ppm

- **额外的资料:** 制作期间有效的清单将作为基础来使用.

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- **泄漏控制**
- **个人防护设备:**
- **一般保护和卫生措施:**
 - 远离食品、饮料和饲料.
 - 立即除去所有的不洁的和被污染的衣服.
 - 在休息之前和工作完毕后请清洗双手.
 - 避免和眼睛接触.
 - 避免和眼睛及皮肤接触.
- **呼吸系统防护:** 不需要.
- **手防护:**
 - 手套的物料必须是不渗透性的, 且能抵抗该产品/物质/添加剂.
 - 基于缺乏测试, 对于产品/制剂/化学混合物, 并不会提供手套材料的建议
 - 选择手套材料时, 请注意材料的渗透时间, 渗透率和降解参数
- **手套材料** 选择合适的手套不单取决于材料, 亦取决于质量特征, 以及来自哪一间生产厂家
- **渗入手套材料的时间** 请向劳保手套生产厂家获取准确的破裂时间并观察实际的破裂时间
- **眼睛防护:**



密封的护目镜

9 理化特性

- **有关基本物理及化学特性的信息**
- **一般说明**
- **外观:**
 - **形状:** 液体
 - **颜色:** 无色的
 - **气味:** 类似丙酮
 - **嗅觉阈限:** 未决定.
- **pH值:** 未决定.
- **条件的更改**
 - **熔点:** -94.7 °C
 - **沸点/初沸点和沸程:** 56.5 °C
- **闪点:** -20 °C
- **可燃性(固体、气体):** 不适用的
- **点火温度:** 465 °C
- **分解温度:** 未决定.
- **自燃温度:** 未决定.
- **爆炸的危险性:** 该产品并非爆炸性的然而有可能形成可爆炸性的空气/蒸汽混合物
- **爆炸极限:**
 - **较低:** 2.6 Vol %
 - **较高:** 13 Vol %
- **蒸气压 在 20 °C:** 233 hPa
- **密度 在 20 °C:** 0.79 g/cm³
- **相对密度** 未决定.

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- | | |
|---------------|----------|
| · 蒸气密度 | 未决定. |
| · 蒸发速率 | 未决定. |
| · 溶解性 | |
| 水: | 完全可拌和的 |
| · n-辛醇/水分配系数: | 未决定. |
| · 黏性: | |
| 动态在 20 °C: | 32 mPas |
| 运动学的: | 未决定. |
| · 其他信息 | 无相关详细资料。 |

10 稳定性和反应性

- 反应性 无相关详细资料。
- 稳定性
- 热分解/要避免的情况: 如果遵照规格使用则不会分解。
- 有害反应可能性 未有已知的危险反应。
- 应避免的条件 无相关详细资料。
- 不相容的物质: 无相关详细资料。
- 危险的分解产物: 未知有危险的分解产品。

11 毒理学信息

- 对毒性学影响的信息
- 急性毒性:

- 与分类相关的 LD/LC50 值:

口腔	LD50	5,800 mg/kg (rat)
皮肤	LD50	20,000 mg/kg (rabbit)

- 主要的刺激性影响:
- 皮肤: 没有刺激性影响。
- 在眼睛上面: 刺激的影响。
- 致敏作用: 没有已知的敏化影响。

12 生态学信息

- 生态毒性
- 水生毒性: 无相关详细资料。
- 持久性和降解性 无相关详细资料。
- 环境系统习性:
- 潜在的生物累积性 无相关详细资料。
- 土壤内移动性 无相关详细资料。
- 额外的生态学资料:
- 总括注解:
 - 水危害级别 1(德国规例) (评估): 对水是稍微危害的
 - 不要让未稀释或大量的产品接触地下水、水道或者污水系统。
- PBT(残留性、生物浓缩性、毒性物质) 及 vPvB(高残留性、高生物浓缩性物质)评价结果
- PBT(残留性、生物浓缩性、毒性物质) 不适用的
- vPvB(高残留性、高生物浓缩性物质): 不适用的

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· 其他副作用 无相关详细资料。

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13 废弃处置

- 废弃处置方法
- 建议: 不能将该产品和家居垃圾一起丢弃. 不要让该产品接触污水系统.
- 受污染的容器和包装:
- 建议: 必须根据官方的规章来丢弃.
- 建议的清洗剂: 如有必要请使用水及清洁剂进行清洁.

14 运输信息

· 联合国危险货物编号(UN号)	
· ADR, IMDG, IATA	UN1090
· UN适当装船名	
· ADR	1090 丙酮
· IMDG, IATA	ACETONE
· 运输危险等级	
· ADR, IMDG, IATA	
	
· 级别	3 易燃液体
· 标签	3
· 包装组别	
· ADR, IMDG, IATA	II
· 危害环境:	不适用的
· 用户特别预防措施	警告: 易燃液体
· 危险编码:	33
· EMS 号码:	F-E,S-D
· Stowage Category	E
· MARPOL73/78(针对船舶引起的海洋污染预防公约)附件书2及根据IBC Code(国际装船货物编码)的大量运送	不适用的
· 运输/额外的资料:	
· ADR	
· Excepted quantities (EQ)	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· IMDG	
· Limited quantities (LQ)	1L
· Excepted quantities (EQ)	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml

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· UN "标准规定": UN 1090 丙酮, 3, II

15 法规信息

- 对相应纯物质或者混合物的安全、保健及环境法规/法律
- 危险化学品安全管理条例

· 危险化学品目录

67-64-1 | 二甲基酮

- 新化学物质环境管理办法
- 中国现有化学物质名录 有列出物质.
- GHS卷标元素 本化学物质根据化学物质分类及标记全球协调制度(GHS)进行了分类及标记。
- 图示



GHS02 GHS07

- 名称 危险
- 危险字句
 - 高度易燃液体和蒸气
 - 吞咽有害
 - 吸入可能有害
 - 造成严重眼刺激
 - 可引起昏睡或眩晕
- 警戒字句
- 预防措施
 - 远离热源/火花/明火/热表面。禁止吸烟
 - 使用防爆的电气/通风/照明/设备
- 事故响应
 - 如皮肤(或头发)沾染:立即脱掉所有沾染的衣服。用水清洗皮肤/淋浴
 - 如进入眼睛:用水小心冲洗几分钟。如戴隐形眼镜并可方便地取出,取出隐形眼镜。继续冲洗
- 安全储存
 - 存放处须加锁
- 废弃处置
 - 处置内装物/容器按照地方/区域/国家/国际规章
- 化学物质安全性评价: 尚未进行化学物质安全性评价

16 其他信息

该资料是基于我们目前的知识。然而,这并不构成对任何特定产品特性的担保并且不建立一个法律上有效的合同关系。

· 缩写:

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
 IMDG: International Maritime Code for Dangerous Goods
 IATA: International Air Transport Association
 EINECS: European Inventory of Existing Commercial Chemical Substances
 CAS: Chemical Abstracts Service (division of the American Chemical Society)
 LC50: Lethal concentration, 50 percent
 LD50: Lethal dose, 50 percent
 PBT: 持久性生物累积性有毒物质

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vPvB: very Persistent and very Bioaccumulative

易燃液体 第2类: Flammable liquids – Category 2

急性毒性(经口) 第4类: Acute toxicity – Category 4

急性毒性(吸入) 第5类: Acute toxicity – Category 5

严重眼损伤/眼刺激 类别2A: Serious eye damage/eye irritation – Category 2A

特定靶器官系统毒性 (单次接触) 第3类: Specific target organ toxicity (single exposure) – Category 3

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Bezpečnostní list podle 1907/2006/ES, Článek 31

Datum vydání: 11.09.2018

Revize: 11.09.2018

ODDÍL 1: Identifikace látky/směsi a společnosti/podniku

- **1.1 Identifikátor výrobku**
- **Obchodní označení:** aceton
- **Číslo výrobku:** 10000, 10014, 10010, 10012
- **Číslo CAS:**
67-64-1
- **Číslo ES:**
200-662-2
- **Indexové číslo:**
606-001-00-8
- **1.2 Příslušná určená použití látky nebo směsi a nedoporučená použití**
Další relevantní informace nejsou k dispozici.
- **Použití látky / přípravku** Laboratorní chemikálie
- **1.3 Podrobné údaje o dodavateli bezpečnostního listu**
- **Identifikace výrobce/dovozce:**
Electron Microscopy Sciences
1560 Industry Road
USA-Hatfield, PA 19440
Tel: 215-412-8400 Fax: 215-412-8450
email: sgkcck@aol.com
www.emsdiasum.com
- **Obor poskytující informace:** Product safety department
- **1.4 Telefonní číslo pro naléhavé situace:**
ChemTrec 1-800-424-9300 Contract CCN7661
1-703-527-3887

ODDÍL 2: Identifikace nebezpečnosti

- **2.1 Klasifikace látky nebo směsi**
- **Klasifikace v souladu s nařízením (ES) č. 1272/2008**



GHS02 plamen

Flam. Liq. 2 H225 Vysoce hořlavá kapalina a páry.



GHS07

Acute Tox. 4 H302 Zdraví škodlivý při požití.

Eye Irrit. 2 H319 Způsobuje vážné podráždění očí.

STOT SE 3 H336 Může způsobit ospalost nebo závratě.

- **2.2 Prvky označení**
- **Označování v souladu s nařízením (ES) č. 1272/2008** Látka je klasifikována a označena podle nařízení CLP.
- **Výstražné symboly nebezpečnosti**



GHS02



GHS07

- **Signální slovo** Nebezpečí

(pokračování na straně 2)

Bezpečnostní list

podle 1907/2006/ES, Článek 31

Datum vydání: 11.09.2018

Revize: 11.09.2018

Obchodní označení: aceton

(pokračování strany 1)

- **Standardní věty o nebezpečnosti**
- H225 Vyroce hořlavá kapalina a páry.
- H302 Zdraví škodlivý při požití.
- H319 Způsobuje vážné podráždění očí.
- H336 Může způsobit ospalost nebo závratě.
- **Pokyny pro bezpečné zacházení**
- P210 *Chraňte před teplem, horkými povrchy, jiskrami, otevřeným ohněm a jinými zdroji zapálení. Zákaz kouření.*
- P241 *Používejte elektrické/ventilační/osvětlovací/zařízení do výbušného prostředí.*
- P303+P361+P353 **PŘI STYKU S KŮŽÍ (nebo s vlasy):** *Veškeré kontaminované části oděvu okamžitě svlékněte. Opláchněte kůži vodou/osprchujte.*
- P305+P351+P338 **PŘI ZASAŽENÍ OČÍ:** *Několik minut opatrně vyplachujte vodou. Vyjměte kontaktní čočky, jsou-li nasazeny a pokud je lze vyjmout snadno. Pokračujte ve vyplachování.*
- P405 *Skladujte uzamčené.*
- P501 *Obsah/nádobu likvidujte v souladu s místními/regionálními/národními/mezinárodními předpisy.*
- **Další údaje:**
- EUH066 *Opakovaná expozice může způsobit vysušení nebo popraskání kůže.*
- **2.3 Další nebezpečnost**
- **Výsledky posouzení PBT a vPvB**
- **PBT:** *Nedá se použít.*
- **vPvB:** *Nedá se použít.*

ODDÍL 3: Složení/informace o složkách

- **3.1 Chemická charakteristika: Látky**
- **Číslo CAS:**
67-64-1 aceton
- **Identifikační číslo(číslo)**
- **Číslo ES:** 200-662-2
- **Indexové číslo:** 606-001-00-8

ODDÍL 4: Pokyny pro první pomoc

- **4.1 Popis první pomoci**
- **Při nadýchání:** *Přívod čerstvého vzduchu, při obtížích vyhledat lékaře.*
- **Při styku s kůží:** *Tento produkt nemá všeobecně dráždicí účinek na pokožku.*
- **Při zasažení očí:**
Oči s otevřenými víčky vyplachovat po více minut proudem tekoucí vody. Při přetrvávajících potížích se poradit s lékařem.
- **Při požití:** *Při přetrvávajících potížích konzultovat s lékařem.*
- **4.2 Nejdůležitější akutní a opožděné symptomy a účinky** *Další relevantní informace nejsou k dispozici.*
- **4.3 Pokyn týkající se okamžité lékařské pomoci a zvláštního ošetření**
Další relevantní informace nejsou k dispozici.

ODDÍL 5: Opatření pro hašení požáru

- **5.1 Hasiva**
- **Vhodná hasiva:**
CO₂, hasící prášek nebo rozestříkované vodní paprsky. Větší ohně zdotat rozestříkovanými vodními paprsky nebo pěnou odolnou vůči alkoholu.

(pokračování na straně 3)

Bezpečnostní list

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Obchodní označení: *aceton*

(pokračování strany 2)

- **5.2 Zvláštní nebezpečnost vyplývající z látky nebo směsi** Další relevantní informace nejsou k dispozici.
- **5.3 Pokyny pro hasiče**
- **Zvláštní ochranné prostředky pro hasiče:** Nejsou nutná žádná zvláštní opatření.

ODDÍL 6: Opatření v případě náhodného úniku

- **6.1 Opatření na ochranu osob, ochranné prostředky a nouzové postupy**
Nosit ochrannou výstroj. Nechráněné osoby se nesmí přibližovat.
- **6.2 Opatření na ochranu životního prostředí:**
Zředit velkým množstvím vody.
Nenechat proniknout do kanalizace/povrchových vod/podzemních vod.
- **6.3 Metody a materiál pro omezení úniku a pro čištění:**
Sebrat s materiály, vážícími kapaliny (písek, šterkový písek, pojidla kyselin, univerzální pojidla, piliny).
Zajistit dostatečné větrání.
- **6.4 Odkaz na jiné oddíly**
Informace o bezpečnému zacházení viz kapitola 7.
Informace o osobní ochranné výstroji viz kapitola 8.
Informace k odstranění viz kapitola 13.

ODDÍL 7: Zacházení a skladování

- **7.1 Opatření pro bezpečné zacházení** Při odborném zacházení nejsou nutná žádná zvláštní opatření.
- **Upozornění k ochraně před ohněm a explozí:**
Nepřibližovat se ze zápalnými zdroji - nekouřit.
Zajistit proti elektrostatickému náboji.
- **7.2 Podmínky pro bezpečné skladování látek a směsí včetně neslučitelných látek a směsí**
- **Pokyny pro skladování:**
- **Požadavky na skladovací prostory a nádoby:** Skladovat na chladném místě.
- **Upozornění k hromadnému skladování:** Není nutné.
- **Další údaje k podmínkám skladování:**
Nádrž držet neprodyšně uzavřenou.
Skladovat v dobře uzavřených nádobách v chladu a suchu.
- **7.3 Specifické konečné / specifická konečná použití** Další relevantní informace nejsou k dispozici.

ODDÍL 8: Omezování expozice / osobní ochranné prostředky

- **Technická opatření:** Žádné další údaje, viz bod 7.

8.1 Kontrolní parametry

Kontrolní parametry:

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NPK Krátkodobá hodnota: 1500 mg/m³Dlouhodobá hodnota: 800 mg/m³

I

- **Další upozornění:** Jako podklad sloužily při zhotovení platné listiny.

8.2 Omezování expozice

Osobní ochranné prostředky:

Všeobecná ochranná a hygienická opatření:

Zdržovat od potravin, nápojů a krmiv.

Zašpiněné, nasáknuté šaty ihned vysvléci.

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*Před přestávkami a po práci umýt ruce.**Zamezit styku se zrakem.**Zamezit styku s pokožkou a zrakem.*· **Ochrana dýchacích orgánů:** *Není nutné.*· **Ochrana rukou:***Materiál rukavic musí být nepropustný a odolný proti produktu / látce / směsi.**Vzhledem k tomu, že chybí testy, není možné doporučit materiál rukavic pro produkt / přípravek / chemickou směs.**Výběr materiálu rukavic proveďte podle času průniku, permeability a degradace.*· **Materiál rukavic***Správný výběr rukavic nezávisí jen na materiálu, ale také na dalších kritériích, která se liší podle výrobce.*· **Doba průniku materiálem rukavic***Je nutno u výrobce rukavic zjistit a dodržovat přesné časy průniku materiálem ochranných rukavic.*· **Ochrana očí:**

Uzavřené ochranné brýle

ODDÍL 9: Fyzikální a chemické vlastnosti

· 9.1 Informace o základních fyzikálních a chemických vlastnostech

· **Všeobecné údaje**· **Vzhled:**

Skupenství: Tekutina

Barva: Bezbarvá

· **Zápach:** Acetonový· **Prahová hodnota zápachu:** *Není určeno.*· **Hodnota pH:** *Není určeno.*· **Změna stavu**

Bod tání/bod tuhnutí: -94,7 °C

Počáteční bod varu a rozmezí bodu varu: 56,5 °C

· **Bod vzplanutí:** -20 °C· **Hořlavost (pevné látky, plyny):** *Nedá se použít.*· **Zápalná teplota:** 465 °C· **Teplota rozkladu:** *Není určeno.*· **Teplota samovznícení:** *Není určeno.*· **Výbušné vlastnosti:** *I když produktu nehrozí nebezpečí exploze, je přesto možné nebezpečí exploze ve směsi par se vzduchem.*· **Meze výbušnosti:**

Dolní mez: 2,6 Vol %

Horní mez: 13 Vol %

· **Tlak páry při 20 °C:** 233 hPa· **Hustota při 20 °C:** 0,79 g/cm³· **Relativní hustota** *Není určeno.*· **Hustota páry:** *Není určeno.*· **Rychlost odpařování** *Není určeno.*

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- | | |
|--|--|
| · Rozpuštnost ve / směřitelnost s vodě: | Úplně mísitelná. |
| · Rozdělovací koeficient: n-oktanol/voda: | Není určeno. |
| · Viskozita: | |
| · Dynamicky při 20 °C: | 32 mPas |
| · Kinematicky: | Není určeno. |
| · 9.2 Další informace | Další relevantní informace nejsou k dispozici. |

ODDÍL 10: Stálost a reaktivita

- **10.1 Reaktivita** Další relevantní informace nejsou k dispozici.
- **10.2 Chemická stabilita**
- **Termický rozklad / Podmínky, kterých je nutno se vyvarovat:**
Nedochází k rozkladu při doporučeném způsobu použití.
- **10.3 Možnost nebezpečných reakcí** Žádné nebezpečné reakce nejsou známy.
- **10.4 Podmínky, kterým je třeba zabránit** Další relevantní informace nejsou k dispozici.
- **10.5 Neslučitelné materiály:** Další relevantní informace nejsou k dispozici.
- **10.6 Nebezpečné produkty rozkladu:** Nejsou známy žádné nebezpečné produkty při rozkladu.

ODDÍL 11: Toxikologické informace

- **11.1 Informace o toxikologických účincích**
- **Akutní toxicita**
Zdraví škodlivý při požití.

· **Zařazení relevantní hodnoty LD/LC 50:**

Orálně	LD50	5.800 mg/kg (rat)
Pokožkou	LD50	20.000 mg/kg (rabbit)

- **Primární dráždivé účinky:**
- **Žíravost/dráždivost pro kůži** Na základě dostupných údajů nejsou kritéria pro klasifikaci splněna.
- **Vážné poškození očí / podráždění očí**
Způsobuje vážné podráždění očí.
- **Senzibilizace dýchacích cest / senzibilizace kůže**
Na základě dostupných údajů nejsou kritéria pro klasifikaci splněna.
- **Účinky CMR (karcinogenita, mutagenita a toxicita pro reprodukci)**
- **Mutagenita v zárodečných buňkách** Na základě dostupných údajů nejsou kritéria pro klasifikaci splněna.
- **Karcinogenita** Na základě dostupných údajů nejsou kritéria pro klasifikaci splněna.
- **Toxicita pro reprodukci** Na základě dostupných údajů nejsou kritéria pro klasifikaci splněna.
- **Toxicita pro specifické cílové orgány – jednorázová expozice**
Může způsobit ospalost nebo závratě.
- **Toxicita pro specifické cílové orgány – opakovaná expozice**
Na základě dostupných údajů nejsou kritéria pro klasifikaci splněna.
- **Nebezpečnost při vdechnutí** Na základě dostupných údajů nejsou kritéria pro klasifikaci splněna.

ODDÍL 12: Ekologické informace

- **12.1 Toxicita**
- **Aquatická toxicita:** Další relevantní informace nejsou k dispozici.
- **12.2 Perzistence a rozložitelnost** Další relevantní informace nejsou k dispozici.

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- **12.3 Bioakumulační potenciál** Další relevantní informace nejsou k dispozici.
- **12.4 Mobilita v půdě** Další relevantní informace nejsou k dispozici.
- **Další ekologické údaje:**
- **Všeobecná upozornění:**
Třída ohrožení vody 1 (zařazení v listině): slabé ohrožení vody
Nesmí se dostat nezředitý nebo ve větším množství do spodní vody, povodí nebo kanalizace.
- **12.5 Výsledky posouzení PBT a vPvB**
- **PBT:** Nedá se použít.
- **vPvB:** Nedá se použít.
- **12.6 Jiné nepříznivé účinky** Další relevantní informace nejsou k dispozici.

ODDÍL 13: Pokyny pro odstraňování

- **13.1 Metody nakládání s odpady**
- **Doporučení:** Nesmí se odstraňovat společně s odpady z domácnosti. Nepřipustit únik do kanalizace.
- **Kontaminované obaly:**
- **Doporučení:** Odstranění podle příslušných předpisů.
- **Doporučený čisticí prostředek:** Voda, případně s přísadami čisticích prostředků.

ODDÍL 14: Informace pro přepravu

- | | |
|---|----------------------------|
| · 14.1 UN číslo | UN1090 |
| · ADR, IMDG, IATA | |
| · 14.2 Oficiální (OSN) pojmenování pro přepravu | |
| · ADR | 1090 ACETON |
| · IMDG, IATA | ACETONE |
| · 14.3 Třída/třídy nebezpečnosti pro přepravu | |
| · ADR, IMDG, IATA | |
|  | |
| · třída | 3 Hořlavé kapaliny |
| · Etiketa | 3 |
| · 14.4 Obalová skupina | |
| · ADR, IMDG, IATA | II |
| · 14.5 Nebezpečnost pro životní prostředí: | Nedá se použít. |
| · 14.6 Zvláštní bezpečnostní opatření pro uživatele | Varování: Hořlavé kapaliny |
| · Kemlerovo číslo: | 33 |
| · EMS-skupina: | F-E, S-D |
| · Stowage Category | E |
| · 14.7 Hromadná přeprava podle přílohy II úmluvy MARPOL a předpisu IBC | Nedá se použít. |

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· **Přeprava/další údaje:**

· **ADR**

· **Omezené množství (LQ)**

1L

· **Vyňatá množství (EQ)**

Kód: E2

Nejvyšší čisté množství na vnitřní obal: 30 ml

Nejvyšší čisté množství na vnější obal: 500 ml

· **Přepavní kategorie**

2

· **Kód omezení pro tunely:**

D/E

· **IMDG**

· **Limited quantities (LQ)**

1L

· **Excepted quantities (EQ)**

Code: E2

Maximum net quantity per inner packaging: 30 ml

Maximum net quantity per outer packaging: 500 ml

· **UN "Model Regulation":**

UN 1090 ACETON, 3, II

ODDÍL 15: Informace o předpisech

· **15.1 Předpisy týkající se bezpečnosti, zdraví a životního prostředí/specifické právní předpisy týkající se látky nebo směsi**

· **Rady 2012/18/EU**

· **Nebezpečné látky jmenovitě uvedené - PŘÍLOHA I** Látka neobsažena.

· **Kategorie Seveso P5c HOŘLAVÉ KAPALINY**

· **Kvalifikační množství (v tunách) při uplatnění požadavků pro podlimitní množství 5.000 t**

· **Kvalifikační množství (v tunách) při uplatnění požadavků pro nadlimitní množství 50.000 t**

· **Rady (ES) č. 1907/2006 PŘÍLOHA XVII** Omezující podmínky: 3, 40

· **15.2 Posouzení chemické bezpečnosti:** Posouzení chemické bezpečnosti nebylo provedeno.

ODDÍL 16: Další informace

Údaje se opírají o dnešní stav našich vědomostí, nepředstavují však záruku vlastností produktu a nevznikají tak žádné smluvní právní vztahy.

· **Zkratky a akronymy:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

Flam. Liq. 2: Hořlavé kapaliny – Kategorie 2

Acute Tox. 4: Akutní toxicita – Kategorie 4

Eye Irrit. 2: Vážné poškození očí / podráždění očí – Kategorie 2

STOT SE 3: Toxicita pro specifické cílové orgány (jednorázová expozice) – Kategorie 3

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PUNKT 1: Identifikation af stoffet/blandingen og af selskabet/virksomheden

- **1.1 Produktidentifikator**
- **Handelsnavn:** acetone
- **Artikelnummer:** 10000, 10014, 10010, 10012
- **CAS-nummer:**
67-64-1
- **EC-nummer:**
200-662-2
- **Indeksnummer:**
606-001-00-8
- **1.2 Relevante identificerede anvendelser for stoffet eller blandingen samt anvendelser, der frarådes**
Der står ingen yderligere, relevante informationer til rådighed.
- **Stoffets/præparatets anvendelse** Laboratoriekemikalier
- **1.3 Nærmere oplysninger om leverandøren af sikkerhedsdatabladet**
- **Producent/leverandør**
Electron Microscopy Sciences
1560 Industry Road
USA-Hatfield, PA 19440
Tel: 215-412-8400 Fax: 215-412-8450
email: sgkcck@aol.com
www.emsdiasum.com
- **For yderligere information:** Product safety department
- **1.4 Nødtelefon:**
ChemTrec 1-800-424-9300 Contract CCN7661
1-703-527-3887

PUNKT 2: Fareidentifikation

- **2.1 Klassificering af stoffet eller blandingen**
- **Klassificering i henhold til forordning (EF) nr. 1272/2008**



GHS02 flamme

Flam. Liq. 2 H225 Meget brandfarlig væske og damp.



GHS07

Acute Tox. 4 H302 Farlig ved indtagelse.

Eye Irrit. 2 H319 Forårsager alvorlig øjenirritation.

STOT SE 3 H336 Kan forårsage sløvhed eller svimmelhed.

- **2.2 Mærkningselementer**
- **Mærkning i henhold til forordning (EF) nr. 1272/2008**
Denne substans er klassificeret og mærket iht. CLP-forordningen.
- **Farepiktogrammer**



GHS02 GHS07

- **Signalord** Fare

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- **Faresætninger**

H225 Meget brandfarlig væske og damp.

H302 Farlig ved indtagelse.

H319 Forårsager alvorlig øjenirritation.

H336 Kan forårsage sløvhed eller svimmelhed.

- **Sikkerhedssætninger**

P210 Holdes væk fra varme, varme overflader, gnister, åben ild og andre antændelseskilder.
Rygning forbudt.

P241 Anvend eksplosionsikkert elektrisk/ventilations-/lys-/udstyr.

P303+P361+P353 VED KONTAKT MED HUDEN (eller håret): Alt tilsmudset tøj tages straks af. Skyl/brus huden med vand.

P305+P351+P338 VED KONTAKT MED ØJNENE: Skyl forsigtigt med vand i flere minutter. Fjern eventuelle kontaktlinser, hvis dette kan gøres let. Fortsæt skylning.

P405 Opbevares under lås.

P501 Bortskaffelse af indholdet/beholderen i henhold til de lokale/regionale/nationale/internationale forskrifter.

- **Yderligere oplysninger:**

EUH066 Gentagen kontakt kan give tør eller revnet hud.

- **2.3 Andre farer**

- **Resultater af PBT- og vPvB-vurdering**

- **PBT:** Ikke relevant.

- **vPvB:** Ikke relevant.

PUNKT 3: Sammensætning af oplysning om indholdsstoffer

- **3.1 Kemisk betegnelse: Stoffer**

- **CAS-nr. betegnelse**

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- **Identifikationsnummer (-numre)**

- **EC-nummer:** 200-662-2

- **Indeksnummer:** 606-001-00-8

PUNKT 4: Førstehjælpsforanstaltninger

- **4.1 Beskrivelse af førstehjælpsforanstaltninger**

- **Efter indånding:** Tilførsel af frisk luft, i tilfælde af symptomer skal der søges læge.

- **Efter hudkontakt:** Almindeligvis virker produktet ikke irriterende på huden.

- **Efter øjenkontakt:**

Skyl øjnene med åbent øjenlåg i flere minutter under rindende vand. Søg læge, hvis problemerne er vedvarende.

- **Efter indtagelse:** Søg læge, hvis problemerne er vedvarende.

- **4.2 Vigtigste symptomer og virkninger, både akutte og forsinkede**

Der står ingen yderligere, relevante informationer til rådighed.

- **4.3 Angivelse af om øjeblikkelig lægehjælp og særlig behandling er nødvendig**

Der står ingen yderligere, relevante informationer til rådighed.

PUNKT 5: Brandbekæmpelse

- **5.1 Slukningsmidler**

- **Egnede slukningsmidler:**

CO₂, slukningspulver eller vandspraystråle. Større brande bekæmpes med vandspraystråle eller alkoholbestandigt skum.

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- **5.2 Særlige farer i forbindelse med stoffet eller blandingen**
Der står ingen yderligere, relevante informationer til rådighed.
- **5.3 Anvisninger for brandmandskab**
- **Særlige værnemidler:** Der kræves ingen særlige forholdsregler.

PUNKT 6: Forholdsregler over for udslip ved uheld

- **6.1 Personlige sikkerhedsforanstaltninger, personlige værnemidler og nødprocedurer**
Bær beskyttelsesudstyr. Hold ubeskyttede personer borte.
- **6.2 Miljøbeskyttelsesforanstaltninger:**
Fortynd med rigeligt vand.
Må ikke udledes i kloaksystemet/overfladevand/grundvand.
- **6.3 Metoder og udstyr til inddæmning og oprensning:**
Opsamles med væskebindende materiale (sand, kiselgur, syrebindemiddel, universalbindemiddel, savsmuld).
Sørg for tilstrækkelig udluftning.
- **6.4 Henvisning til andre punkter**
Information om sikker håndtering se kapitel 7.
Informationer vedrørende personlige værnemidler se kapitel 8.
Informationer om bortskaffelse se kapitel 13.

PUNKT 7: Håndtering og opbevaring

- **7.1 Forholdsregler for sikker håndtering**
Ved sagkyndig anvendelse er ingen specielle forholdsregler nødvendige.
- **Anvisninger vedrørende brand- og eksplosionsbeskyttelse:**
Hold antændelige kilder borte – ingen rygning.
Træf forholdsregler mod elektrostatiske opladninger.
- **7.2 Betingelser for sikker opbevaring, herunder eventuel uforenelighed**
- **Opbevaring:**
- **Krav til opbevaringsrum og beholdere:** Opbevares på et køligt sted.
- **Henvisninger vedrørende opbevaring med andre stoffer:** Ikke påkrævet.
- **Yderligere oplysninger vedrørende opbevaringsbetingelserne:**
Hold beholderen tætsluttende lukket.
Opbevares køligt og tørt i tætsluttende beholdere.
- **7.3 Særlige anvendelser** Der står ingen yderligere, relevante informationer til rådighed.

PUNKT 8: Eksponeringskontrol/personlige værnemidler

- **Yderligere anvisninger vedrørende udformning af tekniske anlæg:** Ingen yderligere oplysninger, se punkt 7.

· 8.1 Kontrolparametre

- **Indholdsstoffer med arbejdspladsrelaterede grænseværdier, der skal overvåges:**

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GV	Langtidsværdi: 600 mg/m ³ , 250 ppm
E	

- **Yderligere anvisninger:** Baseret på de lister, der var gældende på tidspunktet for udarbejdelsen.

· 8.2 Eksponeringskontrol

- **Personlige værnemidler:**
- **Generelle forholdsregler vedrørende beskyttelse og hygiejne:**
Skal holdes borte fra føde- og drikkevarer og foderstoffer.

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Forurennet, gennemvædet tøj skal det tages af med det samme.

Vask hænder inden der holdes pause og ved arbejdsophør.

Undgå kontakt med øjnene.

Undgå kontakt med øjne og hud.

· **Åndedrætsværn:** Ikke påkrævet.

· **Håndbeskyttelse:**

Handskematerialet skal være uigennemtrængeligt og kunne tåle produktet/stoffet/præparatet.

På grund af manglende tests kan der ikke anbefales noget handskemateriale til produktet/præparatet/kemikalieblandingen.

Ved valg af handskematerialet skal der tages højde for gennemtrængningstider, permeabilitetstal og nedbrydning.

· **Handskemateriale:**

Valg af en egnet handske afhænger ikke blot af materialet, men også af yderligere kvalitetskriterier og er forskelligt fra den ene fabrikant til den anden.

· **Handskematerialets gennemtrængningstid**

Hos handskefabrikanten skal man forespørge om den nøjagtige gennemtrængningstid og overholde denne.

· **Øjenbeskyttelse:**



Tætsluttende beskyttelsesbriller

PUNKT 9: Fysiske og kemiske egenskaber

· **9.1 Oplysninger om grundlæggende fysiske og kemiske egenskaber**

· **Generelle oplysninger**

· **Udseende:**

Form: Væske

Farve: Farveløs

· **Lugt:** Acetoneagtig

· **Lugttærskel:** Ikke bestemt.

· **pH-værdi:** Ikke bestemt.

· **Tilstandsændring**

Smeltepunkt/frysepunkt: -94,7 °C

Begyndelseskogepunkt og kogepunktsinterval: 56,5 °C

· **Flammepunkt:** -20 °C

· **Antændelighed (fast stof, luftart):** Ikke relevant.

· **Antændelsepunkt:** 465 °C

· **Dekomponeringstemperatur:** Ikke bestemt.

· **Selvantændelsestemperatur:** Ikke bestemt.

· **Eksplorative egenskaber:** Produktet er ikke eksplosivt, der kan dog dannes eksplosive damp-/luftblandinger.

· **Eksplisionsgrænser:**

Nedre: 2,6 Vol %

Øvre: 13 Vol %

· **Damptryk ved 20 °C:** 233 hPa

· **Densitet ved 20 °C:** 0,79 g/cm³

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· Relativ massefylde:	Ikke bestemt.
· Dampmassefylde:	Ikke bestemt.
· Fordampningshastighed	Ikke bestemt.
· Opløselighed i/blandbarhed med vand:	Fuldt blandbar.
· Fordelingskoefficient: n-oktanol/vand:	Ikke bestemt.
· Viskositet:	
dynamisk ved 20 °C:	32 mPas
kinematisk:	Ikke bestemt.
· 9.2 Andre oplysninger	Der står ingen yderligere, relevante informationer til rådighed.

PUNKT 10: Stabilitet og reaktivitet

- **10.1 Reaktivitet** Der står ingen yderligere, relevante informationer til rådighed.
- **10.2 Kemisk stabilitet**
- **Termisk nedbrydning/forhold, der bør undgås** Ingen nedbrydning ved formålsbestemt brug.
- **10.3 Risiko for farlige reaktioner** Der er ikke kendskab til nogen farlige reaktioner.
- **10.4 Forhold, der skal undgås** Der står ingen yderligere, relevante informationer til rådighed.
- **10.5 Materialer, der skal undgås:** Der står ingen yderligere, relevante informationer til rådighed.
- **10.6 Farlige nedbrydningsprodukter:** Der er ikke kendskab til nogen farlige nedbrydningsprodukter.

PUNKT 11: Toksikologiske oplysninger

- **11.1 Oplysninger om toksikologiske virkninger**
- **Akut toksicitet**
Farlig ved indtagelse.

- **Klassificeringsrelevante LD/LC50-værdier:**

Oral	LD50	5.800 mg/kg (rat)
Dermal	LD50	20.000 mg/kg (rabbit)

- **Primær irritationsvirkning:**
- **Hudætsning/-irritation**
Kriterierne for klassificering kan på grundlag af de foreliggende data ikke anses for at være opfyldt.
- **Alvorlig øjenskade/øjenirritation**
Forårsager alvorlig øjenirritation.
- **Respiratorisk sensibilisering eller hudsensibilisering**
Kriterierne for klassificering kan på grundlag af de foreliggende data ikke anses for at være opfyldt.
- **CMR-virkninger (kræftfremkaldende egenskaber, mutagenicitet og reproduktionstoksicitet)**
- **Kimcellemutagenicitet**
Kriterierne for klassificering kan på grundlag af de foreliggende data ikke anses for at være opfyldt.
- **Kræftfremkaldende egenskaber**
Kriterierne for klassificering kan på grundlag af de foreliggende data ikke anses for at være opfyldt.
- **Reproduktionstoksicitet**
Kriterierne for klassificering kan på grundlag af de foreliggende data ikke anses for at være opfyldt.
- **Enkel STOT-eksponering**
Kan forårsage sløvhed eller svimmelhed.
- **Gentagne STOT-eksponeringer**
Kriterierne for klassificering kan på grundlag af de foreliggende data ikke anses for at være opfyldt.

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- **Aspirationsfare**
Kriterierne for klassificering kan på grundlag af de foreliggende data ikke anses for at være opfyldt.


PUNKT 12: Miljøoplysninger

- **12.1 Toksicitet**
- **Toksicitet i vand:** Der står ingen yderligere, relevante informationer til rådighed.
- **12.2 Persistens og nedbrydelighed** Der står ingen yderligere, relevante informationer til rådighed.
- **12.3 Bioakkumuleringspotentiale** Der står ingen yderligere, relevante informationer til rådighed.
- **12.4 Mobilitet i jord** Der står ingen yderligere, relevante informationer til rådighed.
- **Yderligere økologiske oplysninger:**
- **Generelle anvisninger:**
Fareklasse for vand 1 (klassificering ifølge listen): svagt vandforurenende
Må ikke udledes i grundvandet, vandløb eller kloaksystemet ufortyndet eller i større mængder.
- **12.5 Resultater af PBT- og vPvB-vurdering**
- **PBT:** Ikke relevant.
- **vPvB:** Ikke relevant.
- **12.6 Andre negative virkninger** Der står ingen yderligere, relevante informationer til rådighed.

PUNKT 13: Bortskaffelse

- **13.1 Metoder til affaldsbehandling**
- **Anbefaling:** Må ikke bortskaffes sammen med husholdningsaffald. Må ikke udledes i kloaksystemet.
- **Urensede emballager:**
- **Anbefaling:** Bortskaffes i overensstemmelse med myndighedernes forskrifter.
- **Anbefalet rengøringsmiddel:** Vand, eventuelt tilsat rengøringsmidler.

PUNKT 14: Transportoplysninger

- | | |
|---|-------------------------------|
| · 14.1 UN-nummer | |
| · ADR, IMDG, IATA | UN1090 |
| · 14.2 UN-forsendelsesbetegnelse (UN proper shipping name) | |
| · ADR | 1090 ACETONE |
| · IMDG, IATA | ACETONE |
| · 14.3 Transportfareklasse(r) | |
| · ADR, IMDG, IATA | |
|  | |
| · klasse | 3 Brandfarlige væsker |
| · Faremærkat | 3 |
| · 14.4 Emballagegruppe | |
| · ADR, IMDG, IATA | II |
| · 14.5 Miljøfarer: | Ikke relevant. |
| · 14.6 Særlige forsigtighedsregler for brugeren | Advarsel: Brandfarlige væsker |

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· Kemler-tal:	33
· EMS-nummer:	F-E,S-D
· Stowage Category	E
· 14.7 Bulktransport i henhold til bilag II til MARPOL og IBC-koden	Ikke relevant.
· Transport/yderligere oplysninger:	
· ADR	
· Begrænsede mængder (LQ)	1L
· Undtagne mængder (EQ)	Kode: E2 Største tilladte nettomængde pr. indvendig emballage: 30 ml Største tilladte nettomængde pr. ydre emballage: 500 ml
· Transportkategori	2
· Tunnelrestriktionskode	D/E
· IMDG	
· Limited quantities (LQ)	1L
· Excepted quantities (EQ)	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· UN "Model Regulation":	UN 1090 ACETONE, 3, II

PUNKT 15: Oplysninger om regulering

- **15.1 Særlige bestemmelser/særlig lovgivning for stoffet eller blandingen med hensyn til sikkerhed, sundhed og miljø**
- **Direktiv 2012/18/EU**
- **Navngivne farlige stoffer - BILAG I** Stoffet er ikke optaget i listen.
- **Seveso-bestemmelser P5c BRANDFARLIGE VÆSKER**
- **Tærskelmængde (tons) for anvendelse af Kolonne 2-krav** 5.000 t
- **Tærskelmængde (tons) for anvendelse af Kolonne 3-krav** 50.000 t
- **Forordning (EF) nr. 1907/2006 BILAG XVII** Begrænsninger: 3, 40
- **Nationale forskrifter:**
- **MAL-Code:** 4-1
- **15.2 Kemikaliesikkerhedsvurdering:** Der er ikke udført kemikaliesikkerhedsvurdering.

PUNKT 16: Andre oplysninger

Alle ovenstående angivelser er baseret på vores aktuelle viden, udgør dog ikke nogen tilsikring af produktgenskaber og stifter heller ikke noget kontraktligt retsforhold.

- **Forkortelser og akronymer:**
- ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
- IMDG: International Maritime Code for Dangerous Goods
- IATA: International Air Transport Association
- GHS: Globally Harmonised System of Classification and Labelling of Chemicals
- EINECS: European Inventory of Existing Commercial Chemical Substances
- CAS: Chemical Abstracts Service (division of the American Chemical Society)
- Måleteknisk Arbejdshygiejnisk Luftbehov
- LC50: Lethal concentration, 50 percent
- LD50: Lethal dose, 50 percent

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*PBT: Persistent, Bioaccumulative and Toxic**vPvB: very Persistent and very Bioaccumulative**Flam. Liq. 2: Brandfarlige væsker – Kategori 2**Acute Tox. 4: Akut toksicitet – Kategori 4**Eye Irrit. 2: Alvorlige øjenskader/øjenirritation – Kategori 2**STOT SE 3: Specifik målorgantoksicitet (enkelt eksponering) – Kategori 3*

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RUBRIEK 1: Identificatie van de stof of het mengsel en van de vennootschap/onderneming

- **1.1 Productidentificatie**
- **Handelsnaam:** aceton
- **Artikelnummer:** 10000, 10014, 10010, 10012
- **CAS-nummer:**
67-64-1
- **EC-nummer:**
200-662-2
- **Catalogusnummer:**
606-001-00-8
- **1.2 Relevant geïdentificeerd gebruik van de stof of het mengsel en ontraden gebruik**
Geen verdere relevante informatie verkrijgbaar.
- **Toepassing van de stof / van de bereiding** Laboratoriumchemicaliën
- **1.3 Details betreffende de verstrekker van het veiligheidsinformatieblad**
- **Fabrikant/leverancier:**
Electron Microscopy Sciences
1560 Industry Road
USA-Hatfield, PA 19440
Tel: 215-412-8400 Fax: 215-412-8450
email: sgkcck@aol.com
www.emsdiasum.com
- **Aurion**
Binnenhaven 5
6709 PD Wageningen
The Netherlands
Tel: 31 317 415094
Fax: 31 317 415955
email: info@aurion.nl
- **Inlichtinggevendende sector:** Product safety department
- **1.4 Telefoonnummer voor noodgevallen:**
ChemTrec 1-800-424-9300 Contract CCN7661
1-703-527-3887

RUBRIEK 2: Identificatie van de gevaren

- **2.1 Indeling van de stof of het mengsel**
- **Indeling overeenkomstig Verordening (EG) nr. 1272/2008**



GHS02 vlam

Flam. Liq. 2 H225 Licht ontvlambare vloeistof en damp.



GHS07

Acute Tox. 4 H302 Schadelijk bij inslikken.

Eye Irrit. 2 H319 Veroorzaakt ernstige oogirritatie.

STOT SE 3 H336 Kan slaperigheid of duizeligheid veroorzaken.

- **2.2 Etiketteringselementen**
- **Etikettering overeenkomstig Verordening (EG) nr. 1272/2008**
De stof product is geclassificeerd en geëtiketteerd volgens de CLP-verordening.

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· Gevarenpictogrammen



GHS02 GHS07

· Signaalwoord Gevaar

· Gevarenaanduidingen

H225 Licht ontvlambare vloeistof en damp.

H302 Schadelijk bij inslikken.

H319 Veroorzaakt ernstige oogirritatie.

H336 Kan slaperigheid of duizeligheid veroorzaken.

· Veiligheidsaanbevelingen

P210 Verwijderd houden van warmte, hete oppervlakken, vonken, open vuur en andere ontstekingsbronnen. Niet roken.

P241 Explosieveilige elektrische/ventilatie-/verlichtings- apparatuur gebruiken.

P303+P361+P353 BIJ CONTACT MET DE HUID (of het haar): verontreinigde kleding onmiddellijk uittrekken. Huid met water afspoelen/afdouchen.

P305+P351+P338 BIJ CONTACT MET DE OGEN: voorzichtig afspoelen met water gedurende een aantal minuten; contactlenzen verwijderen, indien mogelijk; blijven spoelen.

P405 Achter slot bewaren.

P501 De inhoud en de verpakking verwerken volgens de plaatselijke/regionale/nationale/internationale voorschriften.

· Aanvullende gegevens:

EUH066 Herhaalde blootstelling kan een droge of een gebarsten huid veroorzaken.

· 2.3 Andere gevaren

· Resultaten van PBT- en zPzB-beoordeling

· **PBT:** Niet bruikbaar.

· **zPzB:** Niet bruikbaar.

RUBRIEK 3: Samenstelling en informatie over de bestanddelen

· 3.1 Chemische karakterisering: Stoffen

· CAS-Nr. omschrijving

67-64-1 aceton

· Identificatienummer(s)

· **EC-nummer:** 200-662-2

· **Catalogusnummer:** 606-001-00-8

RUBRIEK 4: Eerstehulpmaatregelen

· 4.1 Beschrijving van de eerstehulpmaatregelen

· **Na het inademen:** Frisse lucht toedienen; bij klachten arts ontbieden.

· **Na huidcontact:** Over het algemeen is het produkt niet prikkelend voor de huid

· Na oogcontact:

De ogen gedurende verscheidene minuten onder stromend water afspoelen terwijl de oogspleet geopend blijft. Bij aanhoudende klachten een dokter raadplegen.

· **Na inslikken:** Als de klachten niet minderen, een arts raadplegen

· **4.2 Belangrijkste acute en uitgestelde symptomen en effecten** Geen verdere relevante informatie verkrijgbaar.

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- **4.3 Vermelding van de vereiste onmiddellijke medische verzorging en speciale behandeling**
Geen verdere relevante informatie verkrijgbaar.

RUBRIEK 5: Brandbestrijdingsmaatregelen

- **5.1 Blusmiddelen**
- **Geschikte blusmiddelen:**
CO₂, bluspoeder of waterstraal. Grotere brand met waterstraal bestrijden of met schuim, dat tegen alcohol bestand is.
- **5.2 Speciale gevaren die door de stof of het mengsel worden veroorzaakt**
Geen verdere relevante informatie verkrijgbaar.
- **5.3 Advies voor brandweertieners**
- **Speciale beschermende kleding:** Geen bijzondere maatregelen nodig.

RUBRIEK 6: Maatregelen bij het accidenteel vrijkomen van de stof of het mengsel

- **6.1 Persoonlijke voorzorgsmaatregelen, beschermde uitrusting en noodprocedures**
Beschermende kleding aantrekken. Niet beschermde personen op afstand houden.
- **6.2 Milieuvoorzorgsmaatregelen:**
Met veel water verdunnen.
Niet in de riolering/het oppervlaktewater/het grondwater laten terecht komen.
- **6.3 Insluitings- en reinigingsmethoden en -materiaal:**
Met vloeistofbindend materiaal (zand, bergmeel, zuurbinder, universele binder, zaagmeel) opnemen.
Voor voldoende ventilatie zorgen.
- **6.4 Verwijzing naar andere rubrieken**
Informatie inzake veilig gebruik - zie hoofdstuk 7.
Informatie inzake persoonlijke beschermingsuitrusting - zie hoofdstuk 8.
Informatie inzake berging - zie hoofdstuk 13.

RUBRIEK 7: Hantering en opslag

- **7.1 Voorzorgsmaatregelen voor het veilig hanteren van de stof of het mengsel**
Bij een deskundig gebruik zijn geen bijzondere maatregelen vereist.
- **Informatie m.b.t. brand- en ontploffingsgevaar:**
Onststekingsbronnen op afstand houden - niet roken.
Maatregelen treffen tegen ontlading van statische elektriciteit.
- **7.2 Voorwaarden voor een veilige opslag, met inbegrip van incompatibele producten**
- **Opslag:**
- **Eisen ten opzichte van opslagruimte en tanks:** Op een koele plaats bewaren.
- **Informatie m.b.t. gezamenlijke opslag:** Niet noodzakelijk.
- **Verdere inlichtingen over eisen m.b.t. de opslag:**
Tanks ondoordringbaar gesloten houden.
Koel en droog bewaren in goed gesloten vaten.
- **7.3 Specifiek eindgebruik** Geen verdere relevante informatie verkrijgbaar.

RUBRIEK 8: Maatregelen ter beheersing van blootstelling/persoonlijke bescherming

- **Aanvullende gegevens m.b.t. de inrichting van technische installaties:** Geen aanvullende gegevens. Zie 7.

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· 8.1 Controleparameters**· Bestanddelen met grenswaarden die m.b.t. de werkruimte in acht genomen moeten worden:****67-64-1 aceton**

WGW	Korte termijn waarde: 2420 mg/m ³ , 1000 ppm
	Lange termijn waarde: 1210 mg/m ³ , 500 ppm

· Aanvullende gegevens: Als basis dienden lijsten die bij opstelling geldig waren.**· 8.2 Maatregelen ter beheersing van blootstelling****· Persoonlijke beschermingsvoorzieningen:****· Algemene beschermings- en gezondheidsmaatregelen:**

Verwijderd houden van eet- en drinkwaren.

Verontreinigde kleding onmiddellijk uittrekken.

Vóór de pauze en aan het einde van werktijd handen wassen.

Aanraking met de ogen vermijden.

Aanraking met de ogen en de huid vermijden.

· Ademhalingsbescherming: Niet noodzakelijk.**· Handbescherming:**

Het handschoenmateriaal moet ondoorlatend en bestand zijn tegen het product / de stof / de bereiding.

Op grond van falende testen kan geen aanbeveling voor handschoenmateriaal voor het product / de bereiding / het chemicaliënmengsel afgegeven worden.

Kies handschoenmateriaal rekening houdend met de penetratietijden, de permeatiegraden en de degradatie.

· Handschoenmateriaal

De keuze van een geschikte handschoen is niet alleen afhankelijk van het materiaal, maar ook van andere kwaliteitskenmerken en verschilt van fabrikant tot fabrikant.

· Doordringingstijd van het handschoenmateriaal

De precieze penetratietijd kunt u te weten komen bij de handschoenfabrikant; houd er rekening mee.

· Oogbescherming:

Nauw aansluitende veiligheidsbril

RUBRIEK 9: Fysische en chemische eigenschappen**· 9.1 Informatie over fysische en chemische basiseigenschappen****· Algemene gegevens****· Voorkomen:****Vorm:** Vloeistof**Kleur:** Kleurloos**· Geur:** Acetonachtig**· Geurdrempelwaarde:** Niet bepaald.**· pH-waarde:** Niet bepaald.**· Toestandsverandering****Smelt-/vriespunt:** -94,7 °C**Beginkookpunt en kooktraject:** 56,5 °C**· Vlampunt:** -20 °C**· Ontvlambaarheid (vast, gas):** Niet bruikbaar.**· Ontstekingsstemperatuur:** 465 °C

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· Ontledingstemperatuur:	<i>Niet bepaald.</i>
· Zelfontbrandingstemperatuur:	<i>Niet bepaald.</i>
· Ontploffingseigenschappen:	<i>Het produkt is niet ontploffingsgevaarlijk, maar de vorming van ontploffingsgevaarlijke damp-/luchtmengsels is mogelijk.</i>
· Ontploffingsgrenzen:	
Onderste:	<i>2,6 Vol %</i>
Bovenste:	<i>13 Vol %</i>
· Dampspanning bij 20 °C:	<i>233 hPa</i>
· Dichtheid bij 20 °C:	<i>0,79 g/cm³</i>
· Relatieve dichtheid	<i>Niet bepaald.</i>
· Dampdichtheid	<i>Niet bepaald.</i>
· Verdampingssnelheid	<i>Niet bepaald.</i>
· Oplosbaarheid in/mengbaarheid met Water:	<i>Volledig mengbaar.</i>
· Verdelingscoëfficiënt: n-octanol/water:	<i>Niet bepaald.</i>
· Viscositeit	
Dynamisch bij 20 °C:	<i>32 mPas</i>
Kinematisch:	<i>Niet bepaald.</i>
· 9.2 Overige informatie	<i>Geen verdere relevante informatie verkrijgbaar.</i>

RUBRIEK 10: Stabiliteit en reactiviteit

- **10.1 Reactiviteit** *Geen verdere relevante informatie verkrijgbaar.*
- **10.2 Chemische stabiliteit**
- **Thermische afbraak / te vermijden omstandigheden:** *Geen afbraak bij gebruik volgens voorschrift.*
- **10.3 Mogelijke gevaarlijke reacties** *Geen gevaarlijke reacties bekend.*
- **10.4 Te vermijden omstandigheden** *Geen verdere relevante informatie verkrijgbaar.*
- **10.5 Chemisch op elkaar inwerkende materialen:** *Geen verdere relevante informatie verkrijgbaar.*
- **10.6 Gevaarlijke ontledingsproducten:** *Geen gevaarlijke ontbindingsproducten bekend.*

RUBRIEK 11: Toxicologische informatie

- **11.1 Informatie over toxicologische effecten**
- **Acute toxiciteit**
Schadelijk bij inslikken.

· **Indelingsrelevantie LD/LC50-waarden:**

Oraal	LD50	5.800 mg/kg (rat)
Dermaal	LD50	20.000 mg/kg (rabbit)

- **Primaire aandoening:**
- **Huidcorrosie/-irritatie** *Gebaseerd op beschikbare gegevens; aan de indelingscriteria is niet voldaan.*
- **Ernstig oogletsel/oogirritatie**
Veroorzaakt ernstige oogirritatie.
- **Sensibilisatie van de luchtwegen/de huid**
Gebaseerd op beschikbare gegevens; aan de indelingscriteria is niet voldaan.
- **CMR-effecten (kankerverwekkendheid, mutageniteit en giftigheid voor de voortplanting)**
- **Mutageniteit in geslachtscellen** *Gebaseerd op beschikbare gegevens; aan de indelingscriteria is niet voldaan.*

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- **Kankerverwekkendheid** Gebaseerd op beschikbare gegevens; aan de indelingscriteria is niet voldaan.
- **Giftigheid voor de voortplanting** Gebaseerd op beschikbare gegevens; aan de indelingscriteria is niet voldaan.
- **STOT bij eenmalige blootstelling**
Kan slaperigheid of duizeligheid veroorzaken.
- **STOT bij herhaalde blootstelling** Gebaseerd op beschikbare gegevens; aan de indelingscriteria is niet voldaan.
- **Gevaar bij inademing** Gebaseerd op beschikbare gegevens; aan de indelingscriteria is niet voldaan.


RUBRIEK 12: Ecologische informatie

- **12.1 Toxiciteit**
- **Aquatische toxiciteit:** Geen verdere relevante informatie verkrijgbaar.
- **12.2 Persistentie en afbreekbaarheid** Geen verdere relevante informatie verkrijgbaar.
- **12.3 Bioaccumulatie** Geen verdere relevante informatie verkrijgbaar.
- **12.4 Mobiliteit in de bodem** Geen verdere relevante informatie verkrijgbaar.
- **Verdere ecologische informatie:**
- **Algemene informatie:**
Waterbezwaarlijkheid (NL): B(4) Weinig schadelijk voor in water levende organismen
Gevaar voor water klasse 1 (D) (Lijstclassificatie): gevaar voor water klein
Niet onverdund of in grote hoeveelheden lozen in grondwater, in oppervlaktewater of in de riolering.
- **12.5 Resultaten van PBT- en zPzB-beoordeling**
- **PBT:** Niet bruikbaar.
- **zPzB:** Niet bruikbaar.
- **12.6 Andere schadelijke effecten** Geen verdere relevante informatie verkrijgbaar.

RUBRIEK 13: Instructies voor verwijdering

- **13.1 Afvalverwerkingsmethoden**
- **Aanbeveling:** Mag niet tesamen met huisvuil gestort worden of in de riolering terechtkomen.
- **Niet gereinigde verpakkingen:**
- **Aanbeveling:** Afvalverwijdering volgens overheidsbepalingen.
- **Aanbevolen reinigingsmiddel:** Water, eventueel met toevoeging van reinigingsmiddelen.

RUBRIEK 14: Informatie met betrekking tot het vervoer

- **14.1 VN-nummer**
- **ADR, IMDG, IATA** UNI090
- **14.2 Juiste ladingnaam overeenkomstig de modelreglementen van de VN**
- **ADR** 1090 ACETON
- **IMDG, IATA** ACETONE
- **14.3 Transportgevaarenklasse(n)**
- **ADR, IMDG, IATA**
- 
- **klasse** 3 Brandbare vloeistoffen
- **Etiket** 3

(Vervolg op blz. 7)

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Handelsnaam: aceton

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· 14.4 Verpakkingsgroep: · ADR, IMDG, IATA	<i>II</i>
· 14.5 Milieugevaren:	<i>Niet bruikbaar.</i>
· 14.6 Bijzondere voorzorgen voor de gebruiker · Kemler-getal: · EMS-nummer: · Stowage Category	<i>Waarschuwing: Brandbare vloeistoffen</i> <i>33</i> <i>F-E,S-D</i> <i>E</i>
· 14.7 Vervoer in bulk overeenkomstig bijlage II bij Marpol en de IBC-code	<i>Niet bruikbaar.</i>
· Transport/verdere gegevens:	
· ADR · Beperkte hoeveelheden (LQ) · Uitgezonderde hoeveelheden (EQ)	<i>1L</i> <i>Code: E2</i> <i>Grootste netto hoeveelheid per binnenverpakking: 30 ml</i> <i>Grootste netto hoeveelheid per buitenverpakking: 500 ml</i>
· Vervoerscategorie · Tunnelbeperkingscode	<i>2</i> <i>D/E</i>
· IMDG · Limited quantities (LQ) · Excepted quantities (EQ)	<i>1L</i> <i>Code: E2</i> <i>Maximum net quantity per inner packaging: 30 ml</i> <i>Maximum net quantity per outer packaging: 500 ml</i>
· VN "Model Regulation":	<i>UN 1090 ACETON, 3, II</i>

RUBRIEK 15: Regelgeving

- **15.1 Specifieke veiligheids-, gezondheids- en milieureglementen en -wetgeving voor de stof of het mengsel**
- **SZW-lijst van kankerverwekkende stoffen** De stof is niet aanwezig.
- **SZW-lijst van mutagene stoffen** De stof is niet aanwezig.
- **NIET-limitatieve lijst van voor de voortplanting giftige stoffen - Vruchtbaarheid** De stof is niet aanwezig.
- **NIET-limitatieve lijst van voor de voortplanting giftige stoffen - Ontwikkeling** De stof is niet aanwezig.
- **NIET-limitatieve lijst van voor de voortplanting giftige stoffen - Borstvoeding** De stof is niet aanwezig.
- **Richtlijn 2012/18/EU**
- **Gevaarlijke stoffen die met naam genoemd worden - BIJLAGE I** De stof is niet aanwezig.
- **Seveso-categorie P5c ONTVLAMBARE VLOEISTOFFEN**
- **Drempelwaarde (ton) voor toepassing van voorschriften voor lagedrempelinrichtingen** 5.000 t
- **Drempelwaarde (ton) voor toepassing van voorschriften voor hogedrempelinrichtingen** 50.000 t
- **Verordening (EG) nr. 1907/2006 BIJLAGE XVII Beperkingsvoorwaarden:** 3, 40
- **Nationale voorschriften:**
- **Gevaarklasse v. water:** Waterbezwaarlijkheid (NL): B(4) Weinig schadelijk voor in water levende organismen
- **15.2 Chemischeveiligheidsbeoordeling:** Een chemische veiligheidsbeoordeling is niet uitgevoerd.

RUBRIEK 16: Overige informatie

Deze gegevens zijn gebaseerd op de huidige stand van onze kennis. Zij beschrijven echter geen garantie van produkteigenschappen en vestigen geen contractuele rechtsbetrekking.

(Vervolg op blz. 8)

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Afkortingen en acroniemen:

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

Flam. Liq. 2: Ontvlambare vloeistoffen – Categorie 2

Acute Tox. 4: Acute toxiciteit – Categorie 4

Eye Irrit. 2: Ernstig oogletsel/oogirritatie – Categorie 2

STOT SE 3: Specifieke doelorgaantoxiciteit bij eenmalige blootstelling – Categorie 3

NL

Fiche de données de sécurité

selon 1907/2006/CE, Article 31

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RUBRIQUE 1: Identification de la substance/du mélange et de la société/l'entreprise

- **1.1 Identificateur de produit**
- **Nom du produit:** acétone
- **Code du produit:** 10000, 10014, 10010, 10012
- **No CAS:**
67-64-1
- **Numéro CE:**
200-662-2
- **Numéro index:**
606-001-00-8
- **1.2 Utilisations identifiées pertinentes de la substance ou du mélange et utilisations déconseillées**
Pas d'autres informations importantes disponibles.
- **Emploi de la substance / de la préparation** Produits chimiques pour laboratoires
- **1.3 Renseignements concernant le fournisseur de la fiche de données de sécurité**
- **Producteur/fournisseur:**
Electron Microscopy Sciences
1560 Industry Road
USA-Hatfield, PA 19440
Tel: 215-412-8400 Fax: 215-412-8450
email: sgkcck@aol.com
www.emsdiasum.com
- **Service chargé des renseignements:** Product safety department
- **1.4 Numéro d'appel d'urgence:**
ChemTrec 1-800-424-9300 Contract CCN7661
1-703-527-3887

RUBRIQUE 2: Identification des dangers

- **2.1 Classification de la substance ou du mélange**
- **Classification selon le règlement (CE) n° 1272/2008**



GHS02 flamme

Flam. Liq. 2 H225 Liquide et vapeurs très inflammables.



GHS07

Acute Tox. 4 H302 Nocif en cas d'ingestion.

Eye Irrit. 2 H319 Provoque une sévère irritation des yeux.

STOT SE 3 H336 Peut provoquer somnolence ou vertiges.

- **2.2 Éléments d'étiquetage**
- **Étiquetage selon le règlement (CE) n° 1272/2008** La substance est classifiée et étiquetée selon le règlement CLP.
- **Pictogrammes de danger**



GHS02



GHS07

- **Mention d'avertissement** Danger

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- **Mentions de danger**

- H225 Liquide et vapeurs très inflammables.
- H302 Nocif en cas d'ingestion.
- H319 Provoque une sévère irritation des yeux.
- H336 Peut provoquer somnolence ou vertiges.

- **Conseils de prudence**

- P210 Tenir à l'écart de la chaleur, des surfaces chaudes, des étincelles, des flammes nues et de toute autre source d'inflammation. Ne pas fumer.
- P241 Utiliser du matériel électrique/de ventilation/d'éclairage antidéflagrant.
- P303+P361+P353 EN CAS DE CONTACT AVEC LA PEAU (ou les cheveux): Enlever immédiatement tous les vêtements contaminés. Rincer la peau à l'eau/Se doucher.
- P305+P351+P338 EN CAS DE CONTACT AVEC LES YEUX: rincer avec précaution à l'eau pendant plusieurs minutes. Enlever les lentilles de contact si la victime en porte et si elles peuvent être facilement enlevées. Continuer à rincer.
- P405 Garder sous clef.
- P501 Éliminer le contenu/récipient conformément à la réglementation locale/régionale/nationale/internationale.

- **Indications complémentaires:**

- EUH066 L'exposition répétée peut provoquer dessèchement ou gerçures de la peau.

- **2.3 Autres dangers**

- **Résultats des évaluations PBT et vPvB**

- **PBT:** Non applicable.
- **vPvB:** Non applicable.

RUBRIQUE 3: Composition/informations sur les composants

- **3.1 Caractérisation chimique: Substances**
- **No CAS Désignation**
67-64-1 acétone
- **Code(s) d'identification**
- **Numéro CE:** 200-662-2
- **Numéro index:** 606-001-00-8

RUBRIQUE 4: Premiers secours

- **4.1 Description des premiers secours**
- **Après inhalation:** Donner de l'air frais, consulter un médecin en cas de troubles.
- **Après contact avec la peau:** En règle générale, le produit n'irrite pas la peau.
- **Après contact avec les yeux:**
Rincer les yeux, pendant plusieurs minutes, sous l'eau courante en écartant bien les paupières. Si les troubles persistent, consulter un médecin.
- **Après ingestion:** Si les troubles persistent, consulter un médecin.
- **4.2 Principaux symptômes et effets, aigus et différés** Pas d'autres informations importantes disponibles.
- **4.3 Indication des éventuels soins médicaux immédiats et traitements particuliers nécessaires**
Pas d'autres informations importantes disponibles.

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RUBRIQUE 5: Mesures de lutte contre l'incendie

- **5.1 Moyens d'extinction**
- **Moyens d'extinction:**
CO₂, poudre d'extinction ou eau pulvérisée. Combattre les foyers importants avec de l'eau pulvérisée ou de la mousse résistant à l'alcool.
- **5.2 Dangers particuliers résultant de la substance ou du mélange**
Pas d'autres informations importantes disponibles.
- **5.3 Conseils aux pompiers**
- **Équipement spécial de sécurité:** Aucune mesure particulière n'est requise.

RUBRIQUE 6: Mesures à prendre en cas de dispersion accidentelle

- **6.1 Précautions individuelles, équipement de protection et procédures d'urgence**
Porter un équipement de sécurité. Eloigner les personnes non protégées.
- **6.2 Précautions pour la protection de l'environnement:**
Diluer avec beaucoup d'eau.
Ne pas rejeter dans les canalisations, dans les eaux de surface et dans les nappes d'eau souterraines.
- **6.3 Méthodes et matériel de confinement et de nettoyage:**
Recueillir les liquides à l'aide d'un produit absorbant (sable, kieselguhr, neutralisant d'acide, liant universel, sciure).
Assurer une aération suffisante.
- **6.4 Référence à d'autres rubriques**
Afin d'obtenir des informations pour une manipulation sûre, consulter le chapitre 7.
Afin d'obtenir des informations sur les équipements de protection personnels, consulter le chapitre 8.
Afin d'obtenir des informations sur l'élimination, consulter le chapitre 13.

RUBRIQUE 7: Manipulation et stockage

- **7.1 Précautions à prendre pour une manipulation sans danger**
Aucune mesure particulière n'est nécessaire en cas de bonne utilisation.
- **Préventions des incendies et des explosions:**
Tenir à l'abri des sources d'inflammation - ne pas fumer.
Prendre des mesures contre les charges électrostatiques.
- **7.2 Conditions d'un stockage sûr, y compris d'éventuelles incompatibilités**
- **Stockage:**
- **Exigences concernant les lieux et conteneurs de stockage:** Stocker dans un endroit frais.
- **Indications concernant le stockage commun:** Pas nécessaire.
- **Autres indications sur les conditions de stockage:**
Tenir les emballages hermétiquement fermés.
Stocker au frais et au sec dans des fûts bien fermés.
- **7.3 Utilisation(s) finale(s) particulière(s)** Pas d'autres informations importantes disponibles.

RUBRIQUE 8: Contrôles de l'exposition/protection individuelle

- **Indications complémentaires pour l'agencement des installations techniques:**
Sans autre indication, voir point 7.

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Nom du produit: **acétone**

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· 8.1 Paramètres de contrôle

· Composants présentant des valeurs-seuil à surveiller par poste de travail:

67-64-1 acétone

VME	Valeur momentanée: 2420 mg/m ³ , 1000 ppm
	Valeur à long terme: 1210 mg/m ³ , 500 ppm

· Remarques supplémentaires:

Le présent document s'appuie sur les listes en vigueur au moment de son élaboration.

· 8.2 Contrôles de l'exposition

· Equipement de protection individuel:

· Mesures générales de protection et d'hygiène:

Tenir à l'écart des produits alimentaires, des boissons et de la nourriture pour animaux.

Retirer immédiatement les vêtements souillés ou humectés.

Se laver les mains avant les pauses et en fin de travail.

Eviter tout contact avec les yeux.

Eviter tout contact avec les yeux et avec la peau.

· Protection respiratoire: N'est pas nécessaire.

· Protection des mains:

Le matériau des gants doit être imperméable et résistant au produit / à la substance / à la préparation.

À cause du manque de tests, aucune recommandation pour un matériau de gants pour le produit / la préparation / le mélange de produits chimiques ne peut être donnée.

Choix du matériau des gants en fonction des temps de pénétration, du taux de perméabilité et de la dégradation.

· Matériau des gants

Le choix de gants appropriés ne dépend pas seulement du matériau, mais également d'autres critères de qualité qui peuvent varier d'un fabricant à l'autre.

· Temps de pénétration du matériau des gants

Le temps de pénétration exact est à déterminer par le fabricant des gants de protection et à respecter.

· Protection des yeux:



Lunettes de protection hermétiques

RUBRIQUE 9: Propriétés physiques et chimiques

· 9.1 Informations sur les propriétés physiques et chimiques essentielles

· Indications générales

· Aspect:

Forme:	Liquide
Couleur:	Incolore
Odeur:	Genre acétone
Seuil olfactif:	Non déterminé.

· valeur du pH: Non déterminé.

· Changement d'état

Point de fusion/point de congélation:	-94,7 °C
Point initial d'ébullition et intervalle d'ébullition:	56,5 °C

· Point d'éclair -20 °C

· Inflammabilité (solide, gaz): Non applicable.

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Nom du produit: acétone

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· Température d'inflammation:	465 °C
· Température de décomposition:	Non déterminé.
· Température d'auto-inflammabilité:	Non déterminé.
· Propriétés explosives:	Le produit n'est pas explosif; toutefois, des mélanges explosifs vapeur-air peuvent se former.
· Limites d'explosion:	
Inférieure:	2,6 Vol %
Supérieure:	13 Vol %
· Pression de vapeur à 20 °C:	233 hPa
· Densité à 20 °C:	0,79 g/cm ³
· Densité relative	Non déterminé.
· Densité de vapeur:	Non déterminé.
· Taux d'évaporation:	Non déterminé.
· Solubilité dans/miscibilité avec l'eau:	Entièrement miscible
· Coefficient de partage: n-octanol/eau:	Non déterminé.
· Viscosité:	
Dynamique à 20 °C:	32 mPas
Cinématique:	Non déterminé.
· 9.2 Autres informations	Pas d'autres informations importantes disponibles.

RUBRIQUE 10: Stabilité et réactivité

- **10.1 Réactivité** Pas d'autres informations importantes disponibles.
- **10.2 Stabilité chimique**
- **Décomposition thermique/conditions à éviter:** Pas de décomposition en cas d'usage conforme.
- **10.3 Possibilité de réactions dangereuses** Aucune réaction dangereuse connue.
- **10.4 Conditions à éviter** Pas d'autres informations importantes disponibles.
- **10.5 Matières incompatibles:** Pas d'autres informations importantes disponibles.
- **10.6 Produits de décomposition dangereux:** Pas de produits de décomposition dangereux connus

RUBRIQUE 11: Informations toxicologiques

- **11.1 Informations sur les effets toxicologiques**
- **Toxicité aiguë**
Nocif en cas d'ingestion.

· **Valeurs LD/LC50 déterminantes pour la classification:**

Oral	LD50	5.800 mg/kg (rat)
Dermique	LD50	20.000 mg/kg (lapin)

- **Effet primaire d'irritation:**
- **Corrosion cutanée/irritation cutanée**
Compte tenu des données disponibles, les critères de classification ne sont pas remplis.
- **Lésions oculaires graves/irritation oculaire**
Provoque une sévère irritation des yeux.

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- **Sensibilisation respiratoire ou cutanée**
Compte tenu des données disponibles, les critères de classification ne sont pas remplis.
- **Effets CMR (cancérogène, mutagène et toxique pour la reproduction)**
- **Mutagenicité sur les cellules germinales**
Compte tenu des données disponibles, les critères de classification ne sont pas remplis.
- **Cancérogénicité** Compte tenu des données disponibles, les critères de classification ne sont pas remplis.
- **Toxicité pour la reproduction**
Compte tenu des données disponibles, les critères de classification ne sont pas remplis.
- **Toxicité spécifique pour certains organes cibles - exposition unique**
Peut provoquer somnolence ou vertiges.
- **Toxicité spécifique pour certains organes cibles - exposition répétée**
Compte tenu des données disponibles, les critères de classification ne sont pas remplis.
- **Danger par aspiration** Compte tenu des données disponibles, les critères de classification ne sont pas remplis.

RUBRIQUE 12: Informations écologiques

- **12.1 Toxicité**
- **Toxicité aquatique:** Pas d'autres informations importantes disponibles.
- **12.2 Persistance et dégradabilité** Pas d'autres informations importantes disponibles.
- **12.3 Potentiel de bioaccumulation** Pas d'autres informations importantes disponibles.
- **12.4 Mobilité dans le sol** Pas d'autres informations importantes disponibles.
- **Autres indications écologiques:**
- **Indications générales:**
Catégorie de pollution des eaux 1 (D) (classification selon liste): peu polluant
Ne pas laisser le produit, non dilué ou en grande quantité, pénétrer la nappe phréatique, les eaux ou les canalisations.
- **12.5 Résultats des évaluations PBT et VPVB**
- **PBT:** Non applicable.
- **vPvB:** Non applicable.
- **12.6 Autres effets néfastes** Pas d'autres informations importantes disponibles.

RUBRIQUE 13: Considérations relatives à l'élimination

- **13.1 Méthodes de traitement des déchets**
- **Recommandation:** Ne doit pas être évacué avec les ordures ménagères. Ne pas laisser pénétrer dans les égouts.
- **Emballages non nettoyés:**
- **Recommandation:** Evacuation conformément aux prescriptions légales.
- **Produit de nettoyage recommandé:** Eau, éventuellement avec des produits de nettoyage

RUBRIQUE 14: Informations relatives au transport

- | | |
|--|--------------|
| · 14.1 Numéro ONU | |
| · ADR, IMDG, IATA | UN1090 |
| · 14.2 Désignation officielle de transport de l'ONU | |
| · ADR | 1090 ACÉTONE |
| · IMDG, IATA | ACETONE |

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· **14.3 Classe(s) de danger pour le transport**

· ADR, IMDG, IATA



· **Classe** 3 Liquides inflammables.
 · **Étiquette** 3

· **14.4 Groupe d'emballage**

· ADR, IMDG, IATA II

· **14.5 Dangers pour l'environnement:**

Non applicable.

· **14.6 Précautions particulières à prendre par l'utilisateur**

Attention: Liquides inflammables.

· **Indice Kemler:**

33

· **No EMS:**

F-E,S-D

· **Stowage Category**

E

· **14.7 Transport en vrac conformément à l'annexe II de la convention Marpol et au recueil IBC**

Non applicable.

· **Indications complémentaires de transport:**

· **ADR**

· **Quantités limitées (LQ)**

1L

· **Quantités exceptées (EQ)**

Code: E2

Quantité maximale nette par emballage intérieur: 30 ml

Quantité maximale nette par emballage extérieur: 500 ml

· **Catégorie de transport**

2

· **Code de restriction en tunnels**

D/E

· **IMDG**

· **Limited quantities (LQ)**

1L

· **Excepted quantities (EQ)**

Code: E2

Maximum net quantity per inner packaging: 30 ml

Maximum net quantity per outer packaging: 500 ml

· **"Règlement type" de l'ONU:**

UN 1090 ACÉTONE, 3, II

RUBRIQUE 15: Informations relatives à la réglementation

· **15.1 Réglementations/législation particulières à la substance ou au mélange en matière de sécurité, de santé et d'environnement**

· **Directive 2012/18/UE**

· **Substances dangereuses désignées - ANNEXE I** la substance n'est pas comprise

· **Catégorie SEVESO P5c LIQUIDES INFLAMMABLES**

· **Quantité seuil (tonnes) pour l'application des exigences relatives au seuil bas** 5.000 t

· **Quantité seuil (tonnes) pour l'application des exigences relatives au seuil haut** 50.000 t

· **RÈGLEMENT (CE) N° 1907/2006 ANNEXE XVII** Conditions de limitation: 3, 40

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· 15.2 Évaluation de la sécurité chimique: Une évaluation de la sécurité chimique n'a pas été réalisée.

RUBRIQUE 16: Autres informations

Ces indications sont fondées sur l'état actuel de nos connaissances, mais ne constituent pas une garantie quant aux propriétés du produit et ne donnent pas lieu à un rapport juridique contractuel.

· Acronymes et abréviations:

ADR: Accord européen sur le transport des marchandises dangereuses par Route

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

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Flam. Liq. 2: Liquides inflammables – Catégorie 2

Acute Tox. 4: Toxicité aiguë – Catégorie 4

Eye Irrit. 2: Lésions oculaires graves/irritation oculaire – Catégorie 2

STOT SE 3: Toxicité spécifique pour certains organes cibles (exposition unique) – Catégorie 3

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Sicherheitsdatenblatt

gemäß 1907/2006/EG, Artikel 31

Druckdatum: 11.09.2018

überarbeitet am: 11.09.2018

ABSCHNITT 1: Bezeichnung des Stoffs beziehungsweise des Gemischs und des Unternehmens

· **1.1 Produktidentifikator**

· **Handelsname:** Aceton

· **Artikelnummer:** 10000, 10014, 10010, 10012

· **CAS-Nummer:**

67-64-1

· **EG-Nummer:**

200-662-2

· **Indexnummer:**

606-001-00-8

· **1.2 Relevante identifizierte Verwendungen des Stoffs oder Gemischs und Verwendungen, von denen abgeraten wird**

Keine weiteren relevanten Informationen verfügbar.

· **Verwendung des Stoffes / des Gemisches** Laborchemikalien

· **1.3 Einzelheiten zum Lieferanten, der das Sicherheitsdatenblatt bereitstellt**

· **Hersteller/Lieferant:**

Electron Microscopy Sciences

1560 Industry Road

USA-Hatfield, PA 19440

Tel: 215-412-8400 Fax: 215-412-8450

email: sgkcck@aol.com

www.emsdiasum.com

Science Services GmbH

Unterhachinger Str. 75

81737 München Germany

Tel: +49(0)89 18 93 668-0

safety@scienceservices.de

Deutschland: +49 (0)89 19240, 24h Giftnotruf Munchen, www.toxinfo.org

Osterreich: +43 1406 43 43, Gesundheit Osterreich GmbH, 24 h

· **Auskunftgebender Bereich:** Product safety department

· **1.4 Notrufnummer:**

ChemTrec 1-800-424-9300 Contract CCN7661

1-703-527-3887

ABSCHNITT 2: Mögliche Gefahren

· **2.1 Einstufung des Stoffs oder Gemischs**

· **Einstufung gemäß Verordnung (EG) Nr. 1272/2008**



GHS02 Flamme

Flam. Liq. 2 H225 Flüssigkeit und Dampf leicht entzündbar.



GHS07

Acute Tox. 4 H302 Gesundheitsschädlich bei Verschlucken.

Eye Irrit. 2 H319 Verursacht schwere Augenreizung.

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STOT SE 3 H336 Kann Schläfrigkeit und Benommenheit verursachen.

· 2.2 Kennzeichnungselemente

· Kennzeichnung gemäß Verordnung (EG) Nr. 1272/2008

Der Stoff ist gemäß CLP-Verordnung eingestuft und gekennzeichnet.

· Gefahrenpiktogramme



GHS02 GHS07

· Signalwort Gefahr

· Gefahrenhinweise

H225 Flüssigkeit und Dampf leicht entzündbar.

H302 Gesundheitsschädlich bei Verschlucken.

H319 Verursacht schwere Augenreizung.

H336 Kann Schläfrigkeit und Benommenheit verursachen.

· Sicherheitshinweise

P210 Von Hitze, heißen Oberflächen, Funken, offenen Flammen und anderen Zündquellen fernhalten. Nicht rauchen.

P241 Explosionsgeschützte elektrische Geräte/Lüftungsanlagen/Beleuchtungsanlagen verwenden.

P303+P361+P353 BEI BERÜHRUNG MIT DER HAUT (oder dem Haar): Alle kontaminierten Kleidungsstücke sofort ausziehen. Haut mit Wasser abwaschen/duschen.

P305+P351+P338 BEI KONTAKT MIT DEN AUGEN: Einige Minuten lang behutsam mit Wasser spülen. Eventuell vorhandene Kontaktlinsen nach Möglichkeit entfernen. Weiter spülen.

P405 Unter Verschluss aufbewahren.

P501 Entsorgung des Inhalts / des Behälters gemäß den örtlichen / regionalen / nationalen / internationalen Vorschriften.

· Zusätzliche Angaben:

EUH066 Wiederholter Kontakt kann zu spröder oder rissiger Haut führen.

· 2.3 Sonstige Gefahren

· Ergebnisse der PBT- und vPvB-Beurteilung

· **PBT:** Nicht anwendbar.

· **vPvB:** Nicht anwendbar.

ABSCHNITT 3: Zusammensetzung/Angaben zu Bestandteilen

· 3.1 Chemische Charakterisierung: Stoffe

· CAS-Nr. Bezeichnung

67-64-1 Aceton

· Identifikationsnummer(n)

· **EG-Nummer:** 200-662-2

· **Indexnummer:** 606-001-00-8

ABSCHNITT 4: Erste-Hilfe-Maßnahmen

· 4.1 Beschreibung der Erste-Hilfe-Maßnahmen

· **Nach Einatmen:** Frischluftzufuhr, bei Beschwerden Arzt aufsuchen.

· **Nach Hautkontakt:** Im allgemeinen ist das Produkt nicht hautreizend.

· Nach Augenkontakt:

Augen mehrere Minuten bei geöffnetem Lidspalt unter fließendem Wasser spülen. Bei anhaltenden Beschwerden Arzt konsultieren.

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- **Nach Verschlucken:** Bei anhaltenden Beschwerden Arzt konsultieren.
- **4.2 Wichtigste akute und verzögert auftretende Symptome und Wirkungen**
Keine weiteren relevanten Informationen verfügbar.
- **4.3 Hinweise auf ärztliche Soforthilfe oder Spezialbehandlung**
Keine weiteren relevanten Informationen verfügbar.

ABSCHNITT 5: Maßnahmen zur Brandbekämpfung

- **5.1 Löschmittel**
- **Geeignete Löschmittel:**
CO₂, Löschpulver oder Wassersprühstrahl. Größeren Brand mit Wassersprühstrahl oder alkoholbeständigem Schaum bekämpfen.
- **5.2 Besondere vom Stoff oder Gemisch ausgehende Gefahren**
Keine weiteren relevanten Informationen verfügbar.
- **5.3 Hinweise für die Brandbekämpfung**
- **Besondere Schutzausrüstung:** Keine besonderen Maßnahmen erforderlich.

ABSCHNITT 6: Maßnahmen bei unbeabsichtigter Freisetzung

- **6.1 Personenbezogene Vorsichtsmaßnahmen, Schutzausrüstungen und in Notfällen anzuwendende Verfahren**
Schutzausrüstung tragen. Ungeschützte Personen fernhalten.
- **6.2 Umweltschutzmaßnahmen:**
Mit viel Wasser verdünnen.
Nicht in die Kanalisation/Oberflächenwasser/Grundwasser gelangen lassen.
- **6.3 Methoden und Material für Rückhaltung und Reinigung:**
Mit flüssigkeitsbindendem Material (Sand, Kieselgur, Säurebinder, Universalbinder, Sägemehl) aufnehmen.
Für ausreichende Lüftung sorgen.
- **6.4 Verweis auf andere Abschnitte**
Informationen zur sicheren Handhabung siehe Abschnitt 7.
Informationen zur persönlichen Schutzausrüstung siehe Abschnitt 8.
Informationen zur Entsorgung siehe Abschnitt 13.

ABSCHNITT 7: Handhabung und Lagerung

- **7.1 Schutzmaßnahmen zur sicheren Handhabung**
Bei sachgemäßer Verwendung keine besonderen Maßnahmen erforderlich.
- **Hinweise zum Brand- und Explosionsschutz:**
Zündquellen fernhalten - nicht rauchen.
Maßnahmen gegen elektrostatische Aufladung treffen.
- **7.2 Bedingungen zur sicheren Lagerung unter Berücksichtigung von Unverträglichkeiten**
- **Lagerung:**
- **Anforderung an Lagerräume und Behälter:** An einem kühlen Ort lagern.
- **Zusammenlagerungshinweise:** Nicht erforderlich.
- **Weitere Angaben zu den Lagerbedingungen:**
Behälter dicht geschlossen halten.
In gut verschlossenen Gebinden kühl und trocken lagern.
- **Lagerklasse:**
- **Klassifizierung nach Betriebssicherheitsverordnung (BetrSichV):** Entzündbare Flüssigkeiten

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· **7.3 Spezifische Endanwendungen** Keine weiteren relevanten Informationen verfügbar.

ABSCHNITT 8: Begrenzung und Überwachung der Exposition/Persönliche Schutzausrüstungen

· **Zusätzliche Hinweise zur Gestaltung technischer Anlagen:** Keine weiteren Angaben, siehe Abschnitt 7.· **8.1 Zu überwachende Parameter**· **Bestandteile mit arbeitsplatzbezogenen, zu überwachenden Grenzwerten:****67-64-1 Aceton**

AGW	Langzeitwert: 1200 mg/m ³ , 500 ml/m ³ 2(1);AGS, DFG, EU, Y
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· **Bestandteile mit biologischen Grenzwerten:****67-64-1 Aceton**

BGW	80 mg/l Untersuchungsmaterial: Urin Probennahmezeitpunkt: Expositionsende bzw. Schichtende Parameter: Aceton
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· **Zusätzliche Hinweise:** Als Grundlage dienen die bei der Erstellung gültigen Listen.· **8.2 Begrenzung und Überwachung der Exposition**· **Persönliche Schutzausrüstung:**· **Allgemeine Schutz- und Hygienemaßnahmen:**

Von Nahrungsmitteln, Getränken und Futtermitteln fernhalten.

Beschmutzte, getränkte Kleidung sofort ausziehen.

Vor den Pausen und bei Arbeitsende Hände waschen.

Berührung mit den Augen vermeiden.

Berührung mit den Augen und der Haut vermeiden.

· **Atemschutz:** Nicht erforderlich.· **Handschutz:**

Das Handschuhmaterial muss undurchlässig und beständig gegen das Produkt / den Stoff / die Zubereitung sein.

Aufgrund fehlender Tests kann keine Empfehlung zum Handschuhmaterial für das Produkt / die Zubereitung / das Chemikaliengemisch abgegeben werden.

Auswahl des Handschuhmaterials unter Beachtung der Durchbruchzeiten, Permeationsraten und der Degradation.

· **Handschuhmaterial**

Die Auswahl eines geeigneten Handschuhs ist nicht nur vom Material, sondern auch von weiteren Qualitätsmerkmalen abhängig und von Hersteller zu Hersteller unterschiedlich.

· **Durchdringungszeit des Handschuhmaterials**

Die genaue Durchbruchzeit ist beim Schutzhandschuhhersteller zu erfahren und einzuhalten.

· **Augenschutz:**

Dichtschließende Schutzbrille

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ABSCHNITT 9: Physikalische und chemische Eigenschaften

· 9.1 Angaben zu den grundlegenden physikalischen und chemischen Eigenschaften

· Allgemeine Angaben

· Aussehen:

Form: Flüssigkeit

Farbe: Farblos

· **Geruch:** Acetonartig

· **Geruchsschwelle:** Nicht bestimmt.

· **pH-Wert:** Nicht bestimmt.

· Zustandsänderung

Schmelzpunkt/Gefrierpunkt: -94,7 °C

Siedebeginn und Siedebereich: 56,5 °C

· **Flammpunkt:** -20 °C

· **Entzündbarkeit (fest, gasförmig):** Nicht anwendbar.

· **Zündtemperatur:** 465 °C

· **Zersetzungstemperatur:** Nicht bestimmt.

· **Selbstentzündungstemperatur:** Nicht bestimmt.

· **Explosive Eigenschaften:** Das Produkt ist nicht explosionsgefährlich, jedoch ist die Bildung explosionsgefährlicher Dampf-/Luftgemische möglich.

· Explosionsgrenzen:

Untere: 2,6 Vol %

Obere: 13 Vol %

· **Dampfdruck bei 20 °C:** 233 hPa

· **Dichte bei 20 °C:** 0,79 g/cm³

· **Relative Dichte:** Nicht bestimmt.

· **Dampfdichte:** Nicht bestimmt.

· **Verdampfungsgeschwindigkeit:** Nicht bestimmt.

· Löslichkeit in / Mischbarkeit mit

Wasser: Vollständig mischbar.

· **Verteilungskoeffizient: n-Octanol/Wasser:** Nicht bestimmt.

· Viskosität:

Dynamisch bei 20 °C: 32 mPas

Kinematisch: Nicht bestimmt.

· **9.2 Sonstige Angaben:** Keine weiteren relevanten Informationen verfügbar.

ABSCHNITT 10: Stabilität und Reaktivität

· **10.1 Reaktivität:** Keine weiteren relevanten Informationen verfügbar.

· **10.2 Chemische Stabilität:**

· **Thermische Zersetzung / zu vermeidende Bedingungen:**

 Keine Zersetzung bei bestimmungsgemäßer Verwendung.

· **10.3 Möglichkeit gefährlicher Reaktionen:** Keine gefährlichen Reaktionen bekannt.

· **10.4 Zu vermeidende Bedingungen:** Keine weiteren relevanten Informationen verfügbar.

· **10.5 Unverträgliche Materialien:** Keine weiteren relevanten Informationen verfügbar.

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- **10.6 Gefährliche Zersetzungsprodukte:** Keine gefährlichen Zersetzungsprodukte bekannt.

ABSCHNITT 11: Toxikologische Angaben

- **11.1 Angaben zu toxikologischen Wirkungen**

- **Akute Toxizität**

Gesundheitsschädlich bei Verschlucken.

- **Einstufungsrelevante LD/LC50-Werte:**

Oral	LD50	5.800 mg/kg (rat)
Dermal	LD50	20.000 mg/kg (rabbit)

- **Primäre Reizwirkung:**

- **Ätz-/Reizwirkung auf die Haut** Aufgrund der verfügbaren Daten sind die Einstufungskriterien nicht erfüllt.

- **Schwere Augenschädigung/-reizung**

Verursacht schwere Augenreizung.

- **Sensibilisierung der Atemwege/Haut** Aufgrund der verfügbaren Daten sind die Einstufungskriterien nicht erfüllt.

- **CMR-Wirkungen (krebserzeugende, erbgutverändernde und fortpflanzungsgefährdende Wirkung)**

- **Keimzell-Mutagenität** Aufgrund der verfügbaren Daten sind die Einstufungskriterien nicht erfüllt.

- **Karzinogenität** Aufgrund der verfügbaren Daten sind die Einstufungskriterien nicht erfüllt.

- **Reproduktionstoxizität** Aufgrund der verfügbaren Daten sind die Einstufungskriterien nicht erfüllt.

- **Spezifische Zielorgan-Toxizität bei einmaliger Exposition**

Kann Schläfrigkeit und Benommenheit verursachen.

- **Spezifische Zielorgan-Toxizität bei wiederholter Exposition**

Aufgrund der verfügbaren Daten sind die Einstufungskriterien nicht erfüllt.

- **Aspirationsgefahr** Aufgrund der verfügbaren Daten sind die Einstufungskriterien nicht erfüllt.

ABSCHNITT 12: Umweltbezogene Angaben

- **12.1 Toxizität**

- **Aquatische Toxizität:** Keine weiteren relevanten Informationen verfügbar.

- **12.2 Persistenz und Abbaubarkeit** Keine weiteren relevanten Informationen verfügbar.

- **12.3 Bioakkumulationspotenzial** Keine weiteren relevanten Informationen verfügbar.

- **12.4 Mobilität im Boden** Keine weiteren relevanten Informationen verfügbar.

- **Weitere ökologische Hinweise:**

- **Allgemeine Hinweise:**

Wassergefährdungsklasse 1 (Listeneinstufung): schwach wassergefährdend

Nicht unverdünnt bzw. in größeren Mengen in das Grundwasser, in Gewässer oder in die Kanalisation gelangen lassen.

- **12.5 Ergebnisse der PBT- und vPvB-Beurteilung**

- **PBT:** Nicht anwendbar.

- **vPvB:** Nicht anwendbar.

- **12.6 Andere schädliche Wirkungen** Keine weiteren relevanten Informationen verfügbar.

ABSCHNITT 13: Hinweise zur Entsorgung

- **13.1 Verfahren der Abfallbehandlung**

- **Empfehlung:** Darf nicht zusammen mit Hausmüll entsorgt werden. Nicht in die Kanalisation gelangen lassen.

- **Ungereinigte Verpackungen:**

- **Empfehlung:** Entsorgung gemäß den behördlichen Vorschriften.

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· **Empfohlenes Reinigungsmittel:** Wasser, gegebenenfalls mit Zusatz von Reinigungsmitteln.

ABSCHNITT 14: Angaben zum Transport

· **14.1 UN-Nummer**
· **ADR, IMDG, IATA**

UN1090

· **14.2 Ordnungsgemäße UN-Versandbezeichnung**· **ADR**

1090 ACETON

· **IMDG, IATA**

ACETONE

· **14.3 Transportgefahrenklassen**· **ADR, IMDG, IATA**· **Klasse**

3 Entzündbare flüssige Stoffe

· **Gefahrzettel**

3

· **14.4 Verpackungsgruppe**· **ADR, IMDG, IATA**

II

· **14.5 Umweltgefahren:**

Nicht anwendbar.

· **14.6 Besondere Vorsichtsmaßnahmen für den Verwender**

Achtung: Entzündbare flüssige Stoffe

· **Kemler-Zahl:**

33

· **EMS-Nummer:**

F-E,S-D

· **Stowage Category**

E

· **14.7 Massengutbeförderung gemäß Anhang II des MARPOL-Übereinkommens und gemäß IBC-Code** Nicht anwendbar.· **Transport/weitere Angaben:**· **ADR**· **Begrenzte Menge (LQ)**

1L

· **Freigestellte Mengen (EQ)**

Code: E2

Höchste Nettomenge je Innenverpackung: 30 ml

Höchste Nettomenge je Außenverpackung: 500 ml

· **Beförderungskategorie**

2

· **Tunnelbeschränkungscode**

D/E

· **IMDG**· **Limited quantities (LQ)**

1L

· **Excepted quantities (EQ)**

Code: E2

Maximum net quantity per inner packaging: 30 ml

Maximum net quantity per outer packaging: 500 ml

· **UN "Model Regulation":**

UN 1090 ACETON, 3, II

DE

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ABSCHNITT 15: Rechtsvorschriften

- **15.1 Vorschriften zu Sicherheit, Gesundheits- und Umweltschutz/spezifische Rechtsvorschriften für den Stoff oder das Gemisch**
 - Richtlinie 2012/18/EU
 - **Namentlich aufgeführte gefährliche Stoffe - ANHANG I** Der Stoff ist nicht enthalten.
 - **Seveso-Kategorie P5c ENTZÜNDBARE FLÜSSIGKEITEN**
 - **Mengenschwelle (in Tonnen) für die Anwendung in Betrieben der unteren Klasse 5.000 t**
 - **Mengenschwelle (in Tonnen) für die Anwendung in Betrieben der oberen Klasse 50.000 t**
 - **VERORDNUNG (EG) Nr. 1907/2006 ANHANG XVII Beschränkungsbedingungen: 3, 40**
 - **Nationale Vorschriften:**
 - **Technische Anleitung Luft:**
- | Klasse | Anteil in % |
|--------|-------------|
| NK | 100,0 |
- **Wassergefährdungsklasse: WGK 1 (Listeneinstufung): schwach wassergefährdend.**
 - **15.2 Stoffsicherheitsbeurteilung: Eine Stoffsicherheitsbeurteilung wurde nicht durchgeführt.**

ABSCHNITT 16: Sonstige Angaben

Die Angaben stützen sich auf den heutigen Stand unserer Kenntnisse, sie stellen jedoch keine Zusicherung von Produkteigenschaften dar und begründen kein vertragliches Rechtsverhältnis.

- **Abkürzungen und Akronyme:**
- ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
- IMDG: International Maritime Code for Dangerous Goods
- IATA: International Air Transport Association
- GHS: Globally Harmonised System of Classification and Labelling of Chemicals
- EINECS: European Inventory of Existing Commercial Chemical Substances
- CAS: Chemical Abstracts Service (division of the American Chemical Society)
- LC50: Lethal concentration, 50 percent
- LD50: Lethal dose, 50 percent
- PBT: Persistent, Bioaccumulative and Toxic
- vPvB: very Persistent and very Bioaccumulative
- Flam. Liq. 2: Entzündbare Flüssigkeiten – Kategorie 2
- Acute Tox. 4: Akute Toxizität – Kategorie 4
- Eye Irrit. 2: Schwere Augenschädigung/Augenreizung – Kategorie 2
- STOT SE 3: Spezifische Zielorgan-Toxizität (einmalige Exposition) – Kategorie 3

Scheda di dati di sicurezza
ai sensi del regolamento 1907/2006/CE, Articolo 31

Stampato il: 11.09.2018

Revisione: 11.09.2018

SEZIONE 1: Identificazione della sostanza o della miscela e della società/impresa

· **1.1 Identificatore del prodotto**

- **Denominazione commerciale:** acetone
- **Articolo numero:** 10000, 10014, 10010, 10012
- **Numero CAS:**
67-64-1
- **Numeri CE:**
200-662-2
- **Numero indice:**
606-001-00-8

· **1.2 Usi identificati pertinenti della sostanza o della miscela e usi sconsigliati**
Non sono disponibili altre informazioni.

- **Utilizzazione della Sostanza / del Preparato** Prodotti chimici per laboratorio

· **1.3 Informazioni sul fornitore della scheda di dati di sicurezza**

· **Produttore/fornitore:**

Electron Microscopy Sciences
1560 Industry Road
USA-Hatfield, PA 19440
Tel: 215-412-8400 Fax: 215-412-8450
email: sgkcck@aol.com
www.emsdiasum.com

Societa Italiana Chimici
Via Rio Nell Ellba 140
00138 Rome, Italy
Tel: 39 06 8800211
Fax: 39 30 06 8815313
Web: www.sichim.com

- **Informazioni fornite da:** Product safety department

· **1.4 Numero telefonico di emergenza:**

ChemTrec 1-800-424-9300 Contract CCN7661
1-703-527-3887

SEZIONE 2: Identificazione dei pericoli

· **2.1 Classificazione della sostanza o della miscela**

- **Classificazione secondo il regolamento (CE) n. 1272/2008**



GHS02 fiamma

Flam. Liq. 2 H225 Liquido e vapori facilmente infiammabili.



GHS07

Acute Tox. 4 H302 Nocivo se ingerito.

Eye Irrit. 2 H319 Provoca grave irritazione oculare.

STOT SE 3 H336 Può provocare sonnolenza o vertigini.

· **2.2 Elementi dell'etichetta**

- **Etichettatura secondo il regolamento (CE) n. 1272/2008**

La sostanza è classificata ed etichettata conformemente al regolamento CLP.

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Scheda di dati di sicurezza
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Denominazione commerciale: acetone

(Segue da pagina 1)

· Pittogrammi di pericolo

GHS02 GHS07

· Avvertenza Pericolo**· Indicazioni di pericolo**

H225 Liquido e vapori facilmente infiammabili.

H302 Nocivo se ingerito.

H319 Provoca grave irritazione oculare.

H336 Può provocare sonnolenza o vertigini.

· Consigli di prudenza

P210 Tenere lontano da fonti di calore, superfici calde, scintille, fiamme libere o altre fonti di accensione. Non fumare.

P241 Utilizzare impianti elettrici/di ventilazione/d'illuminazione/a prova di esplosione.

P303+P361+P353 IN CASO DI CONTATTO CON LA PELLE (o con i capelli): togliere immediatamente tutti gli indumenti contaminati. Sciacquare la pelle/fare una doccia.

P305+P351+P338 IN CASO DI CONTATTO CON GLI OCCHI: sciacquare accuratamente per parecchi minuti. Togliere le eventuali lenti a contatto se è agevole farlo. Continuare a sciacquare.

P405 Conservare sotto chiave.

P501 Smaltire il prodotto/recipiente in conformità con le disposizioni locali / regionali / nazionali / internazionali.

· Ulteriori dati:

EUH066 L'esposizione ripetuta può provocare secchezza o screpolature della pelle.

· 2.3 Altri pericoli**· Risultati della valutazione PBT e vPvB**

· **PBT:** Non applicabile.

· **vPvB:** Non applicabile.

SEZIONE 3: Composizione/informazioni sugli ingredienti

· 3.1 Caratteristiche chimiche: Sostanze**· Numero CAS**

67-64-1 acetone

· Numeri di identificazione

· **Numeri CE:** 200-662-2

· **Numero indice:** 606-001-00-8

SEZIONE 4: Misure di primo soccorso

· 4.1 Descrizione delle misure di primo soccorso

· **Inalazione:** Portare in zona ben areata, in caso di disturbi consultare il medico.

· **Contatto con la pelle:** Generalmente il prodotto non è irritante per la pelle.

· Contatto con gli occhi:

Lavare con acqua corrente per diversi minuti tenendo le palpebre ben aperte. Se persiste il dolore consultare il medico.

· **Ingestione:** Se il dolore persiste consultare il medico.

· **4.2 Principali sintomi ed effetti, sia acuti che ritardati** Non sono disponibili altre informazioni.

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- **4.3 Indicazione dell'eventuale necessità di consultare immediatamente un medico e di trattamenti speciali**
Non sono disponibili altre informazioni.

SEZIONE 5: Misure antincendio

- **5.1 Mezzi di estinzione**
- **Mezzi di estinzione idonei:**
CO₂, polvere o acqua nebulizzata. Estinguere gli incendi di grosse dimensioni con acqua nebulizzata o con schiuma resistente all'alcool.
- **5.2 Pericoli speciali derivanti dalla sostanza o dalla miscela** Non sono disponibili altre informazioni.
- **5.3 Raccomandazioni per gli addetti all'estinzione degli incendi**
- **Mezzi protettivi specifici:** Non sono richiesti provvedimenti particolari.

SEZIONE 6: Misure in caso di rilascio accidentale

- **6.1 Precauzioni personali, dispositivi di protezione e procedure in caso di emergenza**
Indossare equipaggiamento protettivo. Allontanare le persone non equipaggiate.
- **6.2 Precauzioni ambientali:**
Diluire abbondantemente con acqua.
Impedire infiltrazioni nella fognatura/nelle acque superficiali/nelle acque freatiche.
- **6.3 Metodi e materiali per il contenimento e per la bonifica:**
Raccogliere il liquido con materiale assorbente (sabbia, tripoli, legante di acidi, legante universale, segatura).
Provvedere ad una sufficiente areazione.
- **6.4 Riferimento ad altre sezioni**
Per informazioni relative ad un manipolazione sicura, vedere capitolo 7.
Per informazioni relative all'equipaggiamento protettivo ad uso personale vedere Capitolo 8.
Per informazioni relative allo smaltimento vedere Capitolo 13.

SEZIONE 7: Manipolazione e immagazzinamento

- **7.1 Precauzioni per la manipolazione sicura** Per un uso corretto non sono necessari provvedimenti particolari.
- **Indicazioni in caso di incendio ed esplosione:**
Tenere lontano da fonti di calore, non fumare.
Adottare provvedimenti contro cariche elettrostatiche.
- **7.2 Condizioni per lo stoccaggio sicuro, comprese eventuali incompatibilità**
- **Stoccaggio:**
- **Requisiti dei magazzini e dei recipienti:** Conservare in ambiente fresco.
- **Indicazioni sullo stoccaggio misto:** Non necessario.
- **Ulteriori indicazioni relative alle condizioni di immagazzinamento:**
Mantenere i recipienti ermeticamente chiusi.
Conservare in luogo fresco e asciutto in fusti ben chiusi.
- **7.3 Usi finali particolari** Non sono disponibili altre informazioni.

SEZIONE 8: Controllo dell'esposizione/protezione individuale

- **Ulteriori indicazioni sulla struttura di impianti tecnici:** Nessun dato ulteriore, vedere punto 7.

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· 8.1 Parametri di controllo**· Componenti i cui valori limite devono essere tenuti sotto controllo negli ambienti di lavoro:****67-64-1 acetone**

TWA	Valore a breve termine: 1781 mg/m ³ , (750) ppm Valore a lungo termine: 1187 mg/m ³ , (500) ppm A4, IBE
VL	Valore a lungo termine: 1210 mg/m ³ , 500 ppm

· Componenti con valori limite biologici:**67-64-1 acetone**

IBE	50 mg/l Campioni: urine Momento del prelievo: a fine turno Indicatore biologico: acetone
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· **Ulteriori indicazioni:** Le liste valide alla data di compilazione sono state usate come base.

· 8.2 Controlli dell'esposizione**· Mezzi protettivi individuali:****· Norme generali protettive e di igiene del lavoro:**

- Tenere lontano da cibo, bevande e foraggi.
- Togliere immediatamente gli abiti contaminati.
- Lavarsi le mani prima dell'intervallo o a lavoro terminato.
- Evitare il contatto con gli occhi.
- Evitare il contatto con gli occhi e la pelle.

· **Maschera protettiva:** Non necessario.

· Guanti protettivi:

Il materiale dei guanti deve essere impermeabile e stabile contro il prodotto/ la sostanza/ la formulazione.
A causa della mancanza di tests non può essere consigliato alcun tipo di materiale per i guanti con cui manipolare il prodotto / la formulazione / la miscela di sostanze chimiche.
Scelta del materiale dei guanti in considerazione dei tempi di passaggio, dei tassi di permeazione e della degradazione.

· Materiale dei guanti

La scelta dei guanti adatti non dipende soltanto dal materiale bensì anche da altre caratteristiche di qualità variabili da un produttore a un altro.

· Tempo di permeazione del materiale dei guanti

Richiedere dal fornitore dei guanti il tempo di passaggio preciso il quale deve essere rispettato.

· Occhiali protettivi:

Occhiali protettivi a tenuta

SEZIONE 9: Proprietà fisiche e chimiche**· 9.1 Informazioni sulle proprietà fisiche e chimiche fondamentali****· Indicazioni generali****· Aspetto:**

Forma: Liquido

Colore: Incolore

· Odore: Simile all'acetone

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· Soglia olfattiva:	Non definito.
· valori di pH:	Non definito.
· Cambiamento di stato Punto di fusione/punto di congelamento:	-94,7 °C
Punto di ebollizione iniziale e intervallo di ebollizione:	56,5 °C
· Punto di infiammabilità:	-20 °C
· Infiammabilità (solidi, gas):	Non applicabile.
· Temperatura di accensione:	465 °C
· Temperatura di decomposizione:	Non definito.
· Temperatura di autoaccensione:	Non definito.
· Proprietà esplosive:	Prodotto non è esplosivo, è tuttavia possibile la formazione di miscele di vapori/aria esplosive.
· Limiti di infiammabilità: Inferiore:	2,6 Vol %
Superiore:	13 Vol %
· Tensione di vapore a 20 °C:	233 hPa
· Densità a 20 °C:	0,79 g/cm ³
· Densità relativa	Non definito.
· Densità di vapore:	Non definito.
· Velocità di evaporazione	Non definito.
· Solubilità in/Miscibilità con acqua:	Completamente miscibile.
· Coefficiente di ripartizione: n-ottanolo/acqua:	Non definito.
· Viscosità: Dinamica a 20 °C:	32 mPas
Cinematica:	Non definito.
· 9.2 Altre informazioni	Non sono disponibili altre informazioni.

SEZIONE 10: Stabilità e reattività

- **10.1 Reattività** Non sono disponibili altre informazioni.
- **10.2 Stabilità chimica**
- **Decomposizione termica/ condizioni da evitare:** Il prodotto non si decompone se utilizzato secondo le norme.
- **10.3 Possibilità di reazioni pericolose** Non sono note reazioni pericolose.
- **10.4 Condizioni da evitare** Non sono disponibili altre informazioni.
- **10.5 Materiali incompatibili:** Non sono disponibili altre informazioni.
- **10.6 Prodotti di decomposizione pericolosi:** Non sono noti prodotti di decomposizione pericolosi.

SEZIONE 11: Informazioni tossicologiche

- **11.1 Informazioni sugli effetti tossicologici**
- **Tossicità acuta**
Nocivo se ingerito.

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· Valori LD/LC50 rilevanti per la classificazione:

Orale	LD50	5.800 mg/kg (rat)
Cutaneo	LD50	20.000 mg/kg (rabbit)

- **Irritabilità primaria:**
- **Corrosione/irritazione cutanea** Basandosi sui dati disponibili i criteri di classificazione non sono soddisfatti.
- **Lesioni oculari gravi/irritazioni oculari gravi**
Provoca grave irritazione oculare.
- **Sensibilizzazione respiratoria o cutanea**
Basandosi sui dati disponibili i criteri di classificazione non sono soddisfatti.
- **Effetti CMR (cancerogenicità, mutagenicità e tossicità per la riproduzione)**
- **Mutagenicità delle cellule germinali**
Basandosi sui dati disponibili i criteri di classificazione non sono soddisfatti.
- **Cancerogenicità** Basandosi sui dati disponibili i criteri di classificazione non sono soddisfatti.
- **Tossicità per la riproduzione** Basandosi sui dati disponibili i criteri di classificazione non sono soddisfatti.
- **Tossicità specifica per organi bersaglio (STOT) - esposizione singola**
Può provocare sonnolenza o vertigini.
- **Tossicità specifica per organi bersaglio (STOT) - esposizione ripetuta**
Basandosi sui dati disponibili i criteri di classificazione non sono soddisfatti.
- **Pericolo in caso di aspirazione** Basandosi sui dati disponibili i criteri di classificazione non sono soddisfatti.

SEZIONE 12: Informazioni ecologiche

- **12.1 Tossicità**
- **Tossicità acquatica:** Non sono disponibili altre informazioni.
- **12.2 Persistenza e degradabilità** Non sono disponibili altre informazioni.
- **12.3 Potenziale di bioaccumulo** Non sono disponibili altre informazioni.
- **12.4 Mobilità nel suolo** Non sono disponibili altre informazioni.
- **Ulteriori indicazioni in materia ambientale:**
- **Ulteriori indicazioni:**
Pericolosità per le acque classe 1 (D) (Classif. secondo le liste): poco pericoloso
Non immettere nelle acque freatiche, nei corsi d'acqua o nelle fognature non diluito o in grandi quantità.
- **12.5 Risultati della valutazione PBT e vPvB**
- **PBT:** Non applicabile.
- **vPvB:** Non applicabile.
- **12.6 Altri effetti avversi** Non sono disponibili altre informazioni.

SEZIONE 13: Considerazioni sullo smaltimento

- **13.1 Metodi di trattamento dei rifiuti**
- **Consigli:** Non smaltire il prodotto insieme ai rifiuti domestici Non immettere nelle fognature.
- **Imballaggi non puliti:**
- **Consigli:** Smaltimento in conformità con le disposizioni amministrative.
- **Detergente consigliato:** Acqua eventualmente con l'aggiunta di detersivi.

SEZIONE 14: Informazioni sul trasporto

- **14.1 Numero ONU**
- **ADR, IMDG, IATA**

UN1090

(continua a pagina 7)

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· 14.2 Nome di spedizione dell'ONU

· ADR 1090 ACETONE
· IMDG, IATA ACETONE

· 14.3 Classi di pericolo connesso al trasporto

· ADR, IMDG, IATA



· Classe 3 Liquidi infiammabili
· Etichetta 3

· 14.4 Gruppo di imballaggio

· ADR, IMDG, IATA II

· 14.5 Pericoli per l'ambiente: Non applicabile.

· 14.6 Precauzioni speciali per gli utilizzatori Attenzione: Liquidi infiammabili

· Numero Kemler: 33
· Numero EMS: F-E,S-D
· Stowage Category E

· 14.7 Trasporto di rifiuti secondo l'allegato II di MARPOL ed il codice IBC

Non applicabile.

· Trasporto/ulteriori indicazioni:

· ADR

· Quantità limitate (LQ) 1L
· Quantità esenti (EQ) Codice: E2
Quantità massima netta per imballaggio interno: 30 ml
Quantità massima netta per imballaggio esterno: 500 ml

· Categoria di trasporto 2
· Codice di restrizione in galleria D/E

· IMDG

· Limited quantities (LQ) 1L
· Excepted quantities (EQ) Code: E2
Maximum net quantity per inner packaging: 30 ml
Maximum net quantity per outer packaging: 500 ml

· UN "Model Regulation": UN 1090 ACETONE, 3, II

SEZIONE 15: Informazioni sulla regolamentazione

· 15.1 Disposizioni legislative e regolamentari su salute, sicurezza e ambiente specifiche per la sostanza o la miscela

· Direttiva 2012/18/UE

· Sostanze pericolose specificate - ALLEGATO I La sostanza non è contenuta

· Categoria Seveso P5c LIQUIDI INFIAMMABILI

· Quantità limite (tonnellate) ai fini dell'applicazione dei requisiti di soglia inferiore 5.000 t

· Quantità limite (tonnellate) ai fini dell'applicazione dei requisiti di soglia superiore 50.000 t

· REGOLAMENTO (CE) n. 1907/2006 ALLEGATO XVII Restrizioni: 3, 40

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· **Disposizioni nazionali:**

· **Istruzione tecnica aria:**

Classe	quota in %
NC	100,0

· **15.2 Valutazione della sicurezza chimica:** Una valutazione della sicurezza chimica non è stata effettuata.

SEZIONE 16: Altre informazioni

I dati sono riportati sulla base delle nostre conoscenze attuali, non rappresentano tuttavia alcuna garanzia delle caratteristiche del prodotto e non motivano alcun rapporto giuridico contrattuale.

· **Abbreviazioni e acronimi:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

Flam. Liq. 2: Liquidi infiammabili – Categoria 2

Acute Tox. 4: Tossicità acuta – Categoria 4

Eye Irrit. 2: Gravi lesioni oculari/irritazione oculare – Categoria 2

STOT SE 3: Tossicità specifica per organi bersaglio (esposizione singola) – Categoria 3

물질안전보건자료 GHS에 따라

기압점: 2018.09.11

개정: 2018.09.11

1 화학제품과 회사에 관한 정보

- **제품 식별자**
 - **제품명:** Acetone, Reagent Grade
 - **상품번호:** 10000, 10014, 10010, 10012
 - **CAS-번호**
67-64-1
 - **EC 의번호:**
200-662-2
 - **색인 번호:**
606-001-00-8
 - **해당 순물질이나 혼합물의 관련 하위용도 및 사용금지용도** 추가적인 정보가 존재하지 않습니다.
 - **제품의 권고 용도와 사용상의 제한:** 실험실화 학품
 - **안전데이터표(Safety Data Sheet)내 공급업체 관련 상세 정보**
 - **제조자/수입자/유통업자 정보:**
Electron Microscopy Sciences
1560 Industry Road
USA-Hatfield, PA 19440
Tel: 215-412-8400 Fax: 215-412-8450
email: sgkcck@aol.com
www.emsdiasum.com
 - **Samchang Commercial Co., Ltd.**
Yeo Eui Do
PO Box 1110
Seoul, Korea
Tel: 82 2 703 3040
Fax: 82 2 717 3298
-
- **Daedok Science, Co. Ltd.**
34141 E10 Korea Advanced Institute of Science
Guseong-Dong, Yuseong-gu, Daejeon,
Korea
Phone: 82 42 710 2091
Fax: 82 42 367 0005
Website: www.labsmro.com
 - **추가적인 정보 획득 가능:** Product safety department
 - **비상연락 전화번호:**
ChemTrec 1-800-424-9300 Contract CCN7661
1-703-527-3887

2 유해성·위험성

- **순물질 또는 혼합물의 분류**



화염

인화성 액체 - 구분 2

H225 고인화성 액체 및 증기



급성 독성 - 경구 - 구분 4

H302 삼키면 유해함

심한 눈 손상성/눈 자극성 - 구분 2

H319 눈에 심한 자극을 일으킴

(2 쪽에 계속)

물질안전보건자료

GHS에 따라

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(1 쪽부터계속)

특정표적장기 독성 - 1회 노출 - 구분 3 H336 졸음 또는 현기증을 일으킬 수 있음

· 라벨표기 요소

· GHS 라벨 요소

본 화학물질은 화학물질의 분류 및 표기에 관한 국제조화시스템(GHS)에 따라 분류 및 표기되었습니다.

· 그림문자



GHS02 GHS07

· 신호어 위험

· 유해.위험 문구

고인화성 액체 및 증기

삼키면 유해함

눈에 심한 자극을 일으킴

졸음 또는 현기증을 일으킬 수 있음

· 예방조치 문구

열·스파크·화염·고열로부터 멀리하시오 - 금연

폭발 방지용 전기·환기·조명·장비를 사용하시오.

피부(또는 머리카락)에 묻으면 오염된 모든 의복은 벗으시오. 피부를 물로 씻으시오/샤워하시오.

눈에 묻으면 몇 분간 물로 조심해서 씻으시오. 가능하면콘택트렌즈를 제거하시오. 계속 씻으시오.

잠금장치가 있는 저장장소에 저장하시오.

현지/지역/국가/국제 규정에 따라서 내용물/용기 노출

· 기타 유해성

· PBT(잔류성, 생물농축성, 독성 물질) 및 vPvB(고 잔류성, 고 생물농축성 물질) 평가 결과

· PBT(잔류성, 생물농축성, 독성 물질): 해당사항 없음.

· vPvB(고 잔류성, 고 생물농축성 물질): 해당사항 없음.

3 구성성분의 명칭 및 함유량

· 화학적 특성: 화학물질

· CAS-번호표시

67-64-1 Acetone, Reagent Grade

· 식별 번호

· EC 의번호: 200-662-2

· 색인 번호: 606-001-00-8

4 응급조치 요령

· 응급조치요령 내용

· 흡입했을 때: 신선한 공기를 쉼, 통증이 있을 때는 의료진의 도움을 구한다.

· 피부에 접촉했을 때: 일반적으로 이제품은 피부에 자극적이지 않다.

· 눈에 들어갔을 때: 흐르는 물에 눈을 몇분동안 씻어내고나서, 증상이 지속될 경우에는 의사와 상담한다

· 먹었을 때: 증상이 지속될 경우에는 의사와 상담한다.

· 기타 의사의 주의사항:

· 가장 중요한 급·만성 증상 및 영향 추가적인 정보가 존재하지 않습니다.

· 즉각적인 의료처치 및 특별치료가 필요함을 시사하는 징후 추가적인 정보가 존재하지 않습니다.

KR

(3 쪽에계속)

물질안전보건자료

GHS에 따라

기압점: 2018.09.11

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제품명: Acetone, Reagent Grade

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5 폭발·화재시 대처방법

- 소화제
- 적절한 소화제:
이산화탄소, 진화용 석회 가루 또는 물 방사를 사용하고, 더 큰 화재는 물을 분사하거나 알코올이 함유된 거품으로 끈다.
- 본 화학물질이나 혼합물에서 발생하는 특별한 유해성 추가적인 정보가 존재하지 않습니다.
- 소방관에 대한 권고사항
- 화재 진압 시 착용할 보호구 및 예방조치: 특별한 조치가 필요없음.

6 누출 사고 시 대처방법

- 개인적 예방조치, 보호장비 및 응급처치 절차 안전장비 착용하고, 무방비의 사람은 격리시킨다.
- 환경 관련 예방조치:
많은 물로 희석시킨다.
하수도망/해수면위의물/지하수로도달하지않게한다.
- 밀폐 및 정화 방법과 소재:
액체가 혼합된 물질 (모래, 규조토, 산성 결합물, 일반 결합물, 톱밥)에 흡입되도록 한다.
충분한 환기가 되도록 한다.
- 타 섹션 참조
안전관리에 대한 정보는 제7장을 참고하십시오.
개인보호장비에 대한 정보는 제8장을 참고하십시오.
쓰레기 처리에 대한 정보는 제13장을 참고하십시오.

7 취급 및 저장방법

- 취급:
안전 취급을 위한 예방조치 올바르게 사용할 경우에는 특별한 주의가 필요없다.
- 화재 및 폭발 사고 예방대책에 관한 정보:
발화요소는 멀리둔다.금연.
정전기의 충전으로부터 보호한다.
- 혼합위험성 등 안전 저장 조건
- 보관:
안전한 저장 방법: 차가운 장소에 보관한다.
하나의 공동 보관 시설에 대한 보관 관련 정보: 필요없음
보관 조건에 관한 추가적인 정보:
용기를 새지않게 밀폐한 채 보관한다.
밀폐된 용기속에서 늘 하고 건조하게 보관한다.
구체적 최종 사용자 추가적인 정보가 존재하지 않습니다.

8 노출방지 및 개인보호구

- 첨단시설 디자인에 대한 추가정보: 더 이상 의 자료는 없음. 항목 7을 참고하십시오.
- 통제 변수

· 화학물질의 노출기준, 생물학적 노출기준 등:

67-64-1 Acetone, Reagent Grade

TLV (KR)	단기간의값: 750 ppm 장기간의값: 500 ppm
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(4 쪽에계속)

-KR-

물질안전보건자료

GHS에 따라

기압점: 2018.09.11

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제품명: Acetone, Reagent Grade

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IOELV (EU)	장기간의값: 1210 mg/m ³ , 500 ppm
PEL (US)	장기간의값: 2400 mg/m ³ , 1000 ppm
REL (US)	장기간의값: 590 mg/m ³ , 250 ppm
TLV (US)	단기간의값: 1187 mg/m ³ , 500 ppm
	장기간의값: 594 mg/m ³ , 250 ppm
	BEI

· **추가 정보:** 제조할 당시에 유효한 목록을 기초로 사용했다.

· **노출 통제**

· **개인 보호구**

· **일반적보호조치및위생조치:**

· 식료품, 음료수와 사료로부터 멀리 떨어져 두는 다.

· 더러워지거나 음식물이나 옷은 즉시 탈의한다.

· 휴식 전이나 작업이 끝날때마다 손을 씻는다.

· 눈과의 접촉을 피한다.

· 눈과 피부와의 접촉을 피한다.

· **호흡기 보호:** 필요없음.

· **손 보호:**

· 장갑재질은제품 / 원료 / 조제를투과시키지않아야하고, 내구성이있어야한다.

· 테스트를 하지 않았기 때문에 제품 / 조제 / 화학 혼합물에 적합한 장갑재질에 대한 추천이 없다.

· 투과 시간, 침투율과 저하를 고려해서 장갑 재료를 선택한다.

· **장갑의재로**

· 적합한장갑의선정은재질차이뿐아니라품질기준의차이도고려하여이루어져야하고제조업자에따라서도다르게선정되어야한다.

· **장갑재료의투과시간** 정확한관통시간은보호장갑제조자에의하여인지되고, 준수되어야한다.

· **눈 보호:**



· **확조이는보안경**

9 물리화학적 특성

· **기본 물리 및 화학적 특성에 대한 정보**

· **일반정보**

· **외형**

· 물리적 상태:

액체

· 색:

색소가 없는

· **냄새:**

아세톤성질의

· **후각역치**

알맞지 않다.

· **pH:**

알맞지 않다.

· **상태변화**

· 녹는점/어는점:

-94.7 °C

· 초기 끓는점과 끓는점 범위:

56.5 °C

· **인화점:**

-20 °C

· **인화성(고체, 기체):**

해당사항 없음.

· **점화온도:**

465 °C

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물질안전보건자료

GHS에 따라

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· 분해 온도:	알맞지않다.
· 자기점화:	알맞지않다.
· 폭발위험:	이제품은폭발위험성이없지만, 폭발가능성이있는증기화합물/공기화합물의형성가능성이있다.
· 인화 또는 폭발 범위의 상한/하한	
아래로:	2.6 Vol %
위로:	13 Vol %
· 증기압 의경우 20 °C:	233 hPa
· 밀도 의경우 20 °C:	0.79 g/cm ³
· 비중:	알맞지않다.
· 증기밀도:	알맞지않다.
· 증발 속도:	알맞지않다.
· 용해도:	
물:	완전히혼합할수있는
· n 옥탄올/물 분배계수:	알맞지않다.
· 점도:	
역학성 의경우 20 °C:	32 mPas
등점성:	알맞지않다.
· 기타 정보	추가적인 정보가 존재하지 않습니다.

10 안정성 및 반응성

- 반응성 추가적인 정보가 존재하지 않습니다.
- 화학적 안정성
- 화학적 안정성 및 유해 반응의 가능성 / 피해야 할 조건: 규정에따라사용할경우해체는없다
- 유해반응 가능성 위험한반응으로는알려지지않았다.
- 피해야 할 조건 추가적인 정보가 존재하지 않습니다.
- 혼합 금지 물질: 추가적인 정보가 존재하지 않습니다.
- 유해분해물질: 위험성있는분해물들은알려지지않았다.

11 독성에 관한 정보

- 독성학적 영향에 대한 정보
- 급성 독성:

· LD/LC50-수치에 따른 분류:

구강의	LD50	5,800 mg/kg (rat)
피부의	LD50	20,000 mg/kg (rabbit)

- 일차적 자극 효과:
- 피부 부식성 또는 자극성: 무자극
- 심한 눈 손상 또는 자극성: 자극
- 감각화: 민감한영향이없는것으로알려져있다.

KR

(6 쪽에계속)

물질안전보건자료

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제품명: Acetone, Reagent Grade

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12 환경에 미치는 영향

- **독성**
- **수생독성:** 추가적인 정보가 존재하지 않습니다.
- **지속성 및 분해성** 추가적인 정보가 존재하지 않습니다.
- **환경 시스템에서의 행동:**
- **생물농축 잠재성** 추가적인 정보가 존재하지 않습니다.
- **토양내 이동성** 추가적인 정보가 존재하지 않습니다.
- **추가적인 생태학 정보:**
- **일반 특징:**
수질오염등급 1 (목록분류): 약하게수질오염이된
희석시키지않은채대량으로지하수나, 하천으로그리고하수도망에도달하지않게한다.
- **PBT(잔류성, 생물농축성, 독성 물질) 및 vPvB(고 잔류성, 고 생물농축성 물질) 평가 결과**
- **PBT(잔류성, 생물농축성, 독성 물질):** 해당사항 없음.
- **vPvB(고 잔류성, 고 생물농축성 물질):** 해당사항 없음.
- **기타 부작용** 추가적인 정보가 존재하지 않습니다.

13 폐기시 주의사항

- **폐기물 처리 방법**
- **권고:** 생활쓰레기와함께처리되어서는안된다. 하수도망으로유입되어서는안된다.
- **비위생적 포장:**
- **권고:** 당국의지침에입각한쓰레기처리.
- **추천 세정제:** 경우에따라서세제가첨가된물

14 운송에 필요한 정보

· 유엔 번호 · ADR, IMDG, IATA	UN1090
· UN 적정 선적명 · ADR · IMDG, IATA	1090 ACETONE ACETONE
· 교통 위험 클래스 · ADR, IMDG, IATA	
	
· 등급 · 위험물 라벨	3 발화성용액 3
· 용기등급 · ADR, IMDG, IATA	II
· 환경적 유해물질:	해당사항 없음.
· 이용자 특별 예방조치 · 위험 코드: · EMS-번호:	경고: 발화성용액 33 F-E,S-D

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물질안전보건자료

GHS에 따라

기압점: 2018.09.11

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제품명: Acetone, Reagent Grade

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· Stowage Category	E
· MARPOL73/78(선박으로부터의 해양오염방지협약) 부속서2 및 IBC Code(국제선적화물코드)에 따른 벌크(bulk) 운송	해당사항 없음.
· 운 송/추가 정보:	
· ADR	
· 한정 수량 (LQ)	1L
· Excepted quantities (EQ)	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· 운송 구분	2
· 터널 제한 코드	D/E
· IMDG	
· Limited quantities (LQ)	1L
· Excepted quantities (EQ)	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· UN "모범 규제":	UN 1090 ACETONE, 3, II

15 법적 규제현황

- **산업안전보건법에 의한 규제:**
- **제조 등 금지물질:** 성분이포함 되어있지않다
- **허가대상물질:** 성분이포함 되어있지않다
- **관리대상유해물질:** 성분이포함 되어있다
- **해당 순물질 또는 혼합물에 대한 안전, 보건 및 환경 규제/법률**
- Korean Existing Chemical Inventory KE-29367
- **화학물질관리법**
- **사고대비물질** 성분이포함 되어있지않다
- **금지물질** 성분이포함 되어있지않다
- **제한물질** 성분이포함 되어있지않다
- **유독물질** 성분이포함 되어있지않다
- **허가물질** 성분이포함 되어있지않다
- **GHS 라벨 요소**
- 본 화학물질은 화학물질의 분류 및 표기에 관한 국제조화시스템(GHS)에 따라 분류 및 표기되었습니다.
- **그림문자**



GHS02 GHS07

- **신호어 위험**
- **유해.위험 문구**
고인화성 액체 및 증기
삼키면 유해함
눈에 심한 자극을 일으킴
줄음 또는 현기증을 일으킬 수 있음
- **예방조치 문구**
열·스파크·화염·고열로부터 멀리하시오 - 금연

(8 쪽에계속)

물질안전보건자료

GHS에 따라

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개정: 2018.09.11

제품명: Acetone, Reagent Grade

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폭발 방지용 전기·환기·조명·장비를 사용하십시오.
 피부(또는 머리카락)에 묻으면 오염된 모든 의복은 벗으십시오. 피부를 물로 씻으십시오/샤워하십시오.
 눈에 묻으면 몇 분간 물로 조심해서 씻으십시오. 가능하면콘택트렌즈를 제거하십시오. 계속 씻으십시오.
 잠금장치가 있는 저장장소에 저장하십시오.
 현지/지역/국가/국제 규정에 따라서 내용물/용기 노출
 · **화학물질 안전성 평가:** 화학물질 안전성 평가가 수행되지 않음

16 그 밖의 참고사항

이보고는우리지식에대한오늘날의상태에대하여평가하고있다, 하지만이보고서는생산특성에관한보증은 기술하지않았으며계약적인법률관계에기반을두고있지도않다

- **최초 작성일자:** 2018.09.11
- **개정 횟수 및 최종 개정일자:** 1 / 2018.09.11
- **약어와 두문자어:**
 - ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
 - IMDG: International Maritime Code for Dangerous Goods
 - IATA: International Air Transport Association
 - EINECS: European Inventory of Existing Commercial Chemical Substances
 - CAS: Chemical Abstracts Service (division of the American Chemical Society)
 - LC50: Lethal concentration, 50 percent
 - LD50: Lethal dose, 50 percent
 - PBT: Persistent, Bioaccumulative and Toxic
 - vPvB: very Persistent and very Bioaccumulative

KR

Helaiian Data Keselamatan menurut P.U.(A) 310/2013

Tarikh cetak 11.09.2018

Disemak semula pada 11.09.2018

1 Pengenalan bahan kimia berbahaya dan pembekal

- **Pengenal pasti produk**
- **Nama dagang:** propanon
- **Nombor artikel:** 10000, 10014, 10010, 10012
- **Nombor CAS:**
67-64-1
- **Nombor EC:**
200-662-2
- **Nombor EU:**
606-001-00-8
- **Kegunaan yang disarankan bagi bahan dan sekatan penggunaan** Tiada maklumat lanjut yang diperoleh.
- **Penggunaan bahan/sediaan** Bahan kimia makmal
- **Perincian pembekal risalah data keselamatan**
- **Pengilang/Pembekal:**
Electron Microscopy Sciences
1560 Industry Road
USA-Hatfield, PA 19440
Tel: 215-412-8400 Fax: 215-412-8450
email: sgkcck@aol.com
www.emsdiasum.com
- **Maklumat lanjut dapat diperoleh daripada:** Product safety department
- **Nombor telefon kecemasan:**
ChemTrec 1-800-424-9300 Contract CCN7661
1-703-527-3887

2 Pengenalan bahaya

- **Pengelasan bahan atau campuran**



Nyalaan

Cec. M. Bkr 2 H225 Cecair dan wap amat mudah terbakar.



Toks. Akut 4 H302 Memudaratkan jika tertelan.

Kreng. Mata 2 H319 Menyebabkan kerengsaan mata yang serius.

STOT SE 3 H336 Boleh menyebabkan mengantuk atau kepeningan.

- **Melabelkan unsur**

- **Unsur label GHS** Bahan ini dikelaskan dan dilabelkan menurut Sistem Terharmoni Global (GHS).

- **Piktogram hazard**



GHS02 GHS07

- **Perkataan isyarat Bahaya**

- **Pernyataan hazard**

Cecair dan wap amat mudah terbakar.

Memudaratkan jika tertelan.

(Bersambung ke halaman 2)

Helaian Data Keselamatan menurut P.U.(A) 310/2013

Tarikh cetak 11.09.2018

Disemak semula pada 11.09.2018

Nama dagang: propanon

(Sambungan halaman 1)

Menyebabkan kerengsaan mata yang serius.

Boleh menyebabkan mengantuk atau kepeningan.

· **Pernyataan langkah perlindungan**

Jauhkan daripada haba/percikan api/nyalaan terbuka/permukaan panas – Dilarang merokok.

Gunakan kelengkapan elektrik/pengalihudaraan/pencahayaan yang tahan letupan.

JIKA TERKENA KULIT (atau rambut): Segera tanggalkan/buka semua pakaian yang tercemar. Basuh kulit dengan air/pancuran air.

JIKA TERKENA MATA: Bilas berhati-hati dengan air selama beberapa minit. Tanggalkan kanta lekap, jika ada dan dapat dilakukan dengan mudah. Teruskan membilas.

Simpan di tempat berkunci.

Lupuskan kandungan/bekas menurut peraturan tempatan/wilayah/kebangsaan/antarabangsa.

· **Bahaya lain**

· **Keputusan penilaian PBT dan vPvB**

· **PBT:** Tidak berkenaan

· **vPvB:** Tidak berkenaan

3 Komposisi dan maklumat mengenai ramuan bahan kimia berbahaya

· **Ciri kimia: Bahan**

· **Keterangan No. CAS**

67-64-1 propanon

· **Nombor pengenpastian**

· **Nombor EC:** 200-662-2

· **Nombor EU:** 606-001-00-8

4 Langkah-langkah pertolongan cemas

· **Keterangan langkah pertolongan cemas**

· **Jika tersedut:** Berikan udara bersih, hubungi doktor jika terdapat aduan.

· **Jika terkena kulit:** Biasanya produk tidak merengsakan kulit.

· **Jika terkena mata:**

Bilas mata sambil membukanya di bawah air yang mengalir selama beberapa minit. Jika gejala berterusan, hubungi doktor.

· **Jika tertelan:** Jika gejala berterusan, hubungi doktor.

· **Maklumat untuk doktor:**

· **Gejala dan kesan paling penting, akut dan lewat** Tiada maklumat lanjut yang diperoleh.

· **Arahan bagi apa-apa rawatan perubatan dan rawatan khas yang diperlukan**

Tiada maklumat lanjut yang diperoleh.

5 Langkah-langkah pemadaman kebakaran

· **Bahan pemadam api**

· **Agen pemadam yang sesuai:**

CO₂, serbuk atau semburan air. Padam kebakaran besar dengan semburan air atau busa rintangan alkohol.

· **Bahaya khusus yang timbul daripada bahan atau campuran** Tiada maklumat lanjut yang diperoleh.

· **Panduan kepada pemadam kebakaran**

· **Kelengkapan perlindungan:** Tiada langkah khusus diperlukan.

-MY-

(Bersambung ke halaman 3)

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(Sambungan halaman 2)

6 Langkah-langkah pelepasan tidak sengaja

- **Langkah perlindungan diri, kelengkapan pelindung dan prosedur kecemasan**
Pakai kelengkapan perlindungan. Jauhkan mereka yang tidak dilindungi dari kawasan tercemar.
- **Langkah perlindungan alam sekitar:**
Cairkan dengan air yang banyak.
Jangan biarkannya memasuki pembentung/air permukaan atau tanah.
- **Kaedah dan bahan untuk pembendungan dan pembersihan:**
Serap dengan bahan cecair pengikat (pasir, diatomit, pengikat asid, pengikat semesta, habuk papan)
Pastikan pengalihudaraan mencukupi.
- **Rujukan ke bahagian lain**
Lihat Bahagian 7 untuk maklumat pengendalian yang selamat.
Lihat Bahagian 8 untuk maklumat kelengkapan perlindungan diri.
Lihat Bahagian 13 untuk maklumat pelupusan.

7 Pengendalian dan penyimpanan

- **Pengendalian:**
- **Langkah perlindungan untuk pengendalian selamat**
Tiada langkah berjaga-jaga yang khusus diperlukan jika ia digunakan dengan betul.
- **Maklumat kebakaran dan perlindungan daripada letupan:**
Jauhkan dari punca pencucuhan - Dilarang merokok.
Lindungi daripada cas-cas elektrostatik.
- **Keadaan untuk penyimpanan selamat, termasuk apa-apa ketakserasian**
- **Penyimpanan:**
- **Keperluan yang mesti dipenuhi oleh bilik stor dan ruang simpanan.** Simpan di tempat sejuk.
- **Maklumat penyimpanan di dalam satu tempat penyimpanan yang biasa:** Tidak diperlukan.
- **Maklumat lanjut tentang syarat penyimpanan:**
Pastikan bekas sentiasa bertutup rapat.
Simpan di tempat yang sejuk dan kering di dalam bekas bertutup rapat.
- **Kegunaan akhir yang khusus** Tiada maklumat lanjut yang diperolehi.

8 Kawalan pendedahan dan perlindungan diri

- **Maklumat tambahan tentang reka bentuk kemudahan teknikal:** Tiada maklumat lanjut, lihat perkara 7.

- **Parameter kawalan**

- **Ramuan dengan nilai had yang memerlukan pemantauan di tempat kerja:**

67-64-1 propanon

PEL Nilai jangka panjang: 1187 mg/m ³ , 500 ppm
--

- **Maklumat tambahan:** Senarai yang sah semasa pembuatan digunakan sebagai asas.

- **Kawalan pendedahan**

- **Kelengkapan perlindungan diri:**
- **Langkah perlindungan dan kebersihan am:**
Jauhkan daripada makanan, minuman dan makanan haiwan.
Segera tanggalkan semua pakaian yang tercemar dan kotor.
Basuh tangan sebelum berhenti rehat dan apabila kerja selesai.
Elakkan daripada terkena mata.
Elakkan daripada terkena mata dan kulit.
- **Perlindungan pernafasan:** Tidak diperlukan

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(Sambungan halaman 3)

· **Perlindungan tangan:**

Bahan sarung tangan hendaklah telus dan kalis terhadap produk/bahan/sediaan.

Oleh sebab tiada ujian yang dijalankan, maka tiada syor bagi bahan sarung tangan yang boleh diberikan untuk produk/sediaan/campuran kimia.

Pemilihan bahan sarung tangan berdasarkan waktu penembusan, kadar pembauran dan degradasi.

· **Bahan sarung tangan**

Pemilihan sarung tangan yang sesuai bukan hanya bergantung pada bahannya, tetapi juga tanda kualiti lainnya serta perbezaannya daripada satu pengeluar dengan pengeluar yang lain.

· **Jangka masa penyerapan bahan sarung tangan**

Waktu kemunculan yang tepat hendaklah diperolehi pengeluar sarung tangan pelindung dan hendaklah dipatuhi.

· **Perlindungan mata:**



Gogal bertutup rapat

9 Sifat fizikal dan kimia

· **Maklumat tentang ciri fizik dan kimia**

· **Maklumat Am**

· **Rupa:**

Bentuk:

Cecair

Warna:

Tidak berwarna

· **Bau:**

Seperti aseton

· **Ambang bau**

Tidak ditentukan.

· **Nilai pH:**

Tidak ditentukan.

· **Perubahan pada keadaan**

Takat lebur/takat beku

-94.7 °C

Takat didih awal dan julat didih

56.5 °C

· **Takat kilat:**

-20 °C

· **Kemudahbakaran (pepejal, gas)**

Tidak berkenaan

· **Suhu pencucuhan:**

465 °C

· **Suhu penguraian:**

Tidak ditentukan.

· **Suhu pengautocucuhan**

Tidak ditentukan.

· **Bahaya letupan:**

Produk tidak mudah meletup. Walau bagaimanapun, pembentukan campuran udara/wap mungkin berlaku.

· **Had letupan :**

Bawah:

2.6 Vol %

Atas:

13 Vol %

· **Tekanan wap pada 20 °C:**

233 hPa

· **Ketumpatan pada 20 °C:**

0.79 g/cm³

· **Ketumpatan bandingan**

Tidak ditentukan.

· **Ketumpatan wap**

Tidak ditentukan.

· **Kadar penyejatan**

Tidak ditentukan.

(Bersambung ke halaman 5)

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(Sambungan halaman 4)

- | | |
|--|---------------------------------------|
| · Keterlarutan dalam / Keterlarutcampuran dengan Air: | Terlarut campur sepenuhnya. |
| · Pekali sekatan: n-oktanol/air | Tidak ditentukan. |
| · Kelikatan: | |
| Dinamik pada 20 °C: | 32 mPas |
| Kinematik: | Tidak ditentukan. |
| · Maklumat lain | Tiada maklumat lanjut yang diperoleh. |

10 Kestabilan dan kereaktifan

- **Kereaktifan** Tiada maklumat lanjut yang diperoleh.
- **Kestabilan kimia**
- **Penguraian terma/keadaan yang perlu dielakkan:** Tiada penguraian jika digunakan mengikut spesifikasi.
- **Kemungkinan tindak balas berbahaya** Tiada tindak balas berbahaya yang diketahui.
- **Keadaan yang perlu dielakkan** Tiada maklumat lanjut yang diperoleh.
- **Bahan tidak serasi:** Tiada maklumat lanjut yang diperoleh.
- **Produk penguraian yang berbahaya:** Tiada produk penguraian berbahaya yang diketahui.

11 Maklumat toksikologi

- **Maklumat tentang kesan toksikologi**
- **Ketoksikan akut:**

- **Nilai LD/LC50 yang berkaitan untuk pengelasan:**

Oral	LD50	5,800 mg/kg (rat)
Derma	LD50	20,000 mg/kg (rabbit)

- **Kesan kerengsaan primer:**
- **Kakisan atau kerengsaan kulit** Tiada kesan merengsa.
- **Kerosakan atau kerengsaan mata yang serius** Kesan merengsa.
- **Pemekaan pernafasan / kulit** Tiada kesan pemekaan yang diketahui.

12 Maklumat ekologi

- **Ketoksikan**
- **Ketoksikan akuatik:** Tiada maklumat lanjut yang diperoleh.
- **Keterusan dan keterdegradasikan** Tiada maklumat lanjut yang diperoleh.
- **Kelakuan dalam sistem alam sekitar:**
- **Potensi bioakumulatif** Tiada maklumat lanjut yang diperoleh.
- **Mobiliti di dalam tanah** Tiada maklumat lanjut yang diperoleh.
- **Maklumat tambahan ekologi:**
- **Nota am:**
Bahaya air kelas 1 (Peraturan Jerman) (Penilaian mengikut senarai): sedikit berbahaya kepada air
Jangan biarkan produk yang tidak dicairkan atau dalam kuantiti yang banyak memasuki air tanah, saluran air atau sistem pembedungan.
- **Keputusan penilaian PBT dan vPvB**
- **PBT:** Tidak berkenaan
- **vPvB:** Tidak berkenaan

(Bersambung ke halaman 6)

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(Sambungan halaman 5)

· **Kesan buruk yang lain** Tiada maklumat lanjut yang diperolehi.

13 Maklumat pelupusan

- **Kaedah rawatan sisa**
- **Syor:**
Tidak boleh dilupuskan bersama dengan sampah isi rumah. Jangan biarkan produk memasuki sistem pembentukan.
- **Pembungkusan yang tidak bersih:**
- **Syor:** Pelupusan mestilah dijalankan menurut peraturan rasmi
- **Agan pencuci yang disyorkan:** Air, jika perlu, digunakan bersama dengan agan pencuci.

14 Maklumat pengangkutan

- **Nombor UN**
- **ADR, IMDG, IATA** UN1090

- **Nama penghantaran UN yang betul**
- **ADR** 1090 ACETONE
- **IMDG, IATA** ACETONE

- **pengangkutan kelas bahaya**
- **ADR, IMDG, IATA**



- **Kelas** 3 Cecair mudah terbakar.
- **Label** 3

- **Kumpulan pembungkusan**
- **ADR, IMDG, IATA** II

- **Hazard persekitaran:** Tidak berkenaan

- **Langkah perlindungan khas untuk pengguna** Amaran: Cecair mudah terbakar.
- **Kod bahaya (Kemler):** 33
- **Nombor EMS:** F-E,S-D
- **Stowage Category** E

- **Pengangkutan dalam pukal menurut Lampiran II MARPOL73/78 dan Kod IBC** Tidak berkenaan

- **Pengangkutan/Maklumat Tambahan:**

- **ADR**
- **Excepted quantities (EQ)** Code: E2
Maximum net quantity per inner packaging: 30 ml
Maximum net quantity per outer packaging: 500 ml

- **IMDG**
- **Limited quantities (LQ)** 1L

(Bersambung ke halaman 7)

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(Sambungan halaman 6)

· Excepted quantities (EQ)	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· "Peraturan Model" UN:	UN 1090 ACETONE, 3, II

15 Maklumat pengawalseliaan

- **Peraturan/undang-undang keselamatan, kesihatan dan persekitaran khusus untuk bahan atau campuran tersebut**
- **Unsur label GHS** Bahan ini dikelaskan dan dilabelkan menurut Sistem Terharmonisasi Global (GHS).
- **Piktogram hazard**



GHS02 GHS07

- **Perkataan isyarat Bahaya**
- **Pernyataan hazard**
Cecair dan wap amat mudah terbakar.
Memudaratkan jika tertelan.
Menyebabkan kerengsaan mata yang serius.
Boleh menyebabkan mengantuk atau kepeningan.
- **Pernyataan langkah perlindungan**
Jauhkan daripada haba/percikan api/nyalaan terbuka/permukaan panas – Dilarang merokok.
Gunakan kelengkapan elektrik/pengalihudaraan/pencahayaan yang tahan letupan.
JIKA TERKENA KULIT (atau rambut): Segera tanggalkan/buka semua pakaian yang tercemar. Basuh kulit dengan air/pancuran air.
JIKA TERKENA MATA: Bilas berhati-hati dengan air selama beberapa minit. Tanggalkan kanta lekap, jika ada dan dapat dilakukan dengan mudah. Teruskan membilas.
Simpan di tempat berkunci.
Lupuskan kandungan/bekas menurut peraturan tempatan/wilayah/kebangsaan/antarabangsa.
- **Penilaian keselamatan bahan kimia:** Penilaian Keselamatan Bahan Kimia belum dilakukan.

16 Maklumat lain

Maklumat ini berdasarkan maklumat kami yang terkini. Walau bagaimanapun, ini tidak akan menjadi jaminan bagi apa-apa ciri produk yang khusus dan tidak akan mewujudkan hubungan kontraktual yang sah dari segi undang-undang.

- **Singkatan dan akronim:**
ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
EINECS: European Inventory of Existing Commercial Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
Cec. M. Bkr 2: Cecair mudah terbakar – Kategori 2
Toks. Akut 4: Ketoksikan akut – Kategori 4
Kreng. Mata 2: Kerosakan mata atau kerengsaan mata yang serius – Kategori 2
STOT SE 3: Ketoksikan organ sasaran khusus (pendedahan tunggal) – Kategori 3

Karta charakterystyki

Zgodnie z 1907/2006/WE, Artykuł 31

Data druku: 11.09.2018

Aktualizacja: 11.09.2018

SEKCJA 1: Identyfikacja substancji/mieszaniny i identyfikacja przedsiębiorstwa

- **1.1 Identyfikator produktu**
- **Nazwa handlowa:** aceton
- **Numer artykułu:** 10000, 10014, 10010, 10012
- **Numer według CAS:**
67-64-1
- **Numer WE:**
200-662-2
- **Numer indeksu:**
606-001-00-8
- **1.2 Istotne zidentyfikowane zastosowania substancji lub mieszaniny oraz zastosowania odradzane**
Brak dostępnych dalszych istotnych danych
- **Zastosowanie substancji / preparatu** Odczynniki laboratoryjne
- **1.3 Dane dotyczące dostawcy karty charakterystyki**
- **Producent/Dostawca:**
Electron Microscopy Sciences
1560 Industry Road
USA-Hatfield, PA 19440
Tel: 215-412-8400 Fax: 215-412-8450
email: sgkcck@aol.com
www.emsdiasum.com
- **Komórka udzielająca informacji:** Product safety department
- **1.4 Numer telefonu alarmowego:**
ChemTrec 1-800-424-9300 Contract CCN7661
1-703-527-3887

SEKCJA 2: Identyfikacja zagrożeń

- **2.1 Klasyfikacja substancji lub mieszaniny**
- **Klasyfikacja zgodnie z rozporządzeniem (WE) nr 1272/2008**



GHS02 płomień

Flam. Liq. 2 H225 Wysoce łatwopalna ciecz i pary.



GHS07

Acute Tox. 4 H302 Działa szkodliwie po połknięciu.

Eye Irrit. 2 H319 Działa drażniąco na oczy.

STOT SE 3 H336 Może wywoływać uczucie senności lub zawroty głowy.

- **2.2 Elementy oznakowania**
- **Oznakowanie zgodnie z rozporządzeniem (WE) nr 1272/2008**
Substancja jest klasyfikowana i oznakowana zgodnie z przepisami CLP.
- **Piktogramy określające rodzaj zagrożenia**



GHS02 GHS07

- **Hasło ostrzegawcze** Niebezpieczeństwo

(ciąg dalszy na stronie 2)

Karta charakterystyki

Zgodnie z 1907/2006/WE, Artykuł 31

Data druku: 11.09.2018

Aktualizacja: 11.09.2018

Nazwa handlowa: **aceton**

(ciąg dalszy od strony 1)

- **Zwroty wskazujące rodzaj zagrożenia**
 - H225 Wysoce łatwopalna ciecz i pary.
 - H302 Działa szkodliwie po połknięciu.
 - H319 Działa drażniąco na oczy.
 - H336 Może wywoływać uczucie senności lub zawroty głowy.
- **Zwroty wskazujące środki ostrożności**
 - P210 Przechowywać z dala od źródeł ciepła, gorących powierzchni, iskrzenia, otwartego ognia i innych źródeł zapłonu. Palenie wzbronione.
 - P241 Używać elektrycznego/wentylującego/oświetleniowego/przeciwwybuchowego sprzętu.
 - P303+P361+P353 W PRZYPADKU KONTAKTU ZE SKÓRĄ (lub z włosami): Natychmiast zdjąć całą zanieczyszczoną odzież. Spłukać skórę pod strumieniem wody/prysznicem.
 - P305+P351+P338 W PRZYPADKU DOSTANIA SIĘ DO OCZU: Ostrożnie płukać wodą przez kilka minut. Wyjąć soczewki kontaktowe, jeżeli są i można je łatwo usunąć. Nadal płukać.
 - P405 Przechowywać pod zamknięciem.
 - P501 Zawartość / pojemnik usuwać zgodnie z przepisami miejscowymi / regionalnymi / narodowymi / międzynarodowymi.
- **Dane dodatkowe:**
 - EUH066 Powtarzające się narażenie może powodować wysuszenie lub pękanie skóry.
- **2.3 Inne zagrożenia**
- **Wyniki oceny właściwości PBT i vPvB**
- **PBT:** Nie nadający się do zastosowania.
- **vPvB:** Nie nadający się do zastosowania.

SEKCJA 3: Skład/informacja o składnikach

- **3.1 Charakterystyka chemiczna: Substancje**
- **Nazwa wg nr CAS**
 - 67-64-1 aceton
- **Numer(y) identyfikacyjny(e)**
- **Numer WE:** 200-662-2
- **Numer indeksu:** 606-001-00-8

SEKCJA 4: Środki pierwszej pomocy

- **4.1 Opis środków pierwszej pomocy**
- **Po wdychaniu:** Dostarczyć świeże powietrze, w razie dolegliwości wezwać lekarza.
- **Po styczności ze skórą:** Ogólnie produkt nie działa drażniąco na skórę.
- **Po styczności z okiem:**
 - Płukać oczy z otwartą powieką przez kilka minut pod bieżącą wodą. W przypadku utrzymującej się dolegliwości zasięgnąć porady lekarza.
- **Po przełknięciu:** Przy trwałych dolegliwościach porozumieć się z lekarzem.
- **4.2 Najważniejsze ostre i opóźnione objawy oraz skutki narażenia** Brak dostępnych dalszych istotnych danych
- **4.3 Wskazania dotyczące wszelkiej natychmiastowej pomocy lekarskiej i szczególnego postępowania z uszkodzonym**
 - Brak dostępnych dalszych istotnych danych

PL

(ciąg dalszy na stronie 3)

Karta charakterystyki

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Nazwa handlowa: *aceton*

(ciąg dalszy od strony 2)

SEKCJA 5: Postępowanie w przypadku pożaru

- **5.1 Środki gaśnicze**
- **Przydatne środki gaśnicze:**
CO₂, proszek gaśniczy lub strumień wody. Większy pożar zwalczać strumieniem wody lub pianą odporną na działanie alkoholu.
- **5.2 Szczególne zagrożenia związane z substancją lub mieszaniną** Brak dostępnych dalszych istotnych danych
- **5.3 Informacje dla straży pożarnej**
- **Specjalne wyposażenie ochronne:** Środki specjalne nie są konieczne.

SEKCJA 6: Postępowanie w przypadku niezamierzonego uwolnienia do środowiska

- **6.1 Indywidualne środki ostrożności, wyposażenie ochronne i procedury w sytuacjach awaryjnych**
Nosić ubranie ochronne. Osoby nie zabezpieczone przenieść w bezpieczne miejsce.
- **6.2 Środki ostrożności w zakresie ochrony środowiska:**
Rozcieńczyć dużą ilością wody.
Nie dopuścić do przeniknięcia do kanalizacji /wód powierzchniowych /wód gruntowych.
- **6.3 Metody i materiały zapobiegające rozprzestrzenianiu się skażenia i służące do usuwania skażenia:**
Zebrać za pomocą materiału wiążącego ciecz (piasek, ziemia okrzemkowa, materiał wiążący kwasy, materiał wiążący uniwersalny, trociny).
Zadbać o wystarczające przewietrzenie.
- **6.4 Odniesienia do innych sekcji**
Informacje na temat bezpiecznej obsługi patrz rozdział 7.
Informacje na temat osobistego wyposażenia ochronnego patrz rozdział 8.
Informacje na temat utylizacji patrz rozdział 13.

SEKCJA 7: Postępowanie z substancjami i mieszaninami oraz ich magazynowanie

- **7.1 Środki ostrożności dotyczące bezpiecznego postępowania**
Przy fachowym użyciu nie są potrzebne szczególne zabiegi.
- **Wskazówki dla ochrony przeciwpożarowej i przeciwybuchowej:**
Źródła zapłonu trzymać z daleka - nie palić tytoniu.
Przedsięwziąć środki przeciwko naładowaniom elektrostatycznym.
- **7.2 Warunki bezpiecznego magazynowania, w tym informacje dotyczące wszelkich wzajemnych niezgodności**
- **Składowanie:**
- **Wymagania w stosunku do pomieszczeń składowych i zbiorników:** Przechowywać w chłodnym miejscu.
- **Wskazówki odnośnie wspólnego składowania:** Nie konieczne.
- **Dalsze wskazówki odnośnie warunków składowania:**
Zbiornik trzymać szczelnie zamknięty.
Składować w dobrze zamkniętych beczkach w chłodnym i suchym miejscu.
- **7.3 Szczególne zastosowanie(-a) końcowe** Brak dostępnych dalszych istotnych danych

SEKCJA 8: Kontrola narażenia/środki ochrony indywidualnej

- **Dodatkowe wskazówki dla wykonania urządzeń technicznych:** Brak dalszych danych, patrz punkt 7.

(ciąg dalszy na stronie 4)

Karta charakterystyki

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Nazwa handlowa: *aceton*

(ciąg dalszy od strony 3)

· 8.1 Parametry dotyczące kontroli

· Składniki wraz z kontrolowanymi wartościami granicznymi zależnymi od miejsca pracy:

67-64-1 aceton

NDS	NDSCh: 1800 mg/m ³
	NDS: 600 mg/m ³

· Wskazówki dodatkowe: Podstawą były aktualnie obowiązujące wykazy.

· 8.2 Kontrola narażenia

· **Osobiste wyposażenie ochronne:**

· **Ogólne środki ochrony i higieny:**

Trzymać z dala od środków spożywczych napojów i pasz.

Zabrudzoną, nasączoną odzież natychmiast zdjąć.

Myć ręce przed przerwą i przed końcem pracy.

Unikać styczności z oczami.

Unikać styczności z oczami i skórą.

· **Ochrona dróg oddechowych:** Nie konieczne.

· **Ochrona rąk:**

Materiał, z którego wykonane są rękawice musi być nieprzepuszczalny i odporny na działanie produktu / substancji / preparatu.

Z powodu braku badań nie można podać żadnego zalecenia dotyczącego materiału dla rękawic do ochrony przed produktem / preparatem / mieszaniną substancji chemicznych.

Wybór materiału na rękawice ochronne przy uwzględnieniu czasów przebicia, szybkości przenikania i degradacji.

· **Materiał, z którego wykonane są rękawice**

Wybór odpowiednich rękawic zależy tylko od materiału, lecz także od innych cech jakościowych i zmienia się od producenta do producenta.

· **Czas penetracji dla materiału, z którego wykonane są rękawice**

Od producenta rękawic należy uzyskać informację na temat dokładnego czasu przebicia i go przestrzegać.

· **Ochrona oczu:**



Okulary ochronne szczelnie zamknięte

SEKCJA 9: Właściwości fizyczne i chemiczne

· 9.1 Informacje na temat podstawowych właściwości fizycznych i chemicznych

· **Ogólne dane**

· **Wygląd:**

Forma: Ciecz

Kolor: Bezbarwny

· **Zapach:** Acetonowy

· **Próg zapachu:** Nieokreślone.

· **Wartość pH:** Nieokreślone.

· **Zmiana stanu**

Temperatura topnienia/krzepnięcia: -94,7 °C

Początkowa temperatura wrzenia i zakres temperatur wrzenia: 56,5 °C

· **Temperatura zapłonu:** -20 °C

(ciąg dalszy na stronie 5)

Karta charakterystyki

Zgodnie z 1907/2006/WE, Artykuł 31

Data druku: 11.09.2018

Aktualizacja: 11.09.2018

Nazwa handlowa: *aceton*

(ciąg dalszy od strony 4)

· Palność (ciała stałego, gazu):	Nie nadający się do zastosowania.
· Temperatura palenia się:	465 °C
· Temperatura rozkładu:	Nieokreślone.
· Temperatura samozapłonu:	Nieokreślone.
· Właściwości wybuchowe:	Produkt nie grozi wybuchem, ale możliwe jest powstawanie par/ mieszanek powietrza groźących wybuchem.
· Granice niebezpieczeństwa wybuchu:	
Dolna:	2,6 Vol %
Górna:	13 Vol %
· Prężność par w 20 °C:	233 hPa
· Gęstość w 20 °C:	0,79 g/cm ³
· Gęstość względna	Nieokreślone.
· Gęstość par	Nieokreślone.
· Szybkość parowania	Nieokreślone.
· Rozpuszczalność w/ mieszalność z	
Woda:	W pełni mieszalny.
· Współczynnik podziału: n-oktanol/woda:	Nieokreślone.
· Lepkość:	
Dynamiczna w 20 °C:	32 mPas
Kinetyczna:	Nieokreślone.
· 9.2 Inne informacje	Brak dostępnych dalszych istotnych danych

SEKCJA 10: Stabilność i reaktywność

- **10.1 Reaktywność** Brak dostępnych dalszych istotnych danych
- **10.2 Stabilność chemiczna**
- **Rozkład termiczny/ warunki których należy unikać:** Brak rozkładu przy użyciu zgodnym z przeznaczeniem.
- **10.3 Możliwość występowania niebezpiecznych reakcji** Reakcje niebezpieczne nie są znane.
- **10.4 Warunki, których należy unikać** Brak dostępnych dalszych istotnych danych
- **10.5 Materiały niezgodne:** Brak dostępnych dalszych istotnych danych
- **10.6 Niebezpieczne produkty rozkładu:** Niebezpieczne produkty rozkładu nie są znane.

SEKCJA 11: Informacje toksykologiczne

- **11.1 Informacje dotyczące skutków toksykologicznych**

- **Toksyczność ostra**

Działa szkodliwie po połknięciu.

- **Istotne sklasyfikowane wartości LD/LC50:**

Ustne	LD50	5.800 mg/kg (rat)
Skórne	LD50	20.000 mg/kg (rabbit)

- **Pierwotne działanie drażniące: Działanie Gatunek Metoda:**

· **Działanie żrące/drażniące na skórę** W oparciu o dostępne dane, kryteria klasyfikacji nie są spełnione.

· **Poważne uszkodzenie oczu/działanie drażniące na oczy**

Działa drażniąco na oczy.

(ciąg dalszy na stronie 6)

Karta charakterystyki

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(ciąg dalszy od strony 5)

- **Działanie uczulające na drogi oddechowe lub skórę**
W oparciu o dostępne dane, kryteria klasyfikacji nie są spełnione.
- **Działanie rakotwórcze, działanie mutagenne i szkodliwe działanie na rozrodczość (CMR)**
- **Działanie mutagenne na komórki rozrodcze** W oparciu o dostępne dane, kryteria klasyfikacji nie są spełnione.
- **Rakotwórczość** W oparciu o dostępne dane, kryteria klasyfikacji nie są spełnione.
- **Szkodliwe działanie na rozrodczość** W oparciu o dostępne dane, kryteria klasyfikacji nie są spełnione.
- **Działanie toksyczne na narządy docelowe – narażenie jednorazowe**
Może wywoływać uczucie senności lub zawroty głowy.
- **Działanie toksyczne na narządy docelowe – narażenie powtarzane**
W oparciu o dostępne dane, kryteria klasyfikacji nie są spełnione.
- **Zagrożenie spowodowane aspiracją** W oparciu o dostępne dane, kryteria klasyfikacji nie są spełnione.

SEKCJA 12: Informacje ekologiczne

- **12.1 Toksyczność**
- **Toksyczność wodna:** Brak dostępnych dalszych istotnych danych
- **12.2 Trwałość i zdolność do rozkładu** Brak dostępnych dalszych istotnych danych
- **12.3 Zdolność do bioakumulacji** Brak dostępnych dalszych istotnych danych
- **12.4 Mobilność w glebie** Brak dostępnych dalszych istotnych danych
- **Dalsze wskazówki ekologiczne:**
- **Wskazówki ogólne:**
Klasa szkodliwości dla wody 1 (określenie wg. listy): w ograniczonym stopniu szkodliwy dla wody
Nie dopuścić do przedostania się w stanie nierozcieńczonym lub w dużych ilościach do wód gruntowych, wód powierzchniowych bądź do kanalizacji.
- **12.5 Wyniki oceny właściwości PBT i vPvB**
- **PBT:** Nie nadający się do zastosowania.
- **vPvB:** Nie nadający się do zastosowania.
- **12.6 Inne szkodliwe skutki działania** Brak dostępnych dalszych istotnych danych

SEKCJA 13: Postępowanie z odpadami

- **13.1 Metody unieszkodliwiania odpadów**
- **Zalecenie:**
Nie może podlegać obróbce wspólnie z odpadkami domowymi. Nie dopuścić do przedostania się do kanalizacji.
- **Opakowania nieoczyszczone:**
- **Zalecenie:** Usuwanie zgodnie z obowiązującymi przepisami.
- **Zalecany środek czyszczący:** Woda, w razie konieczności z dodatkiem środków czystości.

SEKCJA 14: Informacje dotyczące transportu

- | | |
|--|-------------|
| · 14.1 Numer UN | |
| · ADR, IMDG, IATA | UN1090 |
| · 14.2 Prawidłowa nazwa przewozowa UN | |
| · ADR | 1090 ACETON |
| · IMDG, IATA | ACETONE |

(ciąg dalszy na stronie 7)

Karta charakterystyki

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Nazwa handlowa: *aceton*

(ciąg dalszy od strony 6)

· 14.3 Klasa(-y) zagrożenia w transporcie

· ADR, IMDG, IATA



· Klasa

3 materiały ciekłe zapalne

· Nalepka

3

· 14.4 Grupa pakowania

· ADR, IMDG, IATA

II

· 14.5 Zagrożenia dla środowiska:

Nie nadający się do zastosowania.

· 14.6 Szczególne środki ostrożności dla użytkowników Uwaga: materiały ciekłe zapalne

· Liczba Kemlera:

33

· Numer EMS:

F-E,S-D

· Stowage Category

E

· 14.7 Transport luzem zgodnie z załącznikiem II do konwencji MARPOL i kodeksem IBC

Nie nadający się do zastosowania.

· Transport/ dalsze informacje:

· ADR

· Ilości ograniczone (LQ)

1L

· Ilości wyłączone (EQ)

Kod: E2

Maksymalna ilość netto na opakowanie wewnętrzne: 30 ml

Maksymalna ilość netto na opakowanie zewnętrzne: 500 ml

· Kategoria transportowa

2

· Kodów zakazu przewozu przez tunele

D/E

· IMDG

· Limited quantities (LQ)

1L

· Excepted quantities (EQ)

Code: E2

Maximum net quantity per inner packaging: 30 ml

Maximum net quantity per outer packaging: 500 ml

· UN "Model Regulation":

UN 1090 ACETON, 3, II

SEKCJA 15: Informacje dotyczące przepisów prawnych

· 15.1 Przepisy prawne dotyczące bezpieczeństwa, zdrowia i ochrony środowiska specyficzne dla substancji i mieszaniny

· Rady 2012/18/UE

· Wskazane substancje niebezpieczne - ZAŁĄCZNIK I Substancja nie zawarta

· Kategorię Seveso P5c CIECZE ŁATWOPALNE

· Ilości progowe (w tonach) wiążące się z zastosowaniem wymogów dotyczących zakładów o zwiększonym ryzyku
5.000 t· Ilości progowe (w tonach) wiążące się z zastosowaniem wymogów dotyczących zakładów o dużym ryzyku
50.000 t

· Rozporządzenie (WE) nr 1907/2006 ZAŁĄCZNIK XVII Warunki ograniczenia: 3, 40

(ciąg dalszy na stronie 8)

Karta charakterystyki

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Nazwa handlowa: *aceton*

(ciąg dalszy od strony 7)

· **15.2 Ocena bezpieczeństwa chemicznego:** Ocena Bezpieczeństwa Chemicznego nie została przeprowadzona.

SEKCJA 16: Inne informacje

Dane opierają się na dzisiejszym stanie naszej wiedzy, nie określają jednak w sposób ostateczny właściwości produkcyjnych i nie mogą być uzasadnieniem prawomocnych umów.

Skróty i akronimy:

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

Flam. Liq. 2: Substancje ciekłe łatwopalne – Kategoria 2

Acute Tox. 4: Toksyczność ostra – Kategoria 4

Eye Irrit. 2: Poważne uszkodzenie oczu/działanie drażniące na oczy – Kategoria 2

STOT SE 3: Działanie toksyczne na narządy docelowe (narażenie jednorazowe) – Kategoria 3

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SECÇÃO 1: Identificação da substância/mistura e da sociedade/empresa

- **1.1 Identificador do produto**
- **Nome comercial:** acetona
- **Código do produto:** 10000, 10014, 10010, 10012
- **Nº CAS:**
67-64-1
- **Número CE:**
200-662-2
- **Número de índice:**
606-001-00-8
- **1.2 Utilizações identificadas relevantes da substância ou mistura e utilizações desaconselhadas**
Não existe mais nenhuma informação relevante disponível.
- **Utilização da substância / da preparação** Químicos de laboratório
- **1.3 Identificação do fornecedor da ficha de dados de segurança**
- **Fabricante/fornecedor:**
Electron Microscopy Sciences
1560 Industry Road
USA-Hatfield, PA 19440
Tel: 215-412-8400 Fax: 215-412-8450
email: sgkcck@aol.com
www.emsdiasum.com
- **Entidade para obtenção de informações adicionais:** Product safety department
- **1.4 Número de telefone de emergência:**
ChemTrec 1-800-424-9300 Contract CCN7661
1-703-527-3887

SECÇÃO 2: Identificação dos perigos

- **2.1 Classificação da substância ou mistura**
- **Classificação em conformidade com o Regulamento (CE) n.º 1272/2008**



GHS02 chama

Flam. Liq. 2 H225 Líquido e vapor facilmente inflamáveis.



GHS07

Acute Tox. 4 H302 Nocivo por ingestão.
Eye Irrit. 2 H319 Provoca irritação ocular grave.
STOT SE 3 H336 Pode provocar sonolência ou vertigens.

- **2.2 Elementos do rótulo**
- **Rotulagem em conformidade com o Regulamento (CE) n.º 1272/2008**
A substância classificou-se e está etiquetado em conformidade com o regulamento CLP.
- **Pictogramas de perigo**



GHS02



GHS07

- **Palavra-sinal** Perigo

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(continuação da página 1)

- **Advertências de perigo**

- H225 Líquido e vapor facilmente inflamáveis.*

- H302 Nocivo por ingestão.*

- H319 Provoca irritação ocular grave.*

- H336 Pode provocar sonolência ou vertigens.*

- **Recomendações de prudência**

- P210 Manter afastado do calor, superfícies quentes, faíscas, chamas abertas e outras fontes de ignição. Não fumar.*

- P241 Utilizar equipamento eléctrico/de ventilação/de iluminação/à prova de explosão.*

- P303+P361+P353 SE ENTRAR EM CONTACTO COM A PELE (ou o cabelo): retirar imediatamente toda a roupa contaminada. Enxaguar a pele com água/tomar um duche.*

- P305+P351+P338 SE ENTRAR EM CONTACTO COM OS OLHOS: enxaguar cuidadosamente com água durante vários minutos. Se usar lentes de contacto, retire-as, se tal lhe for possível. Continuar a enxaguar.*

- P405 Armazenar em local fechado à chave.*

- P501 Eliminar o conteúdo/recipiente de acordo com a legislação local/regional/nacional/internacional.*

- **Indicações adicionais:**

- EUH066 Pode provocar pele seca ou gretada, por exposição repetida.*

- **2.3 Outros perigos**

- **Resultados da avaliação PBT e mPmB**

- **PBT:** Não aplicável.

- **mPmB:** Não aplicável.

SECCÃO 3: Composição/informação sobre os componentes

- **3.1 Caracterização química: Substâncias**

- **Designação CAS n°**

- 67-64-1 acetona*

- **Número(s) de identificação**

- **Número CE:** 200-662-2

- **Número de índice:** 606-001-00-8

SECCÃO 4: Medidas de primeiros socorros

- **4.1 Descrição das medidas de primeiros socorros**

- **Em caso de inalação:** Entrada de ar fresco; em caso de queixas consultar o médico.

- **Em caso de contacto com a pele:** Em geral o produto não é irritante para a pele.

- **Em caso de contacto com os olhos:**

- Enxaguar os olhos durante alguns minutos sob água corrente, mantendo as pálpebras abertas. Em caso de persistência dos sintomas, consultar o médico.*

- **Em caso de ingestão:** Se os sintomas persistirem, consultar o médico.

- **4.2 Sintomas e efeitos mais importantes, tanto agudos como retardados**

- Não existe mais nenhuma informação relevante disponível.*

- **4.3 Indicações sobre cuidados médicos urgentes e tratamentos especiais necessários**

- Não existe mais nenhuma informação relevante disponível.*

PT

(continuação na página 3)

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SECÇÃO 5: Medidas de combate a incêndios

- **5.1 Meios de extinção**
- **Meios adequados de extinção:**
CO2, pó extintor ou jacto de água. Um incêndio de grandes dimensões deve ser combatido com jacto de água ou espuma resistente ao álcool.
- **5.2 Perigos especiais decorrentes da substância ou mistura**
Não existe mais nenhuma informação relevante disponível.
- **5.3 Recomendações para o pessoal de combate a incêndios**
- **Equipamento especial de protecção:** Não são necessárias medidas especiais.

SECÇÃO 6: Medidas a tomar em caso de fugas acidentais

- **6.1 Precauções individuais, equipamento de protecção e procedimentos de emergência**
Usar equipamento de protecção. Manter as pessoas desprotegidas afastadas.
- **6.2 Precauções a nível ambiental:**
Diluir em bastante água.
Evitar que penetre na canalização / águas superficiais / águas subterrâneas.
- **6.3 Métodos e materiais de confinamento e limpeza:**
Recolher com produtos que absorvam líquidos (areia, seixos, absorventes universais, serradura).
Assegurar uma ventilação adequada.
- **6.4 Remissão para outras secções**
Para informações sobre uma manipulação segura, ver o capítulo 7.
Para informações referentes ao equipamento de protecção individual, ver o capítulo 8.
Para informações referentes à eliminação residual, ver o capítulo 13.

SECÇÃO 7: Manuseamento e armazenagem

- **7.1 Precauções para um manuseamento seguro**
Em caso de utilização correcta, não são necessárias medidas especiais.
- **Precauções para prevenir incêndios e explosões:**
Manter afastado de fontes de ignição - não fumar.
Proteger contra descargas electrostáticas.
- **7.2 Condições de armazenagem segura, incluindo eventuais incompatibilidades**
- **Armazenagem:**
- **Requisitos para espaços ou contentores para armazenagem:** Armazenar num local fresco.
- **Avisos para armazenagem conjunta:** Não necessário.
- **Outros avisos sobre as condições de armazenagem:**
Manter o recipiente hermeticamente fechado.
Armazenar em recipientes bem fechados, em local fresco e seco.
- **7.3 Utilização(ões) final(is) específica(s)** Não existe mais nenhuma informação relevante disponível.

SECÇÃO 8: Controlo da exposição/Protecção individual

- **Indicações adicionais para concepção de instalações técnicas:** Não existem outras informações, ver ponto 7.

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· 8.1 Parâmetros de controlo**· Componentes cujo valor do limite de exposição no local de trabalho deve ser monitorizado:****67-64-1 acetona**

VLE	Valor para exposição curta: (750) ppm Valor para exposição longa: (500) ppm (A4), IBE; (Irrit.ocular, TRS; SNC, Efeitos hematológ.)
-----	---

· Componentes con valores-limite biológicos:**67-64-1 acetona**

IBE	50 mg/L Amostra: urina Momento da amostragem: Fim do turno Indicador biológico: Acetona
-----	--

· **Indicações adicionais:** Foram utilizadas como base as listas válidas à data da elaboração.

· 8.2 Controlo da exposição**· Equipamento de protecção individual:****· Medidas gerais de protecção e higiene:**

Manter afastado de alimentos, bebidas e forragens.

Despir imediatamente a roupa contaminada e embebida.

Lavar as mãos antes das pausas e no fim do trabalho.

Evitar o contacto com os olhos.

Evitar o contacto com os olhos e com a pele.

· **Protecção respiratória:** Não necessário.

· Protecção das mãos:

O material das luvas tem de ser impermeável e resistente ao produto / à substância / preparação.

Uma vez que não foram realizados testes nesta área, não podemos recomendar um determinado tipo de material para as luvas que seja adequado para o produto / a preparação / a mistura de químicos.

Escolher o material das luvas tendo em consideração a durabilidade, a permeabilidade e a degradação.

· Material das luvas

A escolha das luvas mais adequadas não depende apenas do material, mas também de outras características qualitativas e varia de fabricante para fabricante.

· Tempo de penetração no material das luvas

Deve informar-se sobre a validade exacta das suas luvas junto do fabricante e respeitá-la.

· Protecção dos olhos:

Óculos de protecção totalmente fechados

SECCÃO 9: Propriedades físico-químicas

· 9.1 Informações sobre propriedades físicas e químicas de base**· Informações gerais****· Aspeto:**

Forma: Líquido

Cor: Incolor

· **Odor:** tipo acetona

· **Limiar olfactivo:** Não classificado.

· **valor pH:** Não classificado.

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· Mudança do estado: Ponto de fusão/ponto de congelação: -94,7 °C Ponto de ebulição inicial e intervalo de ebulição: 56,5 °C	
· Ponto de inflamação:	-20 °C
· Inflamabilidade (sólido, gás):	Não aplicável.
· Temperatura de ignição:	465 °C
· Temperatura de decomposição:	Não classificado.
· Temperatura de autoignição:	Não classificado.
· Propriedades explosivas:	O produto não é explosivo. Contudo, é possível a formação de misturas explosivas ar/vapor.
· Limites de explosão: Inferior: Superior:	2,6 Vol % 13 Vol %
· Pressão de vapor em 20 °C:	233 hPa
· Densidade em 20 °C:	0,79 g/cm ³
· Densidade relativa	Não classificado.
· Densidade de vapor	Não classificado.
· Taxa de evaporação:	Não classificado.
· Solubilidade em / miscibilidade com água:	Completamente misturável.
· Coefficiente de partição: n-octanol/água	Não classificado.
· Viscosidade: Dinâmico em 20 °C: Cinemático:	32 mPas Não classificado.
· 9.2 Outras informações	Não existe mais nenhuma informação relevante disponível.

SECÇÃO 10: Estabilidade e reactividade

- **10.1 Reactividade** Não existe mais nenhuma informação relevante disponível.
- **10.2 Estabilidade química**
- **Decomposição térmica / condições a evitar:** Não existe decomposição se usado de acordo com as especificações.
- **10.3 Possibilidade de reações perigosas** Não se conhecem reações perigosas.
- **10.4 Condições a evitar** Não existe mais nenhuma informação relevante disponível.
- **10.5 Materiais incompatíveis:** Não existe mais nenhuma informação relevante disponível.
- **10.6 Produtos de decomposição perigosos:** Não se conhecem produtos de decomposição perigosos.

SECÇÃO 11: Informação toxicológica

- **11.1 Informações sobre os efeitos toxicológicos**
- **Toxicidade aguda**
Nocivo por ingestão.

· **Valores LD/LC50 relevantes para a classificação:**

por via oral	LD50	5.800 mg/kg (rat)
por via dérmica	LD50	20.000 mg/kg (rabbit)

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- **Efeito de irritabilidade primário:**
- **Corrosão/irritação cutânea** Com base nos dados disponíveis, os critérios de classificação não são preenchidos.
- **Lesões oculares graves/irritação ocular**
Provoca irritação ocular grave.
- **Sensibilização respiratória ou cutânea**
Com base nos dados disponíveis, os critérios de classificação não são preenchidos.
- **Efeitos CMR (carcinogenicidade, mutagenicidade e efeitos tóxicos na reprodução)**
- **Mutagenicidade em células germinativas**
Com base nos dados disponíveis, os critérios de classificação não são preenchidos.
- **Carcinogenicidade** Com base nos dados disponíveis, os critérios de classificação não são preenchidos.
- **Toxicidade reprodutiva** Com base nos dados disponíveis, os critérios de classificação não são preenchidos.
- **Toxicidade para órgãos-alvo específicos (STOT) - exposição única**
Pode provocar sonolência ou vertigens.
- **Toxicidade para órgãos-alvo específicos (STOT) - exposição repetida**
Com base nos dados disponíveis, os critérios de classificação não são preenchidos.
- **Perigo de aspiração** Com base nos dados disponíveis, os critérios de classificação não são preenchidos.

SECÇÃO 12: Informação ecológica

- **12.1 Toxicidade**
- **Toxicidade aquática:** Não existe mais nenhuma informação relevante disponível.
- **12.2 Persistência e degradabilidade** Não existe mais nenhuma informação relevante disponível.
- **12.3 Potencial de bioacumulação** Não existe mais nenhuma informação relevante disponível.
- **12.4 Mobilidade no solo** Não existe mais nenhuma informação relevante disponível.
- **Outras indicações ecológicas:**
- **Indicações gerais:**
Classe de perigo para a água 1 (D) (classificação pelas listas): pouco perigoso para a água
Não deixar chegar substâncias concentradas, ou seja quantidades grandes, às águas subterrâneas, aos cursos de água ou à canalização.
- **12.5 Resultados da avaliação PBT e mPmB**
- **PBT:** Não aplicável.
- **mPmB:** Não aplicável.
- **12.6 Outros efeitos adversos** Não existe mais nenhuma informação relevante disponível.

SECÇÃO 13: Considerações relativas à eliminação

- **13.1 Métodos de tratamento de resíduos**
- **Recomendação:** Não se pode eliminar juntamente com o lixo doméstico. Não permita que chegue à canalização.
- **Embalagens contaminadas:**
- **Recomendação:** Eliminação residual conforme o regulamento dos serviços públicos.
- **Meio de limpeza recomendado:** Água, eventualmente com adição de produtos de limpeza

SECÇÃO 14: Informações relativas ao transporte

- **14.1 Número ONU**
- **ADR, IMDG, IATA** UN1090
- **14.2 Designação oficial de transporte da ONU**
- **ADR** 1090 ACETONA
- **IMDG, IATA** ACETONE

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· 14.3 Classes de perigo para efeitos de transporte

· ADR, IMDG, IATA



· Classe 3 Líquidos inflamáveis
· Rótulo 3

· 14.4 Grupo de embalagem

· ADR, IMDG, IATA II

· 14.5 Perigos para o ambiente: Não aplicável.

· 14.6 Precauções especiais para o utilizador Atenção: Líquidos inflamáveis

· N° Kemler: 33
· N° EMS: F-E, S-D
· Stowage Category E

· 14.7 Transporte a granel em conformidade com o anexo II da Convenção MARPOL e o Código IBC Não aplicável.

· Transporte/outras informações:

· ADR

· Quantidades Limitadas (LQ) 1L
· Quantidades exceptuadas (EQ) Código: E2
Quantidade líquida máxima por embalagem interior: 30 ml
Quantidade líquida máxima por embalagem exterior: 500 ml

· Categoria de transporte 2
· Código de restrição em túneis D/E

· IMDG

· Limited quantities (LQ) 1L
· Excepted quantities (EQ) Code: E2
Maximum net quantity per inner packaging: 30 ml
Maximum net quantity per outer packaging: 500 ml

· UN "Model Regulation": UN 1090 ACETONA, 3, II

SECÇÃO 15: Informação sobre regulamentação

· 15.1 Regulamentação/legislação específica para a substância ou mistura em matéria de saúde, segurança e ambiente

· Diretiva 2012/18/UE

· Substâncias perigosas designadas - ANEXO I A substância não está listada.

· Categoria "Seveso" P5c LÍQUIDOS INFLAMÁVEIS

· Quantidades-limiar (em toneladas), para a aplicação de requisitos de nível inferior 5.000 t

· Quantidades-limiar (em toneladas), para a aplicação de requisitos de nível superior 50.000 t

· Regulamento (CE) n.º 1907/2006 ANEXO XVII Condições de limitação: 3, 40

· 15.2 Avaliação da segurança química: Não foi realizada nenhuma Avaliação de Segurança Química.

PT

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SECÇÃO 16: Outras informações

As informações fornecidas baseiam-se no estado actual dos nossos conhecimentos, embora não representem uma garantia das propriedades do produto e não fundamentam uma relação contratual.

· Abreviaturas e acrónimos:

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

Flam. Liq. 2: Líquidos inflamáveis – Categoria 2

Acute Tox. 4: Toxicidade aguda – Categoria 4

Eye Irrit. 2: Lesões oculares graves/irritação ocular – Categoria 2

STOT SE 3: Toxicidade para órgãos-alvo específicos (exposição única) – Categoria 3

PT

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SECCIÓN 1: Identificación de la sustancia o la mezcla y de la sociedad o la empresa

· 1.1 Identificador del producto

· **Nombre comercial:** propanona

· **Número del artículo:** 10000, 10014, 10010, 10012

· **Número CAS:**

67-64-1

· **Número CE:**

200-662-2

· **Número de clasificación:**

606-001-00-8

· **1.2 Usos pertinentes identificados de la sustancia o de la mezcla y usos desaconsejados**

No existen más datos relevantes disponibles.

· **Utilización del producto / de la elaboración** Sustancias químicas de laboratorio

· **1.3 Datos del proveedor de la ficha de datos de seguridad**

· **Fabricante/distribuidor:**

Electron Microscopy Sciences

1560 Industry Road

USA-Hatfield, PA 19440

Tel: 215-412-8400 Fax: 215-412-8450

email: sgkcck@aol.com

www.emsdiasum.com

Aname

C/ Perez Galdos no. 2

28693 Quijorna

Madrid, Spain

Tel: +34.91.816.89.50

Fax: +34.91.816.85.94

email: ventas@aname.es

· **Área de información:** Product safety department

· **1.4 Teléfono de emergencia:**

ChemTrec 1-800-424-9300 Contract CCN7661

1-703-527-3887

SECCIÓN 2: Identificación de los peligros

· **2.1 Clasificación de la sustancia o de la mezcla**

· **Clasificación con arreglo al Reglamento (CE) n° 1272/2008**



GHS02 llama

Flam. Liq. 2 H225 Líquido y vapores muy inflamables.



GHS07

Acute Tox. 4 H302 Nocivo en caso de ingestión.

Eye Irrit. 2 H319 Provoca irritación ocular grave.

STOT SE 3 H336 Puede provocar somnolencia o vértigo.

· **2.2 Elementos de la etiqueta**

· **Etiquetado con arreglo al Reglamento (CE) n° 1272/2008**

La sustancia se ha clasificado y etiquetado de conformidad con el reglamento CLP.

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· **Pictogramas de peligro**

GHS02 GHS07

· **Palabra de advertencia Peligro**· **Indicaciones de peligro**

H225 Líquido y vapores muy inflamables.

H302 Nocivo en caso de ingestión.

H319 Provoca irritación ocular grave.

H336 Puede provocar somnolencia o vértigo.

· **Consejos de prudencia**

P210 Mantener alejado del calor, de superficies calientes, de chispas, de llamas abiertas y de cualquier otra fuente de ignición. No fumar.

P241 Utilizar un material eléctrico, de ventilación o de iluminación/antideflagrante.

P303+P361+P353 EN CASO DE CONTACTO CON LA PIEL (o el pelo): Quitar inmediatamente todas las prendas contaminadas. Aclararse la piel con agua/ ducharse.

P305+P351+P338 EN CASO DE CONTACTO CON LOS OJOS: Aclarar cuidadosamente con agua durante varios minutos. Quitar las lentes de contacto, si lleva y resulta fácil. Seguir aclarando.

P405 Guardar bajo llave.

P501 Eliminar el contenido o el recipiente conforme a la reglamentación local/regional/nacional/internacional.

· **Datos adicionales:**

EUH066 La exposición repetida puede provocar sequedad o formación de grietas en la piel.

· **2.3 Otros peligros**· **Resultados de la valoración PBT y mPmB**

· **PBT:** No aplicable.

· **mPmB:** No aplicable.

SECCIÓN 3: Composición/información sobre los componentes

· **3.1 Caracterización química: Sustancias**· **Denominación N° CAS**

67-64-1 propanona

· **Número(s) de identificación**

· **Número CE:** 200-662-2

· **Número de clasificación:** 606-001-00-8

SECCIÓN 4: Primeros auxilios

· **4.1 Descripción de los primeros auxilios**

· **En caso de inhalación del producto:** Suministrar aire fresco. En caso de trastornos, consultar al médico.

· **En caso de contacto con la piel:** Por regla general, el producto no irrita la piel.

· **En caso de con los ojos:**

Limpiar los ojos abiertos durante varios minutos con agua corriente. En caso de trastornos persistentes consultar un médico.

· **En caso de ingestión:** Consultar un médico si los trastornos persisten.

· **4.2 Principales síntomas y efectos, agudos y retardados** No existen más datos relevantes disponibles.

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- **4.3 Indicación de toda atención médica y de los tratamientos especiales que deban dispensarse inmediatamente**
No existen más datos relevantes disponibles.

SECCIÓN 5: Medidas de lucha contra incendios

- **5.1 Medios de extinción**
- **Sustancias extintoras apropiadas:**
CO₂, polvo extintor o chorro de agua rociada. Combatir incendios mayores con chorro de agua rociada o espuma resistente al alcohol.
- **5.2 Peligros específicos derivados de la sustancia o la mezcla** No existen más datos relevantes disponibles.
- **5.3 Recomendaciones para el personal de lucha contra incendios**
- **Equipo especial de protección:** No se requieren medidas especiales.

SECCIÓN 6: Medidas en caso de vertido accidental

- **6.1 Precauciones personales, equipo de protección y procedimientos de emergencia**
Llevar puesto equipo de protección. Mantener alejadas las personas sin protección.
- **6.2 Precauciones relativas al medio ambiente:**
*Diluir con mucha agua.
Evitar que penetre en la canalización /aguas de superficie /agua subterráneas.*
- **6.3 Métodos y material de contención y de limpieza:**
*Quitar con material absorbente (arena, kieselgur, aglutinante de ácidos, aglutinante universal, aserrín).
Asegurar suficiente ventilación.*
- **6.4 Referencia a otras secciones**
*Ver capítulo 7 para mayor información sobre una manipulación segura.
Ver capítulo 8 para mayor información sobre el equipo personal de protección.
Para mayor información sobre cómo desechar el producto, ver capítulo 13.*

SECCIÓN 7: Manipulación y almacenamiento

- **7.1 Precauciones para una manipulación segura**
Si se manipulan correctamente, no se requieren medidas especiales.
- **Prevención de incendios y explosiones:**
*Mantener alejadas las fuentes de encendido. No fumar.
Tomar medidas contra las cargas electrostáticas.*
- **7.2 Condiciones de almacenamiento seguro, incluidas posibles incompatibilidades**
- **Almacenamiento:**
- **Exigencias con respecto al almacén y los recipientes:** Almacenar en un lugar fresco.
- **Normas en caso de un almacenamiento conjunto:** No es necesario.
- **Indicaciones adicionales sobre las condiciones de almacenamiento:**
*Mantener el recipiente cerrado herméticamente.
Almacenarlo en envases bien cerrados en un lugar fresco y seco.*
- **7.3 Usos específicos finales** No existen más datos relevantes disponibles.

SECCIÓN 8: Controles de exposición/protección individual

- **Instrucciones adicionales para el acondicionamiento de instalaciones técnicas:**
Sin datos adicionales, ver punto 7.

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· 8.1 Parámetros de control

· Componentes con valores límite admisibles que deben controlarse en el puesto de trabajo:

67-64-1 propanona

LEP	Valor de larga duración: 1210 mg/m ³ , 500 ppm
	VLB, VLI

· Componentes con valores límite biológicos:

67-64-1 propanona

VLB	50 mg/l
	Muestra: orina
	Momento de Muestero: Final de la jornada laboral
	Indicador Biológico: Acetona

· **Indicaciones adicionales:** Como base se han utilizado las listas vigentes en el momento de la elaboración.

· 8.2 Controles de la exposición

· Equipo de protección individual:

· Medidas generales de protección e higiene:

Mantener alejado de alimentos, bebidas y alimentos para animales.

Quitarse de inmediato la ropa ensuciada o impregnada.

Lavarse las manos antes de las pausas y al final del trabajo.

Evitar el contacto con los ojos.

Evitar el contacto con los ojos y la piel.

· Protección respiratoria: No es necesario.

· Protección de manos:

El material del guante deberá ser impermeable y resistente al producto / substancia / preparado.

Ante la ausencia de tests específicos, no se puede recomendar ningún material específico para guantes de protección contra el producto / preparado / mezcla de substancias químicas.

Selección del material de los guantes en función de los tiempos de rotura, grado de permeabilidad y degradación.

· Material de los guantes

La elección del guante adecuado no depende únicamente del material, sino también de otras características de calidad, que pueden variar de un fabricante a otro.

· Tiempo de penetración del material de los guantes

El tiempo de resistencia a la penetración exacto deberá ser pedido al fabricante de los guantes. Este tiempo debe ser respetado.

· Protección de ojos:



Gafas de protección herméticas

SECCIÓN 9: Propiedades físicas y químicas

· 9.1 Información sobre propiedades físicas y químicas básicas

· Datos generales

· Aspecto:

Forma:

Líquido

Color:

Incoloro

· Olor:

Similar al de la acetona

· Umbral olfativo:

No determinado.

· valor pH:

No determinado.

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· Cambio de estado Punto de fusión/punto de congelación:	-94,7 °C
Punto inicial de ebullición e intervalo de ebullición:	56,5 °C
· Punto de inflamación:	-20 °C
· Inflamabilidad (sólido, gas):	No aplicable.
· Temperatura de ignición:	465 °C
· Temperatura de descomposición:	No determinado.
· Temperatura de auto-inflamación:	No determinado.
· Propiedades explosivas:	El producto no es explosivo; sin embargo, pueden formarse mezclas explosivas de vapor / aire.
· Límites de explosión: Inferior:	2,6 Vol %
Superior:	13 Vol %
· Presión de vapor a 20 °C:	233 hPa
· Densidad a 20 °C:	0,79 g/cm ³
· Densidad relativa	No determinado.
· Densidad de vapor	No determinado.
· Tasa de evaporación:	No determinado.
· Solubilidad en / miscibilidad con agua:	Completamente mezclable.
· Coefficiente de reparto: n-octanol/agua:	No determinado.
· Viscosidad: Dinámica a 20 °C:	32 mPas
Cinémática:	No determinado.
· 9.2 Otros datos	No existen más datos relevantes disponibles.

SECCIÓN 10: Estabilidad y reactividad

- **10.1 Reactividad** No existen más datos relevantes disponibles.
- **10.2 Estabilidad química**
- **Descomposición térmica / condiciones que deben evitarse:** No se descompone al emplearse adecuadamente.
- **10.3 Posibilidad de reacciones peligrosas** No se conocen reacciones peligrosas.
- **10.4 Condiciones que deben evitarse** No existen más datos relevantes disponibles.
- **10.5 Materiales incompatibles:** No existen más datos relevantes disponibles.
- **10.6 Productos de descomposición peligrosos:** No se conocen productos de descomposición peligrosos.

SECCIÓN 11: Información toxicológica

- **11.1 Información sobre los efectos toxicológicos**
- **Toxicidad aguda**
Nocivo en caso de ingestión.

· **Valores LD/LC50 (dosis letal /dosis letal = 50%) relevantes para la clasificación:**

Oral	LD50	5.800 mg/kg (rat)
Dermal	LD50	20.000 mg/kg (rabbit)

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- **Efecto estimulante primario:**
- **Corrosión o irritación cutáneas** A la vista de los datos disponibles, no se cumplen los criterios de clasificación.
- **Lesiones o irritación ocular graves**
Provoca irritación ocular grave.
- **Sensibilización respiratoria o cutánea**
A la vista de los datos disponibles, no se cumplen los criterios de clasificación.
- **Efectos CMR (carcinogenicidad, mutagenicidad y toxicidad para la reproducción)**
- **Mutagenicidad en células germinales**
A la vista de los datos disponibles, no se cumplen los criterios de clasificación.
- **Carcinogenicidad** A la vista de los datos disponibles, no se cumplen los criterios de clasificación.
- **Toxicidad para la reproducción** A la vista de los datos disponibles, no se cumplen los criterios de clasificación.
- **Toxicidad específica en determinados órganos (STOT) – exposición única**
Puede provocar somnolencia o vértigo.
- **Toxicidad específica en determinados órganos (STOT) – exposición repetida**
A la vista de los datos disponibles, no se cumplen los criterios de clasificación.
- **Peligro de aspiración** A la vista de los datos disponibles, no se cumplen los criterios de clasificación.

SECCIÓN 12: Información ecológica

- **12.1 Toxicidad**
- **Toxicidad acuática:** No existen más datos relevantes disponibles.
- **12.2 Persistencia y degradabilidad** No existen más datos relevantes disponibles.
- **12.3 Potencial de bioacumulación** No existen más datos relevantes disponibles.
- **12.4 Movilidad en el suelo** No existen más datos relevantes disponibles.
- **Indicaciones medioambientales adicionales:**
- **Indicaciones generales:**
Nivel de riesgo para el agua 1 (clasificación de listas): escasamente peligroso para el agua
En estado no diluido o no neutralizado, no dejar que se infiltre en aguas subterráneas, aguas superficiales o en alcantarillados.
- **12.5 Resultados de la valoración PBT y mPmB**
- **PBT:** No aplicable.
- **mPmB:** No aplicable.
- **12.6 Otros efectos adversos** No existen más datos relevantes disponibles.

SECCIÓN 13: Consideraciones relativas a la eliminación

- **13.1 Métodos para el tratamiento de residuos**
- **Recomendación:** No debe desecharse con la basura doméstica. No debe llegar al alcantarillado.
- **Embalajes sin limpiar:**
- **Recomendación:** Eliminar conforme a las disposiciones oficiales.
- **Producto de limpieza recomendado:** Agua, eventualmente añadiendo productos de limpieza.

SECCIÓN 14: Información relativa al transporte

- **14.1 Número ONU**
- **ADR, IMDG, IATA** UN1090
- **14.2 Designación oficial de transporte de las Naciones Unidas**
- **ADR** 1090 ACETONA
- **IMDG, IATA** ACETONE

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· 14.3 Clase(s) de peligro para el transporte

· ADR, IMDG, IATA



· Clase 3 Líquidos inflamables
 · Etiqueta 3

· 14.4 Grupo de embalaje

· ADR, IMDG, IATA II

· 14.5 Peligros para el medio ambiente: No aplicable.

· 14.6 Precauciones particulares para los usuarios Atención: Líquidos inflamables

· Número Kemler: 33
 · Número EMS: F-E,S-D
 · Stowage Category E

· 14.7 Transporte a granel con arreglo al anexo II del
 Convenio MARPOL y el Código IBC No aplicable.

· Transporte/datos adicionales:

· ADR
 · Cantidades limitadas (LQ) 1L
 · Cantidades exceptuadas (EQ) Código: E2
 Cantidad neta máxima por envase interior: 30 ml
 Cantidad neta máxima por embalaje exterior: 500 ml
 · Categoría de transporte 2
 · Código de restricción del túnel D/E

· IMDG
 · Limited quantities (LQ) 1L
 · Excepted quantities (EQ) Code: E2
 Maximum net quantity per inner packaging: 30 ml
 Maximum net quantity per outer packaging: 500 ml

· "Reglamentación Modelo" de la UNECE: UN 1090 ACETONA, 3, II

SECCIÓN 15: Información reglamentaria

· 15.1 Reglamentación y legislación en materia de seguridad, salud y medio ambiente específicas para la sustancia o la mezcla

- Directiva 2012/18/UE
- Sustancias peligrosas nominadas - ANEXO I No contiene la sustancia.
- Categoría Seveso P5c LÍQUIDOS INFLAMABLES
- Cantidad umbral (toneladas) a efectos de aplicación de los requisitos de nivel inferior 5.000 t
- Cantidad umbral (toneladas) a efectos de aplicación de los requisitos de nivel superior 50.000 t
- REGLAMENTO (CE) n° 1907/2006 ANEXO XVII Restricciones: 3, 40

· 15.2 Evaluación de la seguridad química: Una evaluación de la seguridad química no se ha llevado a cabo.

ES

(se continua en página 8)

Ficha de datos de seguridad

según 1907/2006/CE, Artículo 31

fecha de impresión 11.09.2018

Revisión: 11.09.2018

Nombre comercial: propanona

(se continua en página 7)

SECCIÓN 16: Otra información

Los datos se fundan en el estado actual de nuestros conocimientos, pero no constituyen garantía alguna de cualidades del producto y no generan ninguna relación jurídica contractual.

· **Abreviaturas y acrónimos:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

Flam. Liq. 2: Líquidos inflamables – Categoría 2

Acute Tox. 4: Toxicidad aguda – Categoría 4

Eye Irrit. 2: Lesiones oculares graves o irritación ocular – Categoría 2

STOT SE 3: Toxicidad específica en determinados órganos (exposición única) – Categoría 3

ES

Säkerhetsdatablad

Enligt 1907/2006/EG, Artikel 31

Datum för utskrift: 11.09.2018

Omarbetad: 11.09.2018

AVSNITT 1: Namnet på ämnet/blandningen och bolaget/företaget

- **1.1 Produktbeteckning**
- **Handelsnamn:** aceton
- **Artikelnummer:** 10000, 10014, 10010, 10012
- **CAS-nummer:**
67-64-1
- **EG-nummer:**
200-662-2
- **Indexnummer:**
606-001-00-8
- **1.2 Relevanta identifierade användningar av ämnet eller blandningen och användningar som det avråds från**
Ingen ytterligare relevant information finns till förfogande.
- **Ämnets användning / tillredningen** Laboratoriekemikalier
- **1.3 Närmare upplysningar om den som tillhandahåller säkerhetsdatablad**
- **Tillverkare/leverantör:**
Electron Microscopy Sciences
1560 Industry Road
USA-Hatfield, PA 19440
Tel: 215-412-8400 Fax: 215-412-8450
email: sgkcck@aol.com
www.emsdiasum.com
- **Område där upplysningar kan inhämtas:** Product safety department
- **1.4 Telefonnummer för nödsituationer:**
ChemTrec 1-800-424-9300 Contract CCN7661
1-703-527-3887

AVSNITT 2: Farliga egenskaper

- **2.1 Klassificering av ämnet eller blandningen**
- **Klassificering enligt förordning (EG) nr 1272/2008**



GHS02 flamma

Flam. Liq. 2 H225 Mycket brandfarlig vätska och ånga.



GHS07

Acute Tox. 4 H302 Skadligt vid förtäring.

Eye Irrit. 2 H319 Orsakar allvarlig ögonirritation.

STOT SE 3 H336 Kan göra att man blir dåsig eller omtöcknad.

- **2.2 Märkningsuppgifter**
- **Märkning enligt förordning (EG) nr 1272/2008** Ämnet är klassificerat och märkt enligt CLP-förordningen.
- **Faropiktogram**



GHS02



GHS07

- **Signalord** Fara

(Fortsättning på sida 2)

Säkerhetsdatablad

Enligt 1907/2006/EG, Artikel 31

Datum för utskrift: 11.09.2018

Omarbetad: 11.09.2018

Handelsnamn: aceton

(Fortsättning från sida 1)

· Faroangivelser

- H225 Mycket brandfarlig vätska och ånga.
- H302 Skadligt vid förtäring.
- H319 Orsakar allvarlig ögonirritation.
- H336 Kan göra att man blir dåsig eller omtöcknad.

· Skyddsangivelser

- P210 Får inte utsättas för värme, heta ytor, gnistor, öppna lågor och andra antändningskällor. Rökning förbjuden.
- P241 Använd explosionssäker elektrisk/ventilations-/belysnings-/utrustning.
- P303+P361+P353 VID HUDKONTAKT (även håret): Ta omedelbart av alla nedstänkta kläder. Skölj huden med vatten/duscha.
- P305+P351+P338 VID KONTAKT MED ÖGONEN: Skölj försiktigt med vatten i flera minuter. Ta ur eventuella kontaktlinser om det går lätt. Fortsätt att skölja.
- P405 Förvaras inlåst.
- P501 Innehållet / behållaren avfallshanteras enligt lokala / regionala / nationella / internationella föreskrifter.

· Ytterligare uppgifter:

- EUH066 Upprepad kontakt kan ge torr hud eller hudsprickor.

· 2.3 Andra faror**· Resultat av PBT- och vPvB-bedömningen**

- **PBT:** Ej användbar.
- **vPvB:** Ej användbar.

AVSNITT 3: Sammansättning/information om beståndsdelar

· 3.1 Kemisk karakterisering: Ämnen**· CAS-nr. beteckning**

67-64-1 acetone

· Identifikationsnummer· **EG-nummer:** 200-662-2· **Indexnummer:** 606-001-00-8

AVSNITT 4: Åtgärder vid första hjälpen

· 4.1 Beskrivning av åtgärder vid första hjälpen

- **Vid inandning:** Tillförsel av friskluft, vid besvär kontakta läkare.
- **Vid kontakt med huden:** I allmänhet kan produkten ej irritera huden.
- **Vid kontakt med ögonen:**

Spola ögonen öppna i flera minuter under rinnande vatten. Om besvär kvarstår, kontakta läkare.

- **Vid förtäring:** Om besvär kvarstår, kontakta läkare.

· 4.2 De viktigaste symptomen och effekterna, både akuta och fördröjda

Ingen ytterligare relevant information finns till förfogande.

· 4.3 Angivande av omedelbar medicinsk behandling och särskild behandling som eventuellt krävs

Ingen ytterligare relevant information finns till förfogande.

AVSNITT 5: Brandbekämpningsåtgärder

· 5.1 Släckmedel**· Lämpliga släckningsmedel:**CO₂, släckningspulver eller spridd vattenstråle. Större bränder skall bekämpas med spridd vattenstråle eller alkoholbeständigt skum.

(Fortsättning på sida 3)

Säkerhetsdatablad

Enligt 1907/2006/EG, Artikel 31

Datum för utskrift: 11.09.2018

Omarbetad: 11.09.2018

Handelsnamn: acetone

(Fortsättning från sida 2)

- **5.2 Särskilda faror som ämnet eller blandningen kan medföra**
Ingen ytterligare relevant information finns till förfogande.
- **5.3 Råd till brandbekämpningspersonal**
- **Speciell skyddsutrustning:** Inga speciella åtgärder krävs.

AVSNITT 6: Åtgärder vid oavsiktliga utsläpp

- **6.1 Personliga skyddsåtgärder, skyddsutrustning och åtgärder vid nödsituationer**
Använd skyddsutrustning. Håll oskyddade personer på avstånd.
- **6.2 Miljöskyddsåtgärder:**
Blanda ut med mycket vatten.
Förhindra produkten att tränga ner i avloppsnät/ytvatten/grundvatten.
- **6.3 Metoder och material för inneslutning och sanering:**
Sug upp med vätskebindande material (sand, kiselgur, syrabindemedel, universalbindemedel, sågspån).
Se till att ventilationen är tillräcklig.
- **6.4 Hänvisning till andra avsnitt**
Information beträffande säker hantering se kapitel 7.
Information beträffande personlig skyddsutrustning se kapitel 8.
Information beträffande avfallshantering se kapitel 13.

AVSNITT 7: Hantering och lagring

- **7.1 Försiktighetsmått för säker hantering** Vid sakkunnig användning krävs inga speciella åtgärder.
- **Hänvisningar beträffande brand- och explosionsskydd:**
Håll åtskild från antändningskällor - rök ej.
Vidta åtgärder mot elektrostatisk uppladdning.
- **7.2 Förhållanden för säker lagring, inklusive eventuell oförenlighet**
- **Lagring:**
- **Krav på lagerutrymmen och behållare:** Förvaras svalt.
- **Hänvisningar beträffande sammanlagring:** Erfordras ej.
- **Ytterligare uppgifter till lagringsvillkoren:**
Förvara behållaren tätt tillsluten.
Förvaras svalt och torrt i väl tillslutet emballage.
- **7.3 Specifik slutanvändning** Ingen ytterligare relevant information finns till förfogande.

AVSNITT 8: Begränsning av exponeringen/personligt skydd

- **Ytterligare hänvisningar beträffande utformning av tekniska anläggningar:** Inga övriga uppgifter, se punkt 7.
- **8.1 Kontrollparametrar**

- **Ämnen med yrkeshygieniska gränsvärden som bör övervakas:**

67-64-1 acetone

OEL	Korttidsvärde: 1200 mg/m ³ , 500 ppm
	Nivågränsvärde: 600 mg/m ³ , 250 ppm
V	

- **Ytterligare hänvisningar:** De vid framställningen gällande listorna har använts som utgångspunkt.
- **8.2 Begränsning av exponeringen**
- **Personlig skyddsutrustning:**
- **Allmänna skydds- och hygienåtgärder:**
Undvik kontakt med livsmedel, drycker och fodermedel.

(Fortsättning på sida 4)

Säkerhetsdatablad

Enligt 1907/2006/EG, Artikel 31

Datum för utskrift: 11.09.2018

Omarbetad: 11.09.2018

Handelsnamn: aceton

(Fortsättning från sida 3)

Nedsmutsade, indränkta klädesplagg skall omedelbart tas av.

Tvätta händerna före raster och efter arbetet.

Undvik kontakt med ögonen.

Undvik kontakt med ögonen och huden.

· **Andningsskydd:** Erfordras ej.

· **Handskydd:**

Handskmaterialet måste vara tätt och beständigt mot produkt/ämne/tillredning.

Handskmaterialrekommendationer kan inte ges för produkt/tillredning/kemikalielösning, då inga tester genomförs.

Val av handskmaterial beaktande penetrationstider, permeationskvoter och degradation.

· **Handskmaterial**

Val av lämplig handske är inte enbart beroende av material utan även av andra kvalitetskriterier och varierar från en tillverkare till nästa.

· **Handskmaterialets penetreringstid**

Exakt penetrationstid fastställs av skyddshandskarnas tillverkare och skall beaktas.

· **Ögonskydd:**



Tättslutande skyddsglasögon

AVSNITT 9: Fysikaliska och kemiska egenskaper

· **9.1 Information om grundläggande fysikaliska och kemiska egenskaper**

· **Allmänna uppgifter**

· **Utseende:**

Form: Vätska

Färg: Färglös

· **Lukt:** Acetonaktig

· **Luktröskel:** Ej bestämd.

· **pH-värde:** Ej bestämd.

· **Tillståndsändring**

Smältpunkt/frys punkt: -94,7 °C

Initial kokpunkt och kokpunktsintervall: 56,5 °C

· **Flampunkt:** -20 °C

· **Brandfarlighet (fast form, gas):** Ej användbar.

· **Tändtemperatur:** 465 °C

· **Sönderfallstemperatur:** Ej bestämd.

· **Självantändningstemperatur:** Ej bestämd.

· **Explosiva egenskaper:** Produkten är ej explosionsfarlig, men bildning av explosionsfarliga ångluft-blandningar är möjlig.

· **Explosionsgränser:**

Nedre: 2,6 Vol %

Övre: 13 Vol %

· **Ångtryck vid 20 °C:** 233 hPa

· **Densitet vid 20 °C:** 0,79 g/cm³

(Fortsättning på sida 5)

Säkerhetsdatablad

Enligt 1907/2006/EG, Artikel 31

Datum för utskrift: 11.09.2018

Omarbetad: 11.09.2018

Handelsnamn: acetone

(Fortsättning från sida 4)

· Relativ densitet	Ej bestämd.
· Ångdensitet	Ej bestämd.
· Avdunstningshastighet:	Ej bestämd.
· Löslighet i / blandbarhet med Vatten:	Fullständigt blandbar.
· Fördelningskoefficient: n-oktanol/vatten:	Ej bestämd.
· Viskositet:	
Dynamisk vid 20 °C:	32 mPas
Kinematisk:	Ej bestämd.
· 9.2 Annan information	Ingen ytterligare relevant information finns till förfogande.

AVSNITT 10: Stabilitet och reaktivitet

- **10.1 Reaktivitet** Ingen ytterligare relevant information finns till förfogande.
- **10.2 Kemisk stabilitet**
- **Termisk sönderdelning / förhållanden som bör undvikas:** Inget sönderfall vid ändamålsenlig användning.
- **10.3 Risken för farliga reaktioner** Inga farliga reaktioner kända.
- **10.4 Förhållanden som ska undvikas** Ingen ytterligare relevant information finns till förfogande.
- **10.5 Oförenliga material:** Ingen ytterligare relevant information finns till förfogande.
- **10.6 Farliga sönderdelningsprodukter:** Inga farliga sönderfallsprodukter kända.

AVSNITT 11: Toxikologisk information

- **11.1 Information om de toxikologiska effekterna**
- **Akut toxicitet**
Skadligt vid förtäring.

· **Klassificeringsrelevanta LD/LC50-värden:**

Oral	LD50	5.800 mg/kg (rat)
Dermal	LD50	20.000 mg/kg (rabbitt)

- **Primär retningseffekt:**
- **Frätande/irriterande på huden**
Kriterierna för klassificering kan på grundval av tillgängliga data inte anses vara uppfyllda.
- **Allvarlig ögonskada/ögonirritation**
Orsakar allvarlig ögonirritation.
- **Luftvägs-/hudsensibilisering**
Kriterierna för klassificering kan på grundval av tillgängliga data inte anses vara uppfyllda.
- **CMR-effekter (cancerframkallande, mutagena och reproduktionstoxiska egenskaper)**
- **Mutagenitet i könsceller**
Kriterierna för klassificering kan på grundval av tillgängliga data inte anses vara uppfyllda.
- **Cancerogenitet** Kriterierna för klassificering kan på grundval av tillgängliga data inte anses vara uppfyllda.
- **Reproduktionstoxicitet**
Kriterierna för klassificering kan på grundval av tillgängliga data inte anses vara uppfyllda.
- **Specifik organtoxicitet – enstaka exponering**
Kan göra att man blir dåsig eller omtöcknad.
- **Specifik organtoxicitet – upprepad exponering**
Kriterierna för klassificering kan på grundval av tillgängliga data inte anses vara uppfyllda.

(Fortsättning på sida 6)

Säkerhetsdatablad

Enligt 1907/2006/EG, Artikel 31

Datum för utskrift: 11.09.2018

Omarbetad: 11.09.2018

Handelsnamn: aceton

(Fortsättning från sida 5)

· **Fara vid aspiration** Kriterierna för klassificering kan på grundval av tillgängliga data inte anses vara uppfyllda.


AVSNITT 12: Ekologisk information

- **12.1 Toxicitet**
- **Akvatisk toxicitet:** Ingen ytterligare relevant information finns till förfogande.
- **12.2 Persistens och nedbrytbarhet** Ingen ytterligare relevant information finns till förfogande.
- **12.3 Bioackumuleringsförmåga** Ingen ytterligare relevant information finns till förfogande.
- **12.4 Rörlighet i jord** Ingen ytterligare relevant information finns till förfogande.
- **Ytterligare ekologiska hänvisningar:**
- **Allmänna hänvisningar:**
Vattenföroreningsklass 1 (värdering enligt listan): liten risk för vattenförorening.
Låt ej tränga ner i grundvatten, vattendrag eller i avloppsnätet i utspätt tillstånd resp. i större mängder.
- **12.5 Resultat av PBT- och vPvB-bedömningen**
- **PBT:** Ej användbar.
- **vPvB:** Ej användbar.
- **12.6 Andra skadliga effekter** Ingen ytterligare relevant information finns till förfogande.

AVSNITT 13: Avfallshantering

- **13.1 Avfallsbehandlingsmetoder**
- **Rekommendation:** Får inte deponeras ihop med hushållsavfall. Får inte tömmas i avloppsnätet.
- **Ej rengjorda förpackningar:**
- **Rekommendation:** Avfallshanteras enligt myndigheters föreskrifter.
- **Rekommenderat rengöringsmedel:** Vatten, eventuellt med tillsats av rengöringsmedel.

AVSNITT 14: Transportinformation

- | | |
|---|-------------------------------|
| · 14.1 UN-nummer | |
| · ADR, IMDG, IATA | UN1090 |
| · 14.2 Officiell transportbenämning | |
| · ADR | 1090 ACETON |
| · IMDG, IATA | ACETONE |
| · 14.3 Faroklass för transport | |
| · ADR, IMDG, IATA | |
|  | |
| · Klass | 3 Brandfarliga vätskor |
| · Etikett | 3 |
| · 14.4 Förpackningsgrupp | |
| · ADR, IMDG, IATA | II |
| · 14.5 Miljöfaror: | Ej användbar. |
| · 14.6 Särskilda skyddsåtgärder | Varning: Brandfarliga vätskor |
| · Kemler-tal: | 33 |

(Fortsättning på sida 7)

Säkerhetsdatablad

Enligt 1907/2006/EG, Artikel 31

Datum för utskrift: 11.09.2018

Omarbetad: 11.09.2018

Handelsnamn: aceton

(Fortsättning från sida 6)

· EMS-nummer:	F-E,S-D
· Stowage Category	E
· 14.7 Bulktransport enligt bilaga II till Marpol 73/78 och IBC-koden	Ej användbar.
· Transport / ytterligare uppgifter:	
· ADR	
· Begränsade mängder (LQ)	1L
· Reducerade mängder (EQ)	Kod: E2 Högsta nettomängd per innerförpackning: 30 ml Högsta nettomängd per ytterförpackning: 500 ml
· Transportkategori	2
· Tunnelrestriktionskod	D/E
· IMDG	
· Limited quantities (LQ)	1L
· Excepted quantities (EQ)	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· UN "Model Regulation":	UN 1090 ACETON, 3, II

AVSNITT 15: Gällande föreskrifter

- **15.1 Föreskrifter/lagstiftning om ämnet eller blandningen när det gäller säkerhet, hälsa och miljö**
- **Direktiv 2012/18/EU**
- **Namngivna farliga ämnen - BILAGA I** Ämnet är inte listat.
- **Seveso-kategorier P5c** BRANDFARLIGA VÄTSKOR
- **Tröskelvärden (i ton) för tillämpning av krav för lägre nivå** 5.000 t
- **Tröskelvärden (i ton) för tillämpning av krav för övre nivå** 50.000 t
- **Förordning (EG) nr 1907/2006 BILAGA XVII Villkor:** 3, 40
- **15.2 Kemikaliesäkerhetsbedömning:** En kemikaliesäkerhetsbedömning har ej gjorts.

AVSNITT 16: Annan information

Uppgifterna är baserade på våra aktuella kunskaper. De representerar emellertid ingen som helst garanti beträffande produkttegenskaper och utgör ingen grund för ett avtalat rättsförhållande.

· **Förkortningar och akronymer:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

LC50: Lethal concentration, 50 percent

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PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

Flam. Liq. 2: Brandfarliga vätskor – Kategori 2

Acute Tox. 4: Akut toxicitet – Kategori 4

Eye Irrit. 2: Allvarlig ögonskada eller ögonirritation – Kategori 2

STOT SE 3: Specifik organtoxicitet (enstaka exponering) – Kategori 3

แผนข้อมูลความปลอดภัย

ตาม 1907/2006/EC, มาตรา 31

วันที่พิมพ์ 2018.09.11

การปรับปรุงใหม่ : 2018.09.11

1 การระบุสาร/ การทำ/ และของบริษัท / บริษัทที่เข้าถือครอง

- 1.1 ลักษณะเฉพาะของผลิตภัณฑ์
- ชื่อทางการค้า อะซีโตน
- เลขที่รายชื่อ 10000, 10014, 10010, 10012
- เลขที่ CAS: 67-64-1
- จำนวน EC: 200-662-2
- เลขที่ EU: 606-001-00-8
- 1.2 สารหรือสารผสมที่เกี่ยวข้องที่ระบุให้ใช้และไม่ควรรให้ใช้ ไม่มีข้อมูลที่เกี่ยวข้องนอกเหนือจากนี้
- การประยุกต์ใช้สาร/ การทำ เคมีภัณฑ์ห้องทดลอง
- 1.3 รายละเอียดของผู้จัดหาข้อมูลด้านความปลอดภัย
- ผู้ผลิต/ ผู้จัดหา
Electron Microscopy Sciences
1560 Industry Road
USA-Hatfield, PA 19440
Tel: 215-412-8400 Fax: 215-412-8450
email: sgkcck@aol.com
www.emsdiasum.com
- ข้อมูลรายละเอียดเพิ่มเติมหาได้จาก Product safety department
- 1.4 หมายเลขโทรศัพท์ฉุกเฉิน:
ChemTrec 1-800-424-9300 Contract CCN7661
1-703-527-3887

2 การระบุสิ่งที่เป็นอันตราย

- 2.1 การจำแนกประเภทของสารหรือสารผสม
- การแบ่งประเภทตามข้อบังคับ (จีซี) เลขที่ 1272/2008



เปลวไฟ

Flam. Liq. 2 H225 ของเหลวและไอที่ไวไฟสูง



Acute Tox. 4 H302 เป็นอันตรายหากกลืนเข้าไป

Eye Irrit. 2 H319 เป็นสาเหตุให้เกิดการระคายเคืองอย่างร้ายแรงที่ตา

STOT SE 3 H336 อาจเป็นสาเหตุให้เชื่องซึมหรือหน้ามืดเวียนศีรษะ

- 2.2 องค์ประกอบของฉลาก
- ฉลากตามระเบียบ (EC) เลขที่ 1272/2008 สารได้รับการจัดประเภทและติดฉลากตามข้อบังคับของ CLP
- ภาพสัญลักษณ์สิ่งที่เป็นอันตราย



GHS02 GHS07

- สัญลักษณ์อันตราย
- ประกาศสิ่งที่เป็นอันตราย
H225 ของเหลวและไอที่ไวไฟสูง

(ต่อที่หน้า 2)

แผนข้อมูลความปลอดภัย

ตาม 1907/2006/EC, มาตรา 31

วันที่พิมพ์ 2018.09.11

การปรับปรุงใหม่ : 2018.09.11

ชื่อทางการค้า อะซีโตน

(ต่อหน้า 1)

H302 เป็นอันตรายหากกลืนเข้าไป

H319 เป็นสาเหตุให้เกิดการระคายเคืองอย่างร้ายแรงที่ตา

H336 อาจเป็นสาเหตุให้เวียนศีรษะหรือหน้ามืดเวียนศีรษะ

· ประกาศการป้องกันระดับระวังภัย

P210 เก็บให้ห่างจากความร้อน/ประกายไฟ/เปลวไฟ/ผิวที่ร้อน - ห้ามสูบบุหรี่

P241 ใช้อุปกรณ์ไฟฟ้า/ระบายอากาศ/ไฟฟ้า/อุปกรณ์เครื่องใช้ชนิดกันระเบิด

P303+P361+P353 หากสัมผัสผิวหนัง (หรือเส้นผม) ถอดเสื้อผ้าที่เปื้อนทั้งหมดทันที ล้างผิวด้วยน้ำ/อาบน้ำ

P305+P351+P338 หากเข้าตา : ชะล้างด้วยน้ำอย่างระมัดระวังเป็นเวลาหลายๆนาที ถอดคอนแทกซ์เลนส์ถ้ายังอยู่ที่เดิมและ
สะตวกที่จะทำก็ให้ชะล้างต่อไป

P405 เก็บในที่ใส่กุญแจปิด

P501 ทิ้งสิ่งที่บรรจุ/ภาชนะที่บรรจุตามกฎหมายของท้องถิ่น/แคว้น/ในประเทศ/ระหว่างประเทศ

· ข้อมูลรายละเอียดเสริม

EUH066 การสัมผัสซ้ำๆหลายครั้งอาจทำให้ผิวหนังแห้งและผิวแตก

· 2.3 อันตรายอื่นๆ

· ผลของ PBT และการประเมิน vPvB

· PBT: ไม่สามารถใช้ได้

· vPvB: ไม่สามารถใช้ได้

3 ส่วนประกอบ/ ข้อมูลรายละเอียดของส่วนผสมต่างๆ

· 3.1 คุณลักษณะทางเคมี: สาร

· การระบุเลขที่ CAS

67-64-1 อะซีโตน

· เลขที่ที่ระบุ

· จำนวน EC: 200-662-2

· เลขที่ EU: 606-001-00-8

4 มาตรการการปฐมพยาบาลเบื้องต้น

· 4.1 คำอธิบายถึงมาตรการปฐมพยาบาล

· หลังจากการสูดหายใจเข้าไป หากบริเวณที่มีอากาศบริสุทธิ์ปรึกษาแพทย์ในกรณีที่อาการไม่ดีขึ้น

· หลังจากการสัมผัสผิวหนัง โดยทั่วๆไปผลิตภัณฑ์ไม่ก่อความระคายเคืองต่อผิวหนัง

· หลังจากการสัมผัสสูดดม ชะล้างที่เปิดอยู่ใต้น้ำที่กำลังไหลเป็นเวลาหลายๆนาที ถ้าอาการไม่ดีขึ้นให้ปรึกษาแพทย์

· หลังจากการกลืนเข้าไป: ถ้าอาการยังไม่บรรเทาให้ปรึกษาแพทย์

· 4.2 อาการสำคัญส่วนใหญ่และผลกระทบ ทั้งชนิดเฉียบพลันและค่อยๆ แสดงอาการ

ไม่มีข้อมูลที่เกี่ยวข้องนอกเหนือจากนี้

· 4.3 ข้อบ่งชี้ของอาการที่ต้องเข้ารับการรักษาจากแพทย์ทันทีและการบำบัดพิเศษที่จำเป็น

ไม่มีข้อมูลที่เกี่ยวข้องนอกเหนือจากนี้

5 มาตรการการดับเพลิง

· 5.1 สารที่ใช้ดับเพลิง

· สารดับเพลิงที่เหมาะสม

คาร์บอนไดออกไซด์สเปรย์ผงหรือน้ำดับเพลิงขนาดใหญ่ด้วยการฉีดน้ำหรือโฟมแอลกอฮอล์ที่ทนทาน

· 5.2 อันตรายเฉพาะอย่างที่เกิดจากสารหรือส่วนผสม ไม่มีข้อมูลที่เกี่ยวข้องนอกเหนือจากนี้

· 5.3 คำแนะนำสำหรับพนักงานดับเพลิง

· อุปกรณ์ป้องกันภัย ไม่ต้องมีมาตรการพิเศษ

TH

(ต่อหน้า 3)

แผนข้อมูลความปลอดภัย

ตาม 1907/2006/EC, มาตรา 31

วันที่พิมพ์ 2018.09.11

การปรับปรุงใหม่ : 2018.09.11

ชื่อทางการค้า อะซีโตน

(ต่อที่หน้า 2)

6 มาตรการลดอุบัติเหตุ

- 6.1 การป้องกันส่วนบุคคล อุปกรณ์ป้องกัน และขั้นตอนดำเนินการเมื่อเกิดกรณีฉุกเฉิน
สวมอุปกรณ์ป้องกันภัยกันคนที่ไม่ใช้อุปกรณ์ป้องกันออกไป
- 6.2 การให้ความคุ้มครองสิ่งแวดล้อม:
ทำให้เจือจางด้วยน้ำมากๆ
อย่าปล่อยให้เข้าไปในท่อน้ำทิ้ง/ น้ำบนดินหรือใต้ดิน
- 6.3 วิธีดำเนินการและวัสดุสำหรับการบรรจุและการทำความสะอาด:
ดูดซับด้วยวัสดุที่สามารถยึดของเหลวไว้ (ทรายไดอะโตไมท์ตัวยึดเกาะกรดตัวยึดทั่วไปซีลีย)
ตรวจให้แน่ใจว่ามีการระบายอากาศที่ดีพอ
- 6.4 การอ้างอิงถึงส่วนอื่น
ดูข้อมูลรายละเอียดเรื่องความปลอดภัยในการขนถ่ายจากส่วนที่ 7
ดูข้อมูลรายละเอียดเรื่องอุปกรณ์ป้องกันส่วนบุคคลจากส่วนที่ 8
ดูข้อมูลรายละเอียดเรื่องการจัดเก็บจากส่วนที่ 13

7 การขนถ่ายและการจัดเก็บ

- 7.1 การป้องกันล่วงหน้าสำหรับการจัดการด้านความปลอดภัย ไม่จำเป็นต้องมีค่าเตือนพิเศษใดๆ หากใช้อย่างถูกวิธี
- ข้อมูลรายละเอียดเกี่ยวกับการป้องกันอัคคีภัยและการระเบิด
ออกห่างจากแหล่งที่ติดไฟอย่าสูบบุหรี่
ป้องกันให้พ้นจากประกายไฟฟาสถิตย์
- 7.2 เงื่อนไขในการเก็บรักษาอย่างปลอดภัย, รวมถึงสิ่งที่เข้ากันไม่ได้ใดๆ
- การจัดเก็บ
- ข้อกำหนดที่ต้องปฏิบัติตามสำหรับห้องเก็บและภาชนะบรรจุ เก็บในบริเวณที่เย็น
- ข้อมูลรายละเอียดด้านการจัดเก็บในสถานที่จัดเก็บรวม ไม่ได้กำหนด
- ข้อมูลรายละเอียดเพิ่มเติมด้านสภาพการจัดเก็บ
เก็บโดยปิดผนึกอย่างแน่นหนา
เก็บในที่เย็นสภาพแห้งในภาชนะบรรจุที่ปิดผนึกอย่างดี
- 7.3 การระบุถึงการสิ้นสุดการใช้ ไม่มีข้อมูลที่เกี่ยวข้องนอกเหนือจากนี้

8 การควบคุมการทิ้งในลักษณะเปิด / การป้องกันภัยส่วนบุคคล

- ข้อมูลรายละเอียดเสริมสำหรับการออกแบบสิ่งอำนวยความสะดวกทางเทคนิค ไม่มีข้อมูลนอกเหนือจากนี้ดูรายการ 7

8.1 การควบคุมตัวแปร

- ส่วนผสมพร้อมค่าขอบเขตที่ต้องเฝ้าดูในสถานที่ปฏิบัติงาน

67-64-1 อะซีโตน

PEL (US)	ค่าระยะยาว: 2400 mg/m ³ , 1000 ppm
REL (US)	ค่าระยะยาว: 590 mg/m ³ , 250 ppm
TLV (US)	ค่าระยะสั้น: 1187 mg/m ³ , 500 ppm
BEI	ค่าระยะยาว: 594 mg/m ³ , 250 ppm

- ข้อมูลรายละเอียดเสริม รายการถูกต้องระหว่างที่จัดทำโดยอาศัยการปฏิบัติงานเป็นหลัก
- 8.2 การควบคุมการสัมผัส
- อุปกรณ์ป้องกันภัยส่วนบุคคล
- มาตรการการป้องกันและสุขอนามัยทั่วไป
เก็บให้ห่างจากสิ่งของที่เป็นอาหาร เครื่องดื่ม และอาหารสัตว์
ให้ถอดเสื้อผ้าที่เปื้อนและเจือปนออกทันที
ล้างมือก่อนที่จะหยุดพักและเมื่อสิ้นสุดเวลาทำงาน
หลีกเลี่ยงการสัมผัสถูกตา

(ต่อที่หน้า 4)

แผนข้อมูลความปลอดภัย

ตาม 1907/2006/EC, มาตรา 31

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ชื่อทางการค้า อะซีโตน

(ต่อหน้า 3)

- หลีกเลี่ยงการสัมผัสผิวหนังและผิวหนัง
- **การป้องกันการสูดหายใจเข้าไป** ไม่ได้กำหนด
 - **การป้องกันมือ**
วัสดุของถุงมือจะต้องไม่ให้อากาศผ่านเข้าออกและทนทานต่อผลิตภัณฑ์/ สาร/ การผลิต เนื่องจากขาดการทดสอบจึงไม่มีคำแนะนำสำหรับวัสดุที่ใช้ทำถุงมือสำหรับผลิตภัณฑ์/ การผลิต/ ของผสมเคมี เลือกวัสดุสำหรับถุงมือโดยพิจารณาจากเวลาที่ใช้ในการซึมผ่านอัตราการแพร่และการเสื่อม
 - **วัสดุที่ใช้ทำถุงมือ**
การเลือกใช้ถุงมือที่เหมาะสมไม่เพียงแต่ขึ้นอยู่กับวัสดุแต่ยังขึ้นกับมาตรฐานด้านคุณภาพและข้อแตกต่างระหว่างผู้ผลิตแต่ละแห่ง
 - **เวลาที่ใช้ในการทะลุผ่านวัสดุที่ใช้ทำถุงมือ**
ผู้ผลิตถุงมือป้องกันจะต้องทดสอบหาเวลาแน่นอนที่ใช้ในการทะลุผ่านและจะต้องมีการตรวจสอบติดตาม
 - **การป้องกันตา**



แว่นตาที่ขอบปิดสนิท

9 คุณสมบัติทางกายภาพและเคมี

9.1 ข้อมูลคุณสมบัติพื้นฐานทางกายภาพและเคมี

· ข้อมูลรายละเอียดทั่วไป

· ลักษณะ :

รูปลักษณ์
สี

ของเหลว
ไม่มีสี

· กลิ่น

คล้ายอะซีโตน

· เกณฑ์กลิ่น :

ไม่ได้กำหนดไว้.

· ค่า pH

ไม่ได้กำหนดไว้.

· การเปลี่ยนสถานะ

จุดหลอมเหลว/ ขอบเขตการหลอมละลาย
จุดเดือด/ ขอบเขตการเดือด

-94.7 °C
56.5 °C

· จุดวาบไฟ

-20 °C

· ความสามารถติดไฟ (ของแข็งแกส)

ไม่สามารถใช้ได้

· อุณหภูมิจุดระเบิด

465 °C

· อุณหภูมิละลายตัว

ไม่ได้กำหนดไว้.

· การเผาไหม้ด้วยตัวเอง

ไม่ได้กำหนดไว้.

· อันตรัยจากการระเบิด

ผลิตภัณฑ์ไม่ได้เป็นสารระเบิดอย่างไรก็ตามอาจเป็นไปได้ที่การผสมของอากาศ/ ไอจะทำให้เกิดการ

· ขอบเขตการระเบิด

ขั้นต่ำ
ขั้นสูง

2.6 Vol %
13 Vol %

· ความดันไอ ที่ 20 °C

233 hPa

· ความหนาแน่น ที่ 20 °C

0.79 g/cm³

· ความหนาแน่นสัมพัทธ์

ไม่ได้กำหนดไว้.

· ความหนาแน่นของไอ

ไม่ได้กำหนดไว้.

· อัตราการระเหย

ไม่ได้กำหนดไว้.

(ต่อหน้า 5)

แผนข้อมูลความปลอดภัย

ตาม 1907/2006/EC, มาตรา 31

วันที่พิมพ์ 2018.09.11

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ชื่อทางการค้า อะซิโตน

(ต่อที่หน้า 4)

- | | |
|--|--|
| · ความสามารถในการละลายใน / ความสามารถผสมเป็นสารละลายเนื้อเดียวทุกส่วนผสมกับน้ำ | ผสมกันได้อย่างเต็มที่ |
| · สัมประสิทธิ์การแยกตัว (เฮน-ออกทานอล/น้ำ) | ไม่ได้กำหนดไว้. |
| · ความหนืด (ไดนามิค) พลศาสตร์ ที่ 20 °C (คิเนเมติก) จลนศาสตร์ | 32 mPas
ไม่ได้กำหนดไว้. |
| · 9.2 ข้อมูลอื่นๆ | ไม่มีข้อมูลที่เกี่ยวข้องนอกเหนือจากนี้ |

10 ความเสถียรและความสามารถในการทำปฏิกิริยา

- 10.1 ปฏิกิริยาโต้ตอบ ไม่มีข้อมูลที่เกี่ยวข้องนอกเหนือจากนี้
- 10.2 เสถียรภาพทางเคมี
- การสลายตัวด้วยความร้อน / เงื่อนไขที่ต้องหลีกเลี่ยง ไม่มีการสลายตัวถ้าใช้ตามรายละเอียดที่ระบุไว้
- 10.3 ความเป็นไปได้ของการเกิดปฏิกิริยาอันตราย ไม่มีปฏิกิริยาเป็นอันตรายที่รู้จัก
- 10.4 เงื่อนไขเพื่อการหลีกเลี่ยง ไม่มีข้อมูลที่เกี่ยวข้องนอกเหนือจากนี้
- 10.5 วัสดุที่เข้ากันไม่ได้: ไม่มีข้อมูลที่เกี่ยวข้องนอกเหนือจากนี้
- 10.6 อันตรายจากการสลายตัวของผลิตภัณฑ์: ไม่มีสารจากการสลายตัวที่เป็นอันตรายที่รู้จัก

11 ข้อมูลรายละเอียดเกี่ยวกับพิษวิทยา

- 11.1 ข้อมูลเกี่ยวกับผลกระทบทางพิษวิทยา

· ความเป็นพิษอย่างสาหัส:
เป็นอันตรายหากกลืนเข้าไป

- การจัดแบ่งตามค่า LD/LC50

ทางปาก	LD50	5,800 mg/kg (rat)
ทางผิวหนัง	LD50	20,000 mg/kg (rabbit)

- อาการระคายเคืองเบื้องต้น
- บนผิวหนัง
- ที่ดวงตา
เป็นสาเหตุให้เกิดการระคายเคืองอย่างร้ายแรงที่ตา
- การทำให้แพ้

12 ข้อมูลรายละเอียดเกี่ยวกับนิเวศวิทยา

- 12.1 ความเป็นพิษ
- ความเป็นพิษที่เกี่ยวข้องกับน้ำ ไม่มีข้อมูลที่เกี่ยวข้องนอกเหนือจากนี้
- 12.2 การคงอยู่และการย่อยสลาย ไม่มีข้อมูลที่เกี่ยวข้องนอกเหนือจากนี้
- 12.3 การสะสมทางชีวภาพที่อาจเกิดขึ้น ไม่มีข้อมูลที่เกี่ยวข้องนอกเหนือจากนี้
- 12.4 การเปลี่ยนแปลงในดิน ไม่มีข้อมูลที่เกี่ยวข้องนอกเหนือจากนี้
- ข้อมูลรายละเอียดเสริมเกี่ยวกับนิเวศวิทยา
- หมายเหตุทั่วไป
เป็นอันตรายต่อน้ำชั้น 1 (กฎข้อบังคับของเยอรมัน)(การประเมินค่าตามรายการ):เป็นอันตรายเล็กน้อยกับน้ำ
อย่าปล่อยให้ผลิตภัณฑ์ที่ยังไม่ได้เจือจางหรือผลิตภัณฑ์เป็นจำนวนมากไปถึงน้ำผิวดินเส้นทางน้ำหรือระบบระบายน้ำเสีย
- 12.5 ผลของ PBT และการประเมิน vPvB
- PBT: ไม่สามารถใช้ได้
- vPvB: ไม่สามารถใช้ได้

(ต่อที่หน้า 6)

แผนข้อมูลความปลอดภัย

ตาม 1907/2006/EC, มาตรา 31

วันที่พิมพ์ 2018.09.11

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ชื่อทางการค้า อะซิโตน

- 12.6 ผลข้างเคียงอื่นๆ ไม่มีข้อมูลที่เกี่ยวข้องนอกเหนือจากนี้

(ต่อที่หน้า 5)

13 การพิจารณาการกำจัด

- 13.1 วิธีการกำจัดของเสีย
- คำแนะนำ ต้องไม่ทิ้งไปพร้อมกับขยะจากบ้านเรือนอย่าปล่อยให้ผลิตภัณฑ์เข้าถึงระบบระบายน้ำเสีย
- ภาชนะบรรจุที่ยังไม่ได้ล้างทำความสะอาด
- คำแนะนำ การกำจัดจะต้องทำตามกฎระเบียบที่เป็นทางการ
- สารทำความสะอาดที่แนะนำ นำถ้าจำเป็นใช้คู่กับสารทำความสะอาด

14 ข้อมูลรายละเอียดในการขนส่ง

- 14.1 เลขที่ UN
- ADR, IMDG, IATA UN1090
- 14.2 ชื่อการจัดส่งสินค้าที่เหมาะสมของ UN
- ADR 1090 ACETONE
- IMDG, IATA ACETONE
- 14.3 ชั้นเรียนอันตรายจากการขนส่ง
- ADR, IMDG, IATA
- ประเภท 3 ของเหลวติดไฟได้
- ฉลากสิ่งที่เป็นอันตราย 3
- 14.4 กลุ่มของภาชนะบรรจุ
- ADR, IMDG, IATA II
- 14.5 สิ่งที่เป็นอันตรายต่อสภาพแวดล้อม ไม่สามารถใช้ได้
- 14.6 การป้องกันพิเศษล่วงหน้าสำหรับผู้ใช้ คำเตือน !: ของเหลวติดไฟได้
- รหัสความอันตราย: 33
- หมายเลข EMS F-E,S-D
- Stowage Category E
- 14.7 การขนส่งขนาดใหญ่ตามภาคผนวก 2 ของ MARPOL73/78 และรหัส IBC ไม่สามารถใช้ได้

· การขนส่ง/ข้อมูลรายละเอียดเสริม

- ADR
- ปริมาณที่จำกัด (LQ) 1L
- Excepted quantities (EQ) Code: E2
- Maximum net quantity per inner packaging: 30 ml
- Maximum net quantity per outer packaging: 500 ml
- หมวดหมู่การขนส่ง 2
- รหัสควบคุมการผ่านอุโมงค์ D/E

(ต่อที่หน้า 7)

แผนข้อมูลความปลอดภัย

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(ต่อหน้า 6)

· IMDG	
· Limited quantities (LQ)	1L
· Excepted quantities (EQ)	Code: E2
	Maximum net quantity per inner packaging: 30 ml
	Maximum net quantity per outer packaging: 500 ml
· “กฎระเบียบต้นแบบ” ของ UN	UN 1090 ACETONE, 3, II

15 ข้อมูลรายละเอียดของกฎระเบียบ

- 15.1 ความปลอดภัย สุขภาพและระเบียบ/กฎหมายสิ่งแวดล้อมโดยเฉพาะของสารหรือสารผสม
- บัญชีรายชื่อวัตถุอันตราย
- กรมวิชาการเกษตร สารที่ไม่ได้อยู่ในรายการ
- กรมประมง สารที่ไม่ได้อยู่ในรายการ
- กรมปศุสัตว์ สารที่ไม่ได้อยู่ในรายการ
- อาหารและยา สารที่ไม่ได้อยู่ในรายการ
- กรมโรงงานอุตสาหกรรม ชนิดที่ 3
- กรมธุรกิจพลังงาน สารที่ไม่ได้อยู่ในรายการ
- 15.2 การประเมินความปลอดภัยของสารเคมี: ไม่ได้ดำเนินการตามการประเมินความปลอดภัยของสารเคมี

16 ข้อมูลรายละเอียดอื่นๆ

ข้อมูลรายละเอียดนี้ใช้ความรู้ปัจจุบันของเราเป็นหลักอย่างไรก็ตามข้อมูลนี้ไม่ใช่การรับประกันจากสถาบันต่อคุณสมบัติเฉพาะของผลิตภัณฑ์และไม่สามารถยืนยันการบังคับใช้ตามกฎหมายที่เกี่ยวข้องกับสัญญา

· คำย่อและชื่อย่อที่ผสมขึ้น

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

Flam. Liq. 2: Flammable liquids – Category 2

Acute Tox. 4: Acute toxicity – Category 4

Eye Irrit. 2: Serious eye damage/eye irritation – Category 2

STOT SE 3: Specific target organ toxicity (single exposure) – Category 3

TH

Dữ liệu an toàn

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1 Nhận biết các chất hoặc hỗn hợp và các doanh nghiệp

- **Phân loại sản phẩm**
- **Tên giao dịch** **Acetone, Reagent Grade**
- **Mã giao dịch:** 10000, 10014, 10010, 10012
- **Mã CAS:**
67-64-1
- **Số EC:**
200-662-2
- **Mã hiển thị:**
606-001-00-8
- **Các trường hợp được dùng chất, hỗn hợp này và các trường hợp chống chỉ định**
Không có thêm thông tin có liên quan.
- **Hướng dẫn sử dụng** Phòng thí nghiệm hóa chất
- **Thông tin chi tiết của các nhà cung cấp các bảng dữ liệu an toàn**
- **Nhà sản xuất / Nhà phân phối:**
Electron Microscopy Sciences
1560 Industry Road
USA-Hatfield, PA 19440
Tel: 215-412-8400 Fax: 215-412-8450
email: sgkcck@aol.com
www.emsdiasum.com
- **Các thông tin chi tiết có thể tìm thấy ở:** Product safety department
- **Số điện thoại khẩn cấp:**
ChemTrec 1-800-424-9300 Contract CCN7661
1-703-527-3887

2 Xác định các trường hợp nguy hiểm có thể xảy ra

- **Phân loại chất và hỗn hợp**



cháy flame

Chất lỏng dễ cháy 2 H225 Chất lỏng và hơi khả năng cháy cao.



Nhiễm độc cấp tính 4 H302 Có hại nếu nuốt phải

Kích ứng mắt 2 A H319 Gây kích ứng nghiêm trọng cho mắt.

Nhiễm độc cấp tính 5 H333 Có thể có hại nếu hít phải.

- **Các phần tử nhãn hiệu**
- **Các yếu tố trên nhãn GHS** Chất này được xếp loại và ghi nhãn theo quy định của GHS
- **Các hình biểu thị sự nguy hiểm**



GHS02 GHS07

- **Từ chỉ dấu hiệu** Nguy hiểm

(Xem tiếp ở trang 2)

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Tên giao dịch Acetone, Reagent Grade

(Xem tiếp ở trang 1)

- **Các hướng dẫn về các nguy hiểm**
Chất lỏng và hơi khả năng cháy cao.
Có hại nếu nuốt phải
Có thể có hại nếu hít phải.
Gây kích ứng nghiêm trọng cho mắt.
- **Các hướng dẫn an toàn**
Tránh nhiệt/tia lửa/ngọn lửa/bề mặt nóng – Không hút thuốc.
Sử dụng các thiết bị điện/thông gió/chiếu sáng chống nổ.
Đeo găng tay bảo vệ/mặc quần áo bảo hộ/dụng cụ bảo vệ mắt/bảo vệ mặt.
Nếu tiếp xúc trên da (hoặc tóc): ngay lập tức cởi bỏ tất cả quần áo nhiễm độc. Rửa bằng nước/ vòi hoa sen
NẾU DÍNH MẮT: Rửa thật cẩn thận với nước trong vài phút. Tháo kính áp tròng nếu có và nếu dễ làm.
Sau đó tiếp tục rửa
Vứt sản phẩm/vỏ hộp theo quy định của địa phương/khu vực/quốc gia/quốc tế.
- **Các dấu hiệu nguy hiểm khác:**
- **Kết quả của đánh giá PBT và vPvB Results**
- **PBT:** Không được áp dụng
- **vPvB:** Không được áp dụng

3 Thành phần / Thông tin của công thức

- **Mô tả tính chất hóa học: Chất**
- **Mô tả mã CAS**
67-64-1 Acetone, Reagent Grade
- **Mã nhận biết**
- **Số EC:** 200-662-2
- **Mã hiển thị :** 606-001-00-8

4 Các biện pháp sơ cứu

- **Mô tả về các biện pháp sơ cứu**
- **Sau khi hít vào:** Cung cấp không khí trong lành, hỏi ý kiến bác sĩ trong trường hợp người bệnh bị đau.
- **Sau khi tiếp xúc với da:** Nhìn chung sản phẩm không gây kích ứng da
- **Sau khi tiếp xúc với mắt:**
Mở mắt và rửa dưới vòi nước trong vài phút, nếu không thấy đỡ thì phải gọi cho bác sĩ ngay
- **Sau khi nuốt phải:** Nếu triệu chứng không giảm thì phải xin tư vấn của bác sĩ
- **Thông tin dành cho bác sĩ:**
- **Những triệu chứng và tác dụng cấp và chậm quan trọng nhất:**
Không có thông tin liên quan nào khác
- **Các chỉ dẫn về sự giúp đỡ tức thời của bác sĩ và trợ giúp đặc biệt**
Không có thêm thông tin liên quan

5 Các giải pháp chữa cháy

- **Các phương tiện chữa cháy**
- **Các giải pháp chữa cháy thích hợp**
CO₂, bột hay phun bụi nước. Chữa đám cháy lớn hơn phải phun bụi nước hay bột ARC
- **Những nguy cơ gây cháy từ các chất hoặc hỗn hợp** Không có thêm thông tin liên quan

(Xem tiếp ở trang 3)

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Tên giao dịch Acetone, Reagent Grade

(Xem tiếp ở trang 2)

- **Hướng dẫn trong trường hợp chữa cháy**
- **Các thiết bị bảo vệ** Không cần đến những biện pháp đặc biệt

6 Các biện pháp trong trường hợp giải phóng bất ngờ

- **Các biện pháp phòng ngừa cá nhân, thiết bị bảo hộ và thủ tục khẩn cấp**
Đeo thiết bị bảo vệ. Những ai không có thiết bị bảo vệ không được vào khu vực nguy hiểm
- **Các biện pháp bảo vệ môi trường**
Làm loãng đi bằng nhiều nước
Ngăn không cho tràn vào hệ thống nước thải, nước mặt hay nước ngầm
- **Các phương pháp và nguyên liệu dùng cho việc ngăn chặn và làm sạch**
Có thể ngấm vào vật liệu giữ chất lỏng (cát, diatomite, vữa axit, vữa thường, mùn cưa)
Đảm bảo thoáng khí
- **Liên hệ đến các phần khác**
Xem phần 7 để biết thông tin về xử lý an toàn
Xem phần 8 để biết thông tin và thiết bị bảo hộ cá nhân
Xem phần 13 để biết thông tin về xả thải

7 Xử lý và lưu trữ

- **Xử lý**
- **Các biện pháp bảo vệ để xử lý an toàn**
Nếu sử dụng đúng cách thì không cần thiết phải có cảnh báo thận trọng
- **Thông tin về các biện pháp chống cháy,**
Tránh xa nguồn cháy nổ. Không hút thuốc
Tránh tích điện
- **Điều kiện cho việc lưu trữ an toàn, bao gồm cả sự không tương thích**
- **Lưu trữ:**
- **Yêu cầu đối với phòng chứa và dụng cụ chứa** Đặt ở nơi thoáng mát
- **Thông tin về lưu trữ đối với một cơ sở lưu trữ thông thường** Không yêu cầu
- **Thông tin thêm về điều kiện lưu trữ**
Đậy kín bình chứa
Đặt ở nơi thoáng mát và trong điều kiện được dán kín
- **Tác dụng của sản phẩm** Không có thêm thông tin liên quan

8 Kiểm soát các tình huống nguy hiểm / Bảo vệ cá nhân

- **Thông tin thêm về thiết kế các phương tiện kỹ thuật** Không có thêm dữ liệu; xem mục 7
- **Các thông số điều khiển**

- **Các thành phần với giá trị giới hạn cần được yêu cầu giám sát tại nơi làm việc**

67-64-1 Acetone, Reagent Grade

PEL (US)	Giá trị dài hạn: 2400 mg/m ³ , 1000 ppm
REL (US)	Giá trị dài hạn: 590 mg/m ³ , 250 ppm
TLV (US)	Giá trị ngắn hạn: 1187 mg/m ³ , 500 ppm Giá trị dài hạn: 594 mg/m ³ , 250 ppm BEI
IOELV (EU)	Giá trị dài hạn: 1210 mg/m ³ , 500 ppm

- **Thông tin bổ sung** Danh sách có hiệu lực trong suốt quá trình thực hiện được sử dụng làm cơ sở

(Xem tiếp ở trang 4)

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Tên giao dịch Acetone, Reagent Grade

(Xem tiếp ở trang 3)

- **Kiểm soát các tình huống nguy hiểm**
- **Các thiết bị an toàn cá nhân**
- **Các biện pháp bảo vệ và vệ sinh tổng thể**
Tránh xa thực phẩm, đồ uống và đồ ăn cho vật nuôi
Loại bỏ ngay lập tức tất cả quần áo bị nhiễm bẩn
rửa tay trước giờ nghỉ và cuối giờ làm
Tránh tiếp xúc với mắt
Tránh tiếp xúc với mắt và da
- **Bảo vệ đường hô hấp:** Không yêu cầu
- **Bảo vệ tay**
Chất liệu làm găng tay phải chống thấm dột với sản phẩm/chất/chế phẩm
Do không thấy các cuộc thử nghiệm nên không có khuyến cáo về chất liệu làm găng tay cho sản phẩm/
chế phẩm/hỗn hợp hóa chất
Chọn chất liệu găng theo số lần và thời gian sử dụng
- **Chất liệu của găng tay**
Việc lựa chọn găng tay phù hợp không chỉ phụ thuộc vào chất liệu, mà còn về nhãn hiệu hơn và chất lượng
và rất đa dạng về nhà sản xuất
- **Thời gian xâm nhập của găng tay vật liệu**
Việc phá vỡ chính xác qua thời gian đã được phát hiện bởi các nhà sản xuất găng tay bảo vệ và phải được
giám sát
- **Bảo vệ mắt Eye**



Kính bảo hộ dán kín

9 Tính chất vật lý và hóa học

- Thông tin về tính chất vật lý và hóa học cơ bản
- Thông tin tổng quát
- **Diện mạo:**
 - Hình thức:: Chất lỏng
 - Màu: Không màu
- **Mùi:** Giống Aceton
- **Ngưỡng mùi:** Không xác định.
- **Độ pH:** Không xác định.
- **Thay đổi trong điều kiện**
 - Điểm tan / Phạm vi tan -94.7 °C
 - Điểm sôi / Phạm vi sôi 56.5 °C
- **Điểm bay hơi:** -20 °C
- **Tính dễ cháy (rắn, khí):** Không thể áp dụng.
- **Nhiệt độ cháy:** 465 °C
- **Nhiệt độ phân hủy:** Không xác định.
- **Tự cháy:** Không xác định.
- **Nguy hiểm do cháy nổ:** Sản phẩm không nổ. Nhưng có khả năng hình thành khí, hỗn hợp hơi gây nổ.

(Xem tiếp ở trang 5)

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Tên giao dịch Acetone, Reagent Grade

(Xem tiếp ở trang 4)

· Giới hạn nổ:	
Dưới:	2.6 Vol %
Trên:	13 Vol %
· Áp lực hơi: tại 20 °C:	233 hPa
· Mật độ tại 20 °C:	0.79 g/cm ³
· Mật độ tương đối:	Không xác định.
· Mật độ của hơi:	Không xác định.
· Tỉ lệ bay hơi:	Không xác định.
· Độ hòa tan trong / Độ hòa trộn với:	
Nước:	Có thể trộn lẫn hoàn toàn.
· Sự phân biệt hệ số (n-octanol / Nước):	Không xác định.
· Độ nhớt:	
Động tại 20 °C	32 mPas
Tĩnh	Không xác định.
· Thông tin khác:	Không có thông tin chi tiết tương ứng

10 Sự ổn định và phản ứng:

- **Phản ứng:** Không có thêm thông tin liên quan
- **Sự ổn định hóa học:**
- **Phân hủy nhiệt / Điều kiện cần tránh::** Không phân hủy nếu được sử dụng theo tiêu chuẩn.
- **Khả năng phản ứng nguy hiểm:** Chưa có phản ứng nguy hiểm nào được biết tới.
- **Các điều kiện cần tránh:** Không có thêm thông tin liên quan
- **Vật liệu không tương thích:** Không có thêm thông tin liên quan.
- **Sản phẩm phân hủy nguy hiểm:** Chưa có sản phẩm phân hủy nào được biết đến.

11 Thông tin độc tính:

- Thông tin về các hiệu ứng độc tính:
- **Ngộ độc cấp tính:**

· Phân loại liên quan tới giá trị LD/LC50

Miệng	LD50	5,800 mg/kg (rat)
Da	LD50	20,000 mg/kg (rabbit)

- **Hiệu ứng kích thích sơ cấp:**
- **Trên da** Không có tác dụng kích ứng.
- **Trên mắt:** Tác dụng kích ứng.
- **Độ nhạy cảm** Không có tác dụng mẫn cảm nào được biết tới.

12 Thông tin sinh thái

- **Độc tính**
- **Thủy sản độc tính:** Không có thêm thông tin liên quan.
- **Sự kiên trì và khả năng nhạc dần:** Không có thêm thông tin liên quan.
- **Hành vi trong các hệ thống môi trường:**
- **Tiềm năng tích lũy sinh học** Không có thêm thông tin liên quan.
- **Tính lưu động trong đất** Không có thêm thông tin liên quan.

(Xem tiếp ở trang 6)

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(Xem tiếp ở trang 5)

- **Bổ sung thông tin sinh thái:**
- **Ghi chú tổng quát:**
Độc hại cho nước loại 1 (quy định của Đức) (Đánh giá theo danh sách): hơi độc cho nước.
Không để sản phẩm chưa pha loãng hoặc số lượng lớn tiếp xúc với nước ngầm, nguồn nước hoặc hệ thống nước thải.
- **Kết quả của đánh giá PBT và vPvB**
- **PBT PBT:** Không có khả năng ứng dụng.
- **vPvB vPvB:** Không có khả năng ứng dụng.
- **Các hiệu ứng bất lợi** Không có thêm thông tin liên quan.

13 Xem xét xử lý

- **Phương pháp xử lý chất thải**
- **Khuyến nghị**
Không được xử lý cùng rác thải sinh hoạt. Không được bỏ sản phẩm vào hệ thống nước thải.
- **Bao bì bán**
- **Khuyến nghị:** Việc xử lý phải thực hiện theo các quy định của chính quyền.
- **Các chất tẩy rửa được khuyến nghị sử dụng** Nước, nếu cần, kết hợp với chất tẩy rửa.

14 Thông tin vận chuyển

- | | |
|--|--|
| <ul style="list-style-type: none"> · Mã LHQ (UN) · ADR, IMDG, IATA | <p>UN1090</p> |
| <ul style="list-style-type: none"> · Tên vận chuyển theo quy ước của LHQ · ADR · IMDG, IATA | <p>1090 ACETONE
ACETONE</p> |
| <ul style="list-style-type: none"> · vận chuyển các lớp học nguy hiểm · ADR, IMDG, IATA | <div style="text-align: center;">  </div> |
| <ul style="list-style-type: none"> · lớp · nhãn | <p>3 Các chất lỏng dễ cháy.
3</p> |
| <ul style="list-style-type: none"> · Nhóm bao bì · ADR, IMDG, IATA | <p>II</p> |
| <ul style="list-style-type: none"> · Các môi trường nguy hiểm: | <p>Không có khả năng ứng dụng..</p> |
| <ul style="list-style-type: none"> · Các biện pháp phòng ngừa đặc biệt cho người sử dụng: · Mã nguy hiểm: · Mã EMS: · Stowage Category | <p>Cảnh báo: Các chất lỏng dễ cháy.
33
F-E,S-D
E</p> |
| <ul style="list-style-type: none"> · Vận chuyển với số lượng lớn theo Phụ Lục II của MARPOL73/78 và mã IBC | <p>Không có khả năng ứng dụng.</p> |

(Xem tiếp ở trang 7)

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(Xem tiếp ở trang 6)

· **Vận chuyển/ Thông tin thêm:**· **ADR**· **Số lượng giới hạn (LQ)**

1L

· **Excepted quantities (EQ)**

Code: E2

Maximum net quantity per inner packaging: 30 ml

Maximum net quantity per outer packaging: 500 ml

· **Danh mục vận chuyển**

2

· **Mã hạn chất đường hầm**

D/E

· **IMDG**· **Limited quantities (LQ)**

1L

· **Excepted quantities (EQ)**

Code: E2

Maximum net quantity per inner packaging: 30 ml

Maximum net quantity per outer packaging: 500 ml

· **Mẫu chuẩn của LHQ:**

UN 1090 ACETONE, 3, II

15 Thông tin quy định:

- **An toàn, sức khỏe và các quy định, pháp luật về môi trường cho các chất và hỗn hợp**
- **Kho hóa chất và chất hóa học của Philippin** Chất được liệt kê.
- **Kho chất hóa học của Australia** Chất được liệt kê.
- **Lập kế hoạch cho thuốc và chất độc theo mẫu chuẩn S5**
- **Các yêu tố trên nhãn GHS** Chất này được xếp loại và ghi nhãn theo quy định của GHS
- **Các hình biểu thị sự nguy hiểm**



GHS02 GHS07

- **Từ chỉ dấu hiệu** Nguy hiểm
- **Các hướng dẫn về các nguy hiểm**
Chất lỏng và hơi khả năng cháy cao.
Có hại nếu nuốt phải.
Có thể có hại nếu hít phải.
Gây kích ứng nghiêm trọng cho mắt.
- **Các hướng dẫn an toàn**
Tránh nhiệt/tia lửa/ngọn lửa/bề mặt nóng – Không hút thuốc.
Sử dụng các thiết bị điện/thông gió/chiếu sáng chống nổ.
Đeo găng tay bảo vệ/mặc quần áo bảo hộ/dụng cụ bảo vệ mắt/bảo vệ mặt.
Nếu tiếp xúc trên da (hoặc tóc): ngay lập tức cởi bỏ tất cả quần áo nhiễm độc. Rửa bằng nước/ vòi hoa sen
NẾU DÍNH MẮT: Rửa thật cẩn thận với nước trong vài phút. Tháo kính áp tròng nếu có và nếu dễ làm.
Sau đó tiếp tục rửa
Vứt sản phẩm/vỏ hộp theo quy định của địa phương/khu vực/quốc gia/quốc tế.
- **Đánh giá an toàn hóa chất:** Đánh giá an toàn hóa chất chưa được tiến hành.

VN

(Xem tiếp ở trang 8)

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Tên giao dịch Acetone, Reagent Grade

(Xem tiếp ở trang 7)

16 Thông tin khác

Thông tin này dựa trên kiến thức hiện nay của chúng tôi. Tuy nhiên, điều này không đảm bảo cho bất cứ tính chất cụ thể nào của sản phẩm và không thiết lập mối quan hệ hợp tác có giá trị pháp lý nào.

· Chữ viết tắt hoặc Viết tắt chữ cái đầu:

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

EINECS: European Inventory of Existing Commercial Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

Chất lỏng dễ cháy 2: Flammable liquids – Category 2

Nhiễm độc cấp tính 4: Acute toxicity – Category 4

Nhiễm độc cấp tính 5: Acute toxicity – Category 5

Kích ứng mắt 2 A: Serious eye damage/eye irritation – Category 2A

VN