

Safety Data Sheet

acc. to OSHA HCS

Printing date 04/14/2017

Reviewed on 04/14/2017

1 Identification

- **Product identifier**
- **Trade name:** DAVIDSON'S FIXATIVE, MODIFIED
- **Article number:** 64133-50, 64133-50-SP
- **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.



GHS06 Skull and crossbones

Acute Tox. 3 H301 Toxic if swallowed.



GHS08 Health hazard

Resp. Sens. 1B H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Muta. 2 H341 Suspected of causing genetic defects.

Carc. 1A H350 May cause cancer.

Repr. 2 H361 Suspected of damaging fertility or the unborn child.

STOT SE 2 H371 May cause damage to organs.



GHS05 Corrosion

Met. Corr.1 H290 May be corrosive to metals.



GHS07

Acute Tox. 4 H332 Harmful if inhaled.

Skin Irrit. 2 H315 Causes skin irritation.

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Eye Irrit. 2A H319 Causes serious eye irritation.

Skin Sens. 1 H317 May cause an allergic skin reaction.

· **Label elements**

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

· **Hazard pictograms**



GHS02 GHS05 GHS06 GHS08

· **Signal word** *Danger*

· **Hazard-determining components of labeling:**

formaldehyde

Ethyl Alcohol, denatured

· **Hazard statements**

Highly flammable liquid and vapor.

May be corrosive to metals.

Toxic if swallowed.

Harmful if inhaled.

Causes skin irritation.

Causes serious eye irritation.

May cause allergy or asthma symptoms or breathing difficulties if inhaled.

May cause an allergic skin reaction.

Suspected of causing genetic defects.

May cause cancer.

Suspected of damaging fertility or the unborn child.

May cause damage to organs.

· **Precautionary statements**

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

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

Do not breathe dust/fume/gas/mist/vapors/spray.

[In case of inadequate ventilation] wear respiratory protection.

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

Ground/bond container and receiving equipment.

Keep container tightly closed.

Use only non-sparking tools.

Keep only in original container.

Take precautionary measures against static discharge.

Wash thoroughly after handling.

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

Use only outdoors or in a well-ventilated area.

Contaminated work clothing must not be allowed out of the workplace.

Obtain special instructions before use.

Do not handle until all safety precautions have been read and understood.

IF SWALLOWED: Immediately call a POISON CENTER/ doctor.

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.

Specific treatment (see on this label).

If experiencing respiratory symptoms: Call a POISON CENTER/doctor.

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

Call a POISON CENTER/doctor if you feel unwell.

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Wash contaminated clothing before reuse.

IF exposed or concerned: Get medical advice/attention.

If skin irritation or rash occurs: Get medical advice/attention.

If eye irritation persists: Get medical advice/attention.

Rinse mouth.

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

Absorb spillage to prevent material damage.

Take off contaminated clothing and wash it before reuse.

Store locked up.

Store in corrosive resistant container with a resistant inner liner.

Store in a well-ventilated place. Keep cool.

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 |

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: Mixtures**

· **Description:** Mixture of the substances listed below with nonhazardous additions.

· **Dangerous components:**

| | | |
|---------|--------------------------|---------|
| 64-17-5 | Ethyl Alcohol, denatured | 10-25% |
| 50-00-0 | formaldehyde | 10-25% |
| 64-19-7 | Acetic Acid Glacial | 2.5-10% |

4 First-aid measures

· **Description of first aid measures**

· **General information:**

Immediately remove any clothing soiled by the product.

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

In case of irregular breathing or respiratory arrest provide artificial respiration.

· **After inhalation:**

Supply fresh air and to be sure call for a doctor.

In case of unconsciousness place patient stably in side position for transportation.

· **After skin contact:** *Immediately wash with water and soap and rinse thoroughly.*

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- **After eye contact:**
Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
- **After swallowing:** Do not induce vomiting; immediately call for medical help.
- **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:**
Inform respective authorities in case of seepage into water course or sewage system.
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).
Dispose contaminated material as waste according to item 13.
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:**

| | | |
|---------|--------------------------|-----------|
| 64-17-5 | Ethyl Alcohol, denatured | 1,800 ppm |
| 50-00-0 | formaldehyde | 0.90 ppm |
| 64-19-7 | Acetic Acid Glacial | 5 ppm |
| 67-56-1 | Methyl Alcohol | 530 ppm |

- **PAC-2:**

| | | |
|---------|--------------------------|-----------|
| 64-17-5 | Ethyl Alcohol, denatured | 3300* ppm |
| 50-00-0 | formaldehyde | 14 ppm |
| 64-19-7 | Acetic Acid Glacial | 35 ppm |
| 67-56-1 | Methyl Alcohol | 2,100 ppm |

- **PAC-3:**

| | | |
|---------|--------------------------|------------|
| 64-17-5 | Ethyl Alcohol, denatured | 15000* ppm |
| 50-00-0 | formaldehyde | 56 ppm |
| 64-19-7 | Acetic Acid Glacial | 250 ppm |

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67-56-1 Methyl Alcohol

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7200* ppm

7 Handling and storage

- **Handling:**
- **Precautions for safe handling**
*Ensure good ventilation/exhaustion at the workplace.
 Open and handle receptacle with care.
 Prevent formation of aerosols.*
- **Information about protection against explosions and fires:**
*Keep ignition sources away - Do not smoke.
 Protect from heat.
 Protect against electrostatic charges.
 Keep respiratory protective device available.*
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** *No special requirements.*
- **Information about storage in one common storage facility:** *Not required.*
- **Further information about storage conditions:**
*Keep receptacle tightly sealed.
 Protect from heat and direct sunlight.*
- **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:**

64-17-5 Ethyl Alcohol, denatured

| | |
|-----|--|
| PEL | Long-term value: 1900 mg/m ³ , 1000 ppm |
|-----|--|

| | |
|-----|--|
| REL | Long-term value: 1900 mg/m ³ , 1000 ppm |
|-----|--|

| | |
|-----|---|
| TLV | Short-term value: 1880 mg/m ³ , 1000 ppm |
|-----|---|

50-00-0 formaldehyde

| | |
|-----|--|
| PEL | Short-term value: 2 ppm Long-term value: 0.75 ppm <i>see 29 CFR 1910.1048(c)</i> |
|-----|--|

| | |
|-----|---|
| REL | Long-term value: 0.016 ppm Ceiling limit value: 0.1* ppm *15-min; See Pocket Guide App. A |
|-----|---|

| | |
|-----|--|
| TLV | Short-term value: NIC-0.37 mg/m ³ , NIC-0.3 ppm Long-term value: NIC-0.12 mg/m ³ , NIC-0.1 ppm Ceiling limit value: (0.37) mg/m ³ , (0.3) ppm NIC-A1; DSEN; RSEN |
|-----|--|

64-19-7 Acetic Acid Glacial

| | |
|-----|--|
| PEL | Long-term value: 25 mg/m ³ , 10 ppm |
|-----|--|

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| | |
|-----|---|
| REL | Short-term value: 37 mg/m ³ , 15 ppm Long-term value: 25 mg/m ³ , 10 ppm |
| TLV | Short-term value: 37 mg/m ³ , 15 ppm Long-term value: 25 mg/m ³ , 10 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.

Store protective clothing separately.

Avoid contact with the eyes and skin.

· **Breathing equipment:**

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.

· **Protection of hands:**



Protective gloves

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. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

· **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:**

Safety glasses



Tightly sealed goggles

9 Physical and chemical properties

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

· **General Information**

· **Appearance:**

Form: Solution

Color: Clear

· **Odor:** Alcohol-like

· **Odor threshold:** Not determined.

· **pH-value at 20 °C (68 °F):** 2.5

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| | |
|---|--|
| · Change in condition | |
| Melting point/Melting range: | Undetermined. |
| Boiling point/Boiling range: | -21 °C (-6 °F) |
| · Flash point: | 17 °C (63 °F) |
| · Flammability (solid, gaseous): | Not flammable. |
| · Ignition temperature: | 300 °C (572 °F) |
| · Decomposition temperature: | Not determined. |
| · Auto igniting: | Product is not selfigniting. |
| · Danger of explosion: | Product is not explosive. However, formation of explosive air/vapor mixtures are possible. |
| · Explosion limits: | |
| Lower: | 3.5 Vol % |
| Upper: | 73.0 Vol % |
| · Vapor pressure at 20 °C (68 °F): | 59 hPa (44 mm Hg) |
| · Density at 20 °C (68 °F): | 0.9501 g/cm ³ (7.929 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: | Not determined. |
| Kinematic: | Not determined. |
| · Solvent content: | |
| Organic solvents: | 31.0 % |
| Water: | 69.0 % |
| VOC content: | 31.0 % |
| | 855.1 g/l / 7.14 lb/gl |
| · 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.

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11 Toxicological information

- **Information on toxicological effects**

- **Acute toxicity:**

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

| | | |
|-----------------------------|------|------------------|
| 50-00-0 formaldehyde | | |
| Oral | LD50 | >200 mg/kg (rat) |

- **Primary irritant effect:**

- **on the skin:** Irritant to skin and mucous membranes.

- **on the eye:** Irritating effect.

- **Sensitization:**

Sensitization possible through inhalation.

Sensitization possible through skin contact.

- **Additional toxicological information:**

The product shows the following dangers according to internally approved calculation methods for preparations:

Toxic

Harmful

Irritant

Carcinogenic.

- **Carcinogenic categories**

- **IARC (International Agency for Research on Cancer)**

| | | |
|---------|--------------------------|---|
| 64-17-5 | Ethyl Alcohol, denatured | I |
| 50-00-0 | formaldehyde | I |

- **NTP (National Toxicology Program)**

| | | |
|---------|--------------|---|
| 50-00-0 | formaldehyde | K |
|---------|--------------|---|

- **OSHA-Ca (Occupational Safety Health Administration)**

| | | |
|---------|--------------|--|
| 50-00-0 | formaldehyde | |
|---------|--------------|--|

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.

- **Ecotoxicological effects:**

- **Remark:** Very toxic for fish

- **Additional ecological information:**

- **General notes:**

Water hazard class 2 (Self-assessment): hazardous for water

Do not allow product to reach ground water, water course or sewage system.

Danger to drinking water if even small quantities leak into the ground.

Also poisonous for fish and plankton in water bodies.

Very toxic for aquatic organisms

- **Results of PBT and vPvB assessment**

- **PBT:** Not applicable.

- **vPvB:** Not applicable.

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· **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

- | | |
|--|---|
| <ul style="list-style-type: none"> · UN-Number · DOT, ADR, IMDG, IATA | <p style="margin-left: 20px;">UN1987</p> |
| <ul style="list-style-type: none"> · UN proper shipping name · DOT · ADR · IMDG · IATA | <p style="margin-left: 20px;">Alcohols, n.o.s. (Ethanol, Acetic acid, glacial) 1987 Alcohols, n.o.s. (Ethanol, Acetic acid, glacial), ENVIRONMENTALLY HAZARDOUS ALCOHOLS, N.O.S. (ETHANOL (ETHYL ALCOHOL), ACETIC ACID, GLACIAL), MARINE POLLUTANT ALCOHOLS, N.O.S. (ETHANOL, ACETIC ACID, GLACIAL)</p> |
| <ul style="list-style-type: none"> · Transport hazard class(es) · DOT | <p style="margin-left: 20px;">3 Flammable liquids</p> |
| <ul style="list-style-type: none"> · Class · Label | <p style="margin-left: 20px;">3 3</p> |
| | |
| <ul style="list-style-type: none"> · ADR, IMDG | <p style="margin-left: 20px;">3 Flammable liquids</p> |
| <ul style="list-style-type: none"> · Class · Label | <p style="margin-left: 20px;">3 3</p> |
| | |
| <ul style="list-style-type: none"> · IATA | <p style="margin-left: 20px;">3 Flammable liquids</p> |
| <ul style="list-style-type: none"> · Class · Label | <p style="margin-left: 20px;">3 3</p> |
| <ul style="list-style-type: none"> · Packing group · DOT, ADR, IMDG, IATA | <p style="margin-left: 20px;">III</p> |

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| | |
|--|--|
| · Environmental hazards: | |
| · Marine pollutant: | Symbol (fish and tree) |
| · Special marking (ADR): | Symbol (fish and tree) |
| · Special precautions for user | Warning: Flammable liquids |
| · Danger code (Kemler): | 33 |
| · EMS Number: | F-E,S-D |
| · Segregation groups | Acids |
| · Stowage Category | B |
| · 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 |
| · ADR | |
| · Excepted quantities (EQ) | Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 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 1987 ALCOHOLS, N.O.S. (ETHANOL, ACETIC ACID, GLACIAL), 3, III, ENVIRONMENTALLY HAZARDOUS |

15 Regulatory information

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

· Section 355 (extremely hazardous substances):

50-00-0 formaldehyde

· Section 313 (Specific toxic chemical listings):

50-00-0 formaldehyde

67-56-1 Methyl Alcohol

· TSCA (Toxic Substances Control Act):

All ingredients are listed.

· Proposition 65

· Chemicals known to cause cancer:

50-00-0 formaldehyde

· Chemicals known to cause reproductive toxicity for females:

None of the ingredients is listed.

· Chemicals known to cause reproductive toxicity for males:

None of the ingredients is listed.

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· Chemicals known to cause developmental toxicity:

64-17-5 Ethyl Alcohol, denatured

67-56-1 Methyl Alcohol

· Carcinogenic categories
· EPA (Environmental Protection Agency)

50-00-0 formaldehyde

B1

· TLV (Threshold Limit Value established by ACGIH)

64-17-5 Ethyl Alcohol, denatured

A3

50-00-0 formaldehyde

A2

· NIOSH-Ca (National Institute for Occupational Safety and Health)

50-00-0 formaldehyde

· GHS label elements The product is classified and labeled according to the Globally Harmonized System (GHS).

· Hazard pictograms


GHS02

GHS05

GHS06

GHS08

· Signal word Danger

· Hazard-determining components of labeling:

formaldehyde

Ethyl Alcohol, denatured

· Hazard statements

Highly flammable liquid and vapor.

May be corrosive to metals.

Toxic if swallowed.

Harmful if inhaled.

Causes skin irritation.

Causes serious eye irritation.

May cause allergy or asthma symptoms or breathing difficulties if inhaled.

May cause an allergic skin reaction.

Suspected of causing genetic defects.

May cause cancer.

Suspected of damaging fertility or the unborn child.

May cause damage to organs.

· Precautionary statements

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

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

Do not breathe dust/fume/gas/mist/vapors/spray.

[In case of inadequate ventilation] wear respiratory protection.

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

Ground/bond container and receiving equipment.

Keep container tightly closed.

Use only non-sparking tools.

Keep only in original container.

Take precautionary measures against static discharge.

Wash thoroughly after handling.

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

Use only outdoors or in a well-ventilated area.

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Contaminated work clothing must not be allowed out of the workplace.
 Obtain special instructions before use.
 Do not handle until all safety precautions have been read and understood.
 IF SWALLOWED: Immediately call a POISON CENTER/ doctor.
 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.
 Specific treatment (see on this label).
 If experiencing respiratory symptoms: Call a POISON CENTER/doctor.
 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
 Call a POISON CENTER/doctor if you feel unwell.
 Wash contaminated clothing before reuse.
 IF exposed or concerned: Get medical advice/attention.
 If skin irritation or rash occurs: Get medical advice/attention.
 If eye irritation persists: Get medical advice/attention.
 Rinse mouth.
 In case of fire: Use for extinction: CO₂, powder or water spray.
 Absorb spillage to prevent material damage.
 Take off contaminated clothing and wash it before reuse.
 Store locked up.
 Store in corrosive resistant container with a resistant inner liner.
 Store in a well-ventilated place. Keep cool.
 Dispose of contents/container in accordance with local/regional/national/international regulations.

· **National regulations:**

· **Information about limitation of use:**

Workers are not allowed to be exposed to the hazardous carcinogenic materials contained in this preparation.
 Exceptions can be made by the authorities in certain cases.

· **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** 04/14/2017 / -

· **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

ELINCS: European List of Notified Chemical Substances

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

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

VOC: Volatile Organic Compounds (USA, EU)

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

Flam. Liq. 2: Flammable liquids – Category 2

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Met. Corr. 1: Corrosive to metals – Category 1
Acute Tox. 3: Acute toxicity – Category 3
Acute Tox. 4: Acute toxicity – Category 4
Skin Irrit. 2: Skin corrosion/irritation – Category 2
Eye Irrit. 2A: Serious eye damage/eye irritation – Category 2A
Resp. Sens. 1B: Respiratory sensitisation – Category 1B
Skin Sens. 1: Skin sensitisation – Category 1
Muta. 2: Germ cell mutagenicity – Category 2
Carc. 1A: Carcinogenicity – Category 1A
Repr. 2: Reproductive toxicity – Category 2
STOT SE 2: Specific target organ toxicity (single exposure) – Category 2

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according to WHS Regulations

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Revision: 14.04.2017

1 Identification

- **Product identifier**
- **Trade name:** DAVIDSON'S FIXATIVE, MODIFIED
- **Article number:** 64133-50, 64133-50-SP
- **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)
- 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.



GHS06 skull and crossbones

Acute Tox. 3 H301 Toxic if swallowed.



GHS08 health hazard

Resp. Sens. 1B H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Muta. 2 H341 Suspected of causing genetic defects.

Carc. 1A H350 May cause cancer.

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Trade name: DAVIDSON'S FIXATIVE, MODIFIED

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Repr. 2 H361 Suspected of damaging fertility or the unborn child.
STOT SE 2 H371 May cause damage to organs.



GHS05 corrosion

Met. Corr.1 H290 May be corrosive to metals.



GHS07

Acute Tox. 4 H332 Harmful if inhaled.
Skin Irrit. 2 H315 Causes skin irritation.
Eye Irrit. 2A H319 Causes serious eye irritation.
Skin Sens. 1 H317 May cause an allergic skin reaction.

· **Label elements**

· **GHS label elements** The product is classified and labelled according to the Globally Harmonised System (GHS).

· **Hazard pictograms**



GHS02



GHS05



GHS06



GHS08

· **Signal word** Danger

· **Hazard-determining components of labelling:**

formaldehyde

Ethyl Alcohol, denatured

· **Hazard statements**

Highly flammable liquid and vapour.

May be corrosive to metals.

Toxic if swallowed.

Harmful if inhaled.

Causes skin irritation.

Causes serious eye irritation.

May cause allergy or asthma symptoms or breathing difficulties if inhaled.

May cause an allergic skin reaction.

Suspected of causing genetic defects.

May cause cancer.

Suspected of damaging fertility or the unborn child.

May cause damage to organs.

· **Precautionary statements**

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

Use explosion-proof electrical/ventilating/lighting equipment.

Do not breathe dust/fume/gas/mist/vapours/spray.

Wear respiratory protection.

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

Ground/bond container and receiving equipment.

Keep container tightly closed.

Use only non-sparking tools.

Keep only in original container.

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- Take precautionary measures against static discharge.
 Wash thoroughly after handling.
 Do not eat, drink or smoke when using this product.
 Use only outdoors or in a well-ventilated area.
 Contaminated work clothing should not be allowed out of the workplace.
 Obtain special instructions before use.
 Do not handle until all safety precautions have been read and understood.
IF SWALLOWED: Immediately call a POISON CENTER/ doctor.
IF ON SKIN (or hair): Remove/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.
 Specific treatment (see on this label).
 If experiencing respiratory symptoms: Call a POISON CENTER/doctor.
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
 Call a POISON CENTER/doctor if you feel unwell.
 Wash contaminated clothing before reuse.
IF exposed or concerned: Get medical advice/attention.
If skin irritation or rash occurs: Get medical advice/attention.
If eye irritation persists: Get medical advice/attention.
 Rinse mouth.
In case of fire: Use for extinction: CO₂, powder or water spray.
 Absorb spillage to prevent material damage.
 Take off contaminated clothing and wash it before reuse.
 Store locked up.
 Store in corrosive resistant container /container with a corrosion resistant inner liner.
 Store in a well-ventilated place. Keep cool.
 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 and Information on Ingredients

- **Chemical characterisation: Mixtures**
- **Description:** Mixture of substances listed below with nonhazardous additions.

· **Dangerous components:**

| | | |
|---------|--------------------------|---------|
| 64-17-5 | Ethyl Alcohol, denatured | 10-25% |
| 50-00-0 | formaldehyde | 10-25% |
| 64-19-7 | Acetic Acid Glacial | 2.5-10% |

- **Additional information:** For the wording of the listed hazard phrases refer to section 16.

4 First Aid Measures

- **Description of first aid measures**
- **General information:**
 Immediately remove any clothing soiled by the product.
 Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
 In case of irregular breathing or respiratory arrest provide artificial respiration.

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- **After inhalation:**
Supply fresh air and to be sure call for a doctor.
In case of unconsciousness place patient stably in side position for transportation.
- **After skin contact:** Immediately wash with water and soap and rinse thoroughly.
- **After eye contact:**
Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
- **After swallowing:** Do not induce vomiting; call for medical help immediately.
- **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:**
Inform respective authorities in case of seepage into water course or sewage system.
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).
Dispose contaminated material as waste according to item 13.
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**
Ensure good ventilation/exhaustion at the workplace.
Open and handle receptacle with care.
Prevent formation of aerosols.
- **Information about fire - and explosion protection:**
Keep ignition sources away - Do not smoke.
Protect from heat.
Protect against electrostatic charges.
Keep respiratory protective device available.

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Trade name: DAVIDSON'S FIXATIVE, MODIFIED

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- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:**
Keep container tightly sealed.
Protect from heat and direct sunlight.
- **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: | |
| 64-17-5 Ethyl Alcohol, denatured | |
| WES | Long-term value: 1880 mg/m ³ , 1000 ppm |
| 50-00-0 formaldehyde | |
| WES | Short-term value: 2.5 mg/m ³ , 2 ppm Long-term value: 1.2 mg/m ³ , 1 ppm Sen |
| 64-19-7 Acetic Acid Glacial | |
| WES | Short-term value: 37 mg/m ³ , 15 ppm Long-term value: 25 mg/m ³ , 10 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.
Store protective clothing separately.
Avoid contact with the eyes and skin.
- **Respiratory protection:**
In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.
- **Protection of hands:**



Protective gloves

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. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

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· **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:**

Safety glasses



Tightly sealed goggles

9 Physical and Chemical Properties

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

· **General Information**

· **Appearance:**

| | |
|---------------------------|-----------------|
| · Form: | Solution |
| · Colour: | Clear |
| · Odour: | Alcohol-like |
| · Odour threshold: | Not determined. |

· **pH-value at 20 °C:** 2.5

· **Change in condition**

| | |
|---|---------------|
| · Melting point/freezing point: | Undetermined. |
| · Initial boiling point and boiling range: | -21 °C |

· **Flash point:** 17 °C

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

· **Ignition temperature:** 300 °C

· **Decomposition temperature:** Not determined.

· **Auto-ignition temperature:** Product is not selfigniting.

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

· **Explosion limits:**

| | |
|-----------------|------------|
| · Lower: | 3.5 Vol % |
| · Upper: | 73.0 Vol % |

· **Vapour pressure at 20 °C:** 59 hPa

| | |
|----------------------------|--------------------------|
| · Density at 20 °C: | 0.9501 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: | Not determined. |
| · Kinematic: | Not determined. |

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- | | |
|--|---------|
| · Solvent content: | |
| Organic solvents: | 31.0 % |
| Water: | 69.0 % |
| VOC (EC) | 31.00 % |
| · 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:**

50-00-0 formaldehyde

| | | |
|------|------|------------------|
| Oral | LD50 | >200 mg/kg (rat) |
|------|------|------------------|

- **Primary irritant effect:**
- **Skin corrosion/irritation** Irritant to skin and mucous membranes.
- **Serious eye damage/irritation** Irritating effect.
- **Respiratory or skin sensitisation**
Sensitisation possible through inhalation.
Sensitisation possible through skin contact.
- **Additional toxicological information:**
The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:
Toxic
Harmful
Irritant
Carcinogenic.
- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**
Muta. 2, Carc. 1A, Repr. 2

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.
- **Ecotoxicological effects:**
- **Remark:** Very toxic for fish

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- **Additional ecological information:**
- **General notes:**
*Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water
 Do not allow product to reach ground water, water course or sewage system.
 Danger to drinking water if even small quantities leak into the ground.
 Also poisonous for fish and plankton in water bodies.
 Very toxic for aquatic organisms*
- **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

- | | |
|--|--|
| <ul style="list-style-type: none"> · UN-Number · ADG, IMDG, IATA | <p style="text-align: center;">UN1987</p> |
| <ul style="list-style-type: none"> · UN proper shipping name · ADG · IMDG · IATA | <p>1987 ALCOHOLS, N.O.S. (ETHANOL (ETHYL ALCOHOL), ACETIC ACID, GLACIAL), ENVIRONMENTALLY HAZARDOUS</p> <p>ALCOHOLS, N.O.S. (ETHANOL (ETHYL ALCOHOL), ACETIC ACID, GLACIAL), MARINE POLLUTANT</p> <p>ALCOHOLS, N.O.S. (ETHANOL, ACETIC ACID, GLACIAL)</p> |
| <ul style="list-style-type: none"> · Transport hazard class(es) · ADG, IMDG | <div style="display: flex; align-items: center; gap: 10px;">   </div> <p>3 Flammable liquids.</p> <p>3</p> |
| <ul style="list-style-type: none"> · Class · Label | <p>3</p> |
| <ul style="list-style-type: none"> · IATA | <div style="display: flex; align-items: center; gap: 10px;">  </div> <p>3 Flammable liquids.</p> |
| <ul style="list-style-type: none"> · Class | <p>3 Flammable liquids.</p> |

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Trade name: **DAVIDSON'S FIXATIVE, MODIFIED**

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| | |
|---|--|
| · Label | 3 |
| · Packing group · ADG, IMDG, IATA | III |
| · Environmental hazards: · Marine pollutant: · Special marking (ADG): | Symbol (fish and tree) Symbol (fish and tree) |
| · Special precautions for user · Danger code (Kemler): · EMS Number: · Segregation groups · Stowage Category | Warning: Flammable liquids. 33 F-E,S-D Acids B |
| · Transport in bulk according to Annex II of Marpol and the IBC Code | Not applicable. |
| · Transport/Additional information: | |
| · ADG · Limited quantities (LQ) · Excepted quantities (EQ) | 5L Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml |
| · Transport category · Tunnel restriction code | 3 D/E |
| · IMDG · 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 |
| · UN "Model Regulation": | UN 1987 ALCOHOLS, N.O.S. (ETHANOL (ETHYL ALCOHOL), ACETIC ACID, GLACIAL), 3, III, ENVIRONMENTALLY HAZARDOUS |

15 Regulatory information

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

· **Australian Inventory of Chemical Substances**

All ingredients are listed.

· **Standard for the Uniform Scheduling of Medicines and Poisons**

| | | |
|---------|---------------------|-------------|
| 50-00-0 | formaldehyde | S2, S6, S10 |
| 64-19-7 | Acetic Acid Glacial | S2, S5, S6 |
| 67-56-1 | Methyl Alcohol | S5, S6 |

· **GHS label elements** The product is classified and labelled according to the Globally Harmonised System (GHS).

· **Hazard pictograms**



GHS02 GHS05 GHS06 GHS08

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Trade name: DAVIDSON'S FIXATIVE, MODIFIED

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· **Signal word** *Danger*

· **Hazard-determining components of labelling:**

formaldehyde

Ethyl Alcohol, denatured

· **Hazard statements**

Highly flammable liquid and vapour.

May be corrosive to metals.

Toxic if swallowed.

Harmful if inhaled.

Causes skin irritation.

Causes serious eye irritation.

May cause allergy or asthma symptoms or breathing difficulties if inhaled.

May cause an allergic skin reaction.

Suspected of causing genetic defects.

May cause cancer.

Suspected of damaging fertility or the unborn child.

May cause damage to organs.

· **Precautionary statements**

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

Use explosion-proof electrical/ventilating/lighting equipment.

Do not breathe dust/fume/gas/mist/vapours/spray.

Wear respiratory protection.

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

Ground/bond container and receiving equipment.

Keep container tightly closed.

Use only non-sparking tools.

Keep only in original container.

Take precautionary measures against static discharge.

Wash thoroughly after handling.

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

Use only outdoors or in a well-ventilated area.

Contaminated work clothing should not be allowed out of the workplace.

Obtain special instructions before use.

Do not handle until all safety precautions have been read and understood.

IF SWALLOWED: Immediately call a POISON CENTER/ doctor.

IF ON SKIN (or hair): Remove/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.

Specific treatment (see on this label).

If experiencing respiratory symptoms: Call a POISON CENTER/doctor.

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

Call a POISON CENTER/doctor if you feel unwell.

Wash contaminated clothing before reuse.

IF exposed or concerned: Get medical advice/attention.

If skin irritation or rash occurs: Get medical advice/attention.

If eye irritation persists: Get medical advice/attention.

Rinse mouth.

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

Absorb spillage to prevent material damage.

Take off contaminated clothing and wash it before reuse.

Store locked up.

Store in corrosive resistant container /container with a corrosion resistant inner liner.

Store in a well-ventilated place. Keep cool.

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

- **Directive 2012/18/EU**
- **Named dangerous substances - ANNEX I** formaldehyde, Methyl Alcohol
- **Seveso category**
E1 Hazardous to the Aquatic Environment
P5c FLAMMABLE LIQUIDS
- **Qualifying quantity (tonnes) for the application of lower-tier requirements** 100 t
- **Qualifying quantity (tonnes) for the application of upper-tier requirements** 200 t
- **National regulations:**
- **Information about limitation of use:**
Workers are not allowed to be exposed to the hazardous carcinogenic materials contained in this preparation. Exceptions can be made by the authorities in certain cases.
- **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
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
VOC: Volatile Organic Compounds (USA, EU)
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
Met. Corr. 1: Corrosive to metals – Category 1
Acute Tox. 3: Acute toxicity – Category 3
Acute Tox. 4: Acute toxicity – Category 4
Skin Irrit. 2: Skin corrosion/irritation – Category 2
Eye Irrit. 2A: Serious eye damage/eye irritation – Category 2A
Resp. Sens. 1B: Respiratory sensitisation – Category 1B
Skin Sens. 1: Skin sensitisation – Category 1
Muta. 2: Germ cell mutagenicity – Category 2
Carc. 1A: Carcinogenicity – Category 1A
Repr. 2: Reproductive toxicity – Category 2
STOT SE 2: Specific target organ toxicity (single exposure) – Category 2

AU

Safety Data Sheet

acc. to OSHA HCS

Printing date 04/14/2017

Reviewed on 04/14/2017

1 Identification

- **Product identifier**
- **Trade name:** DAVIDSON'S FIXATIVE, MODIFIED
- **Article number:** 64133-50, 64133-50-SP
- **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.



GHS06 Skull and crossbones

Acute Toxicity (Oral) - Category 3

H301 Toxic if swallowed.



GHS08 Health hazard

Respiratory Sensitizer - Category 1B

H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Germ Cell Mutagenicity - Category 2

H341 Suspected of causing genetic defects.

Carcinogenicity - Category 1A

H350 May cause cancer.

Reproductive Toxicity - Category 2

H361 Suspected of damaging fertility or the unborn child.

Specific Target Organ Toxicity - Single Exposure - Category 2

H371 May cause damage to organs.



GHS05 Corrosion

Corrosive to Metals - Category 1

H290 May be corrosive to metals.



GHS07

(Contd. on page 2)

Safety Data Sheet

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Trade name: DAVIDSON'S FIXATIVE, MODIFIED

(Contd. of page 1)

Acute Toxicity (Inhalation) - Category 4

H332 Harmful if inhaled.

Skin Irritation - Category 2

H315 Causes skin irritation.

Eye Irritation - Category 2A

H319 Causes serious eye irritation.

Skin Sensitizer - Category 1

H317 May cause an allergic skin reaction.

· **Label elements**

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

· **Hazard pictograms**



GHS02

GHS05

GHS06

GHS08

· **Signal word** *Danger*

· **Hazard-determining components of labeling:**

formaldehyde

Ethyl Alcohol, denatured

· **Hazard statements**

Highly flammable liquid and vapour.

May be corrosive to metals.

Toxic if swallowed.

Harmful if inhaled.

Causes skin irritation.

Causes serious eye irritation.

May cause allergy or asthma symptoms or breathing difficulties if inhaled.

May cause an allergic skin reaction.

Suspected of causing genetic defects.

May cause cancer.

Suspected of damaging fertility or the unborn child.

May cause damage to organs.

· **Precautionary statements**

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

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

Do not breathe dust/fume/gas/mist/vapours/spray.

[In case of inadequate ventilation] wear respiratory protection.

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

Ground and bond container and receiving equipment.

Keep container tightly closed.

Use non-sparking tools.

Keep only in original packaging.

Take actions to prevent static discharges.

Wash thoroughly after handling.

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

Use only outdoors or in a well-ventilated area.

Contaminated work clothing should not be allowed out of the workplace.

Obtain special instructions before use.

Do not handle until all safety precautions have been read and understood.

IF SWALLOWED: Immediately call a POISON CENTER/ doctor.

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

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

Continue rinsing.

Specific treatment (see on this label).

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Safety Data Sheet

acc. to OSHA HCS

Printing date 04/14/2017

Reviewed on 04/14/2017

Trade name: DAVIDSON'S FIXATIVE, MODIFIED

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If experiencing respiratory symptoms: Call a POISON CENTER/doctor.

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

Call a POISON CENTER/doctor if you feel unwell.

IF exposed or concerned: Get medical advice/attention.

If skin irritation or rash occurs: Get medical advice/attention.

If eye irritation persists: Get medical advice/attention.

Rinse mouth.

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

Absorb spillage to prevent material-damage.

Take off contaminated clothing and wash it before reuse.

Store locked up.

Store in a well-ventilated place. Keep cool.

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

· **Hazard description:**

· **WHMIS-symbols:**

B2 - Flammable liquid

D1A - Very toxic material causing immediate and serious toxic effects

D2A - Very toxic material causing other toxic effects



· **Classification system:**

· **NFPA ratings (scale 0 - 4)**



Health = 2

Fire = 3

Reactivity = 0

· **HMIS-ratings (scale 0 - 4)**

| | | |
|------------|---|----------------|
| HEALTH | 2 | Health = 2 |
| FIRE | 3 | Fire = 3 |
| REACTIVITY | 0 | Reactivity = 0 |

3 Composition/information on ingredients

· **Chemical characterization: Mixtures**

· **Description:** Mixture of the substances listed below with nonhazardous additions.

· **Dangerous components:**

| | | |
|---------|--------------------------|------------|
| 64-17-5 | Ethyl Alcohol, denatured | 10-30% w/w |
| 50-00-0 | formaldehyde | 7-13% w/w |
| 64-19-7 | Acetic Acid Glacial | 1-5% w/w |

4 First-aid measures

· **Description of first aid measures**

· **General information:**

Immediately remove any clothing soiled by the product.

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

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- In case of irregular breathing or respiratory arrest provide artificial respiration.*
- **After inhalation:**
Supply fresh air and to be sure call for a doctor.
- In case of unconsciousness place patient stably in side position for transportation.*
- **After skin contact:** *Immediately wash with water and soap and rinse thoroughly.*
- **After eye contact:**
Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
- **After swallowing:** *Do not induce vomiting; immediately call for medical help.*
- **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:**
Inform respective authorities in case of seepage into water course or sewage system.
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).
Dispose contaminated material as waste according to item 13.
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**
Ensure good ventilation/exhaustion at the workplace.
Open and handle receptacle with care.
Prevent formation of aerosols.
- **Information about protection against explosions and fires:**
Keep ignition sources away - Do not smoke.
Protect from heat.
Protect against electrostatic charges.
Keep respiratory protective device available.

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- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:**
Keep receptacle tightly sealed.
Protect from heat and direct sunlight.
- **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:**

64-17-5 Ethyl Alcohol, denatured

| | |
|----|--|
| EL | Short-term value: 1000 ppm |
| EV | Long-term value: 1,900 mg/m ³ , 1,000 ppm |

50-00-0 formaldehyde

| | |
|---------------------|---|
| EL | Long-term value: 0,3 ppm Ceiling limit value: 1 ppm ACGIH A2; IARC 1; S |
| EV | Short-term value: 1,0 ppm |
| Ceiling limit value | 1,5 ppm |

64-19-7 Acetic Acid Glacial

| | |
|----|---|
| EL | Short-term value: 15 ppm Long-term value: 10 ppm |
| EV | Short-term value: 37 mg/m ³ , 15 ppm Long-term value: 25 mg/m ³ , 10 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.
Store protective clothing separately.
Avoid contact with the eyes and skin.
- **Breathing equipment:**
In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.
- **Protection of hands:**



Protective gloves

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.

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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. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

· **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:**

Safety glasses



Tightly sealed goggles

9 Physical and chemical properties

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

· **General Information**

· **Appearance:**

| | |
|--------------------------|-----------------|
| Form: | Solution |
| Color: | Clear |
| · Odor: | Alcohol-like |
| · Odor threshold: | Not determined. |

· **pH-value at 20 °C:** 2,5

· **Change in condition**

| | |
|-------------------------------------|---------------|
| Melting point/Melting range: | Undetermined. |
| Boiling point/Boiling range: | -21 °C |

· **Flash point:** 17 °C

· **Flammability (solid, gaseous):** Not flammable.

· **Ignition temperature:** 300 °C

· **Decomposition temperature:** Not determined.

· **Auto igniting:** Product is not selfigniting.

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

· **Explosion limits:**

| | |
|---------------|------------|
| Lower: | 3,5 Vol % |
| Upper: | 73,0 Vol % |

· **Vapor pressure at 20 °C:** 59 hPa

| | |
|----------------------------|--------------------------|
| · Density at 20 °C: | 0,9501 g/cm ³ |
| · Relative density | Not determined. |
| · Vapor density | Not determined. |
| · Evaporation rate | Not determined. |

· **Solubility in / Miscibility with**

Water: Fully miscible.

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- | | |
|---|-----------------|
| · Partition coefficient (n-octanol/water): Not determined. | |
| · Viscosity: | |
| Dynamic: | Not determined. |
| Kinematic: | Not determined. |
| · Solvent content: | |
| Organic solvents: | 31,0 % |
| Water: | 69,0 % |
| · 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:**

50-00-0 formaldehyde

| | | |
|------|------|------------------|
| Oral | LD50 | >200 mg/kg (rat) |
|------|------|------------------|

- **Primary irritant effect:**
- **on the skin:** Irritant to skin and mucous membranes.
- **on the eye:** Irritating effect.

- **Sensitization:**
- Sensitization possible through inhalation.
- Sensitization possible through skin contact.

- **Additional toxicological information:**

The product shows the following dangers according to internally approved calculation methods for preparations:

Toxic

Harmful

Irritant

Carcinogenic.

- **Carcinogenic categories**

- **IARC (International Agency for Research on Cancer)**

| | | |
|---------|--------------------------|---|
| 64-17-5 | Ethyl Alcohol, denatured | I |
| 50-00-0 | formaldehyde | I |

- **NTP (National Toxicology Program)**

| | | |
|---------|--------------|---|
| 50-00-0 | formaldehyde | K |
|---------|--------------|---|

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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.
- **Ecotoxicological effects:**
- **Remark:** Very toxic for fish
- **Additional ecological information:**
- **General notes:**
*Water hazard class 2 (Self-assessment): hazardous for water
 Do not allow product to reach ground water, water course or sewage system.
 Danger to drinking water if even small quantities leak into the ground.
 Also poisonous for fish and plankton in water bodies.
 Very toxic for aquatic organisms*
- **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

- | | |
|--|---|
| <ul style="list-style-type: none"> · UN-Number · DOT, TDG, IMDG, IATA | <p style="margin: 0;">UN1987</p> |
| <ul style="list-style-type: none"> · UN proper shipping name · DOT · TDG · IMDG · IATA | <p style="margin: 0;"><i>Alcohols, n.o.s. (Ethanol, Acetic acid, glacial)</i></p> <p style="margin: 0;"><i>1987 Alcohols, n.o.s. (Ethanol, Acetic acid, glacial), ENVIRONMENTALLY HAZARDOUS</i></p> <p style="margin: 0;"><i>ALCOHOLS, N.O.S. (ETHANOL (ETHYL ALCOHOL), ACETIC ACID, GLACIAL), MARINE POLLUTANT</i></p> <p style="margin: 0;"><i>ALCOHOLS, N.O.S. (ETHANOL, ACETIC ACID, GLACIAL)</i></p> |

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

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



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

· **IATA**

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

· **Packing group**· **DOT, TDG, IMDG, IATA** III· **Environmental hazards:**· **Marine pollutant:** Symbol (fish and tree)· **Special marking (TDG):** Symbol (fish and tree)· **Special precautions for user** Warning: Flammable liquids· **Danger code (Kemler):** 33· **EMS Number:** F-E,S-D· **Segregation groups** Acids· **Stowage Category** B

· **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

· **TDG**

· **Excepted quantities (EQ)** Code: E1
 Maximum net quantity per inner packaging: 30 ml
 Maximum net quantity per outer packaging: 1000 ml

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

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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 1987 ALCOHOLS, N.O.S. (ETHANOL, ACETIC ACID, GLACIAL), 3, III, ENVIRONMENTALLY HAZARDOUS |

15 Regulatory information

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

· **Sara**

· **Section 355 (extremely hazardous substances):**

50-00-0 formaldehyde

· **Section 313 (Specific toxic chemical listings):**

50-00-0 formaldehyde

67-56-1 Methyl Alcohol

· **TSCA (Toxic Substances Control Act):**

All ingredients are listed.

· **Canadian substance listings:**

· **Canadian Domestic Substances List (DSL)**

All ingredients are listed.

· **Canadian Ingredient Disclosure list (limit 0.1%)**

64-17-5 Ethyl Alcohol, denatured

50-00-0 formaldehyde

· **Canadian Ingredient Disclosure list (limit 1%)**

64-19-7 Acetic Acid Glacial

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

· **Hazard pictograms**



GHS02 GHS05 GHS06 GHS08

· **Signal word** *Danger*

· **Hazard-determining components of labeling:**

formaldehyde

Ethyl Alcohol, denatured

· **Hazard statements**

Highly flammable liquid and vapour.

May be corrosive to metals.

Toxic if swallowed.

Harmful if inhaled.

Causes skin irritation.

Causes serious eye irritation.

May cause allergy or asthma symptoms or breathing difficulties if inhaled.

May cause an allergic skin reaction.

Suspected of causing genetic defects.

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May cause cancer.

Suspected of damaging fertility or the unborn child.

May cause damage to organs.

· Precautionary statements

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

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

Do not breathe dust/fume/gas/mist/vapours/spray.

[In case of inadequate ventilation] wear respiratory protection.

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

Ground and bond container and receiving equipment.

Keep container tightly closed.

Use non-sparking tools.

Keep only in original packaging.

Take actions to prevent static discharges.

Wash thoroughly after handling.

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

Use only outdoors or in a well-ventilated area.

Contaminated work clothing should not be allowed out of the workplace.

Obtain special instructions before use.

Do not handle until all safety precautions have been read and understood.

IF SWALLOWED: Immediately call a POISON CENTER/ doctor.

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

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

Continue rinsing.

Specific treatment (see on this label).

If experiencing respiratory symptoms: Call a POISON CENTER/doctor.

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

Call a POISON CENTER/doctor if you feel unwell.

IF exposed or concerned: Get medical advice/attention.

If skin irritation or rash occurs: Get medical advice/attention.

If eye irritation persists: Get medical advice/attention.

Rinse mouth.

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

Absorb spillage to prevent material-damage.

Take off contaminated clothing and wash it before reuse.

Store locked up.

Store in a well-ventilated place. Keep cool.

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

· National regulations:

· Information about limitation of use:

Workers are not allowed to be exposed to the hazardous carcinogenic materials contained in this preparation.

Exceptions can be made by the authorities in certain cases.

· 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 04/14/2017 / -

· Abbreviations and acronyms:

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

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EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
NFPA: National Fire Protection Association (USA)
HMIS: Hazardous Materials Identification System (USA)
WHMIS: Workplace Hazardous Materials Information System (Canada)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative

CA

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

Printing date 14.04.2017

Revision: 14.04.2017

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

- **1.1 Product identifier**
- **Trade name:** DAVIDSON'S FIXATIVE, MODIFIED
- **Article number:** 64133-50, 64133-50-SP
- **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**



GHS02 flame

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



GHS06 skull and crossbones

Acute Tox. 3 H301 Toxic if swallowed.



GHS08 health hazard

Resp. Sens. 1B H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Muta. 2 H341 Suspected of causing genetic defects.

Carc. 1B H350 May cause cancer.

Repr. 2 H361 Suspected of damaging fertility or the unborn child.

STOT SE 2 H371 May cause damage to organs.



GHS05 corrosion

Met. Corr.1 H290 May be corrosive to metals.



GHS09 environment

Aquatic Chronic 1 H410 Very toxic to aquatic life with long lasting effects.

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GHS07

Acute Tox. 4 H332 Harmful if inhaled.
 Skin Irrit. 2 H315 Causes skin irritation.
 Eye Irrit. 2 H319 Causes serious eye irritation.
 Skin Sens. 1 H317 May cause an allergic skin reaction.

· **2.2 Label elements**

· **Labelling according to Regulation (EC) No 1272/2008**

The product is classified and labelled according to the CLP regulation.

· **Hazard pictograms**



GHS02 GHS05 GHS06 GHS08 GHS09

· **Signal word** *Danger*

· **Hazard-determining components of labelling:**

formaldehyde

· **Hazard statements**

H225 Highly flammable liquid and vapour.
 H290 May be corrosive to metals.
 H301 Toxic if swallowed.
 H332 Harmful if inhaled.
 H315 Causes skin irritation.
 H319 Causes serious eye irritation.
 H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
 H317 May cause an allergic skin reaction.
 H341 Suspected of causing genetic defects.
 H350 May cause cancer.
 H361 Suspected of damaging fertility or the unborn child.
 H371 May cause damage to organs.
 H410 Very toxic to aquatic life with long lasting effects.

· **Precautionary statements**

P301+P310 *IF SWALLOWED: Immediately call a POISON CENTER/ doctor.*
 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.*
 P321 *Specific treatment (see on this label).*
 P405 *Store locked up.*
 P501 *Dispose of contents/container in accordance with local/regional/national/international regulations.*

· **2.3 Other hazards**

· **Results of PBT and vPvB assessment**

- **PBT:** Not applicable.
- **vPvB:** Not applicable.

GB

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Safety data sheet

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Trade name: **DAVIDSON'S FIXATIVE, MODIFIED**

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SECTION 3: Composition/information on ingredients

- **3.2 Chemical characterisation: Mixtures**
- **Description:** Mixture of substances listed below with nonhazardous additions.

- **Dangerous components:**

| | | |
|-----------------------------------|--|---------|
| CAS: 64-17-5 EINECS: 200-578-6 | Ethyl Alcohol, denatured Flam. Liq. 2, H225 | 10-25% |
| CAS: 50-00-0 EINECS: 200-001-8 | formaldehyde Acute Tox. 3, H301; Acute Tox. 3, H311; Acute Tox. 3, H331; Muta. 2, H341; Carc. 1B, H350; Skin Corr. 1B, H314; Skin Sens. 1, H317 | 10-25% |
| CAS: 64-19-7 EINECS: 200-580-7 | Acetic Acid Glacial Flam. Liq. 3, H226; Skin Corr. 1A, H314 | 2.5-10% |

- **Additional information:** For the wording of the listed hazard phrases refer to section 16.

SECTION 4: First aid measures

- **4.1 Description of first aid measures**
- **General information:**
Immediately remove any clothing soiled by the product.
Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
In case of irregular breathing or respiratory arrest provide artificial respiration.
- **After inhalation:**
Supply fresh air and to be sure call for a doctor.
In case of unconsciousness place patient stably in side position for transportation.
- **After skin contact:** Immediately wash with water and soap and rinse thoroughly.
- **After eye contact:**
Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
- **After swallowing:** Do not induce vomiting; call for medical help immediately.
- **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.
- **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:**
Inform respective authorities in case of seepage into water course or sewage system.
Dilute with plenty of water.
Do not allow to enter sewers/ surface or ground water.

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- **6.3 Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Dispose contaminated material as waste according to item 13.
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**
Ensure good ventilation/exhaustion at the workplace.
Open and handle receptacle with care.
Prevent formation of aerosols.
- **Information about fire - and explosion protection:**
Keep ignition sources away - Do not smoke.
Protect from heat.
Protect against electrostatic charges.
Keep respiratory protective device available.
- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:**
Keep container tightly sealed.
Protect from heat and direct sunlight.
- **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:**

64-17-5 Ethyl Alcohol, denatured

| | |
|-----|--|
| WEL | Long-term value: 1920 mg/m ³ , 1000 ppm |
|-----|--|

50-00-0 formaldehyde

| | |
|-----|---|
| WEL | Short-term value: 2.5 mg/m ³ , 2 ppm |
| | Long-term value: 2.5 mg/m ³ , 2 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.
Store protective clothing separately.
Avoid contact with the eyes and skin.

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- **Respiratory protection:**

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.

- **Protection of hands:**



Protective gloves

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. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

- **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:**

Safety glasses



Tightly sealed goggles

SECTION 9: Physical and chemical properties

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

- **General Information**

- **Appearance:**

Form: Solution

Colour: Clear

- **Odour:** Alcohol-like

- **Odour threshold:** Not determined.

- **pH-value at 20 °C:** 2.5

- **Change in condition**

Melting point/freezing point: Undetermined.

Initial boiling point and boiling range: -21 °C

- **Flash point:** 17 °C

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

- **Ignition temperature:** 300 °C

- **Decomposition temperature:** Not determined.

- **Auto-ignition temperature:** Product is not selfigniting.

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

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| | |
|--|--|
| · Explosion limits: | |
| Lower: | 3.5 Vol % |
| Upper: | 73.0 Vol % |
| · Vapour pressure at 20 °C: | 59 hPa |
| · Density at 20 °C: | 0.9501 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: | Not determined. |
| Kinematic: | Not determined. |
| · Solvent content: | |
| Organic solvents: | 31.0 % |
| Water: | 69.0 % |
| VOC (EC) | 31.00 % |
| · 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**
Toxic if swallowed.
Harmful if inhaled.

· LD/LC50 values relevant for classification:

50-00-0 formaldehyde

| | | |
|------|------|------------------|
| Oral | LD50 | >200 mg/kg (rat) |
|------|------|------------------|

- **Primary irritant effect:**
- **Skin corrosion/irritation**
Causes skin irritation.
- **Serious eye damage/irritation**
Causes serious eye irritation.
- **Respiratory or skin sensitisation**
May cause allergy or asthma symptoms or breathing difficulties if inhaled.
May cause an allergic skin reaction.

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- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**
- **Germ cell mutagenicity**
Suspected of causing genetic defects.
- **Carcinogenicity**
May cause cancer.
- **Reproductive toxicity**
Suspected of damaging fertility or the unborn child.
- **STOT-single exposure**
May cause damage to organs.
- **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.
- **Ecotoxicological effects:**
- **Remark:** Very toxic for fish
- **Additional ecological information:**
- **General notes:**
Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water
Do not allow product to reach ground water, water course or sewage system.
Danger to drinking water if even small quantities leak into the ground.
Also poisonous for fish and plankton in water bodies.
Very toxic for aquatic organisms
- **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**
- **ADR, IMDG, IATA** UN1987

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· **14.2 UN proper shipping name**
· **ADR** 1987 ALCOHOLS, N.O.S. (ETHANOL (ETHYL ALCOHOL), ACETIC ACID, GLACIAL), ENVIRONMENTALLY HAZARDOUS
· **IMDG** ALCOHOLS, N.O.S. (ETHANOL (ETHYL ALCOHOL), ACETIC ACID, GLACIAL), MARINE POLLUTANT
· **IATA** ALCOHOLS, N.O.S. (ETHANOL, ACETIC ACID, GLACIAL)

· **14.3 Transport hazard class(es)**· **ADR, IMDG**

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

· **IATA**

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

· **14.4 Packing group**· **ADR, IMDG, IATA** III· **14.5 Environmental hazards:**

· **Marine pollutant:** Symbol (fish and tree)
· **Special marking (ADR):** Symbol (fish and tree)

· **14.6 Special precautions for user**

· **Danger code (Kemler):** Warning: Flammable liquids.
33
· **EMS Number:** F-E,S-D
· **Segregation groups** Acids
· **Stowage Category** B

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

Not applicable.

· **Transport/Additional information:**· **ADR**

· **Limited quantities (LQ)** 5L
· **Excepted quantities (EQ)** Code: E1
Maximum net quantity per inner packaging: 30 ml
Maximum net quantity per outer packaging: 1000 ml

· **Transport category** 3
· **Tunnel restriction code** D/E

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

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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 1987 ALCOHOLS, N.O.S. (ETHANOL (ETHYL ALCOHOL), ACETIC ACID, GLACIAL), 3, III, ENVIRONMENTALLY HAZARDOUS |

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 formaldehyde, Methyl Alcohol**
- **Seveso category**
E1 Hazardous to the Aquatic Environment
P5c FLAMMABLE LIQUIDS
- **Qualifying quantity (tonnes) for the application of lower-tier requirements 100 t**
- **Qualifying quantity (tonnes) for the application of upper-tier requirements 200 t**
- **REGULATION (EC) No 1907/2006 ANNEX XVII Conditions of restriction: 3**
- **National regulations:**
- **Information about limitation of use:**
Workers are not allowed to be exposed to the hazardous carcinogenic materials contained in this preparation.
Exceptions can be made by the authorities in certain cases.
- **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.

- **Relevant phrases**
H225 Highly flammable liquid and vapour.
H226 Flammable liquid and vapour.
H301 Toxic if swallowed.
H311 Toxic in contact with skin.
H314 Causes severe skin burns and eye damage.
H317 May cause an allergic skin reaction.
H331 Toxic if inhaled.
H341 Suspected of causing genetic defects.
H350 May cause cancer.
- **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
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
VOC: Volatile Organic Compounds (USA, EU)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative

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Flam. Liq. 2: Flammable liquids – Category 2
Flam. Liq. 3: Flammable liquids – Category 3
Met. Corr. 1: Corrosive to metals – Category 1
Acute Tox. 3: Acute toxicity – Category 3
Acute Tox. 4: Acute toxicity – Category 4
Skin Corr. 1A: Skin corrosion/irritation – Category 1A
Skin Corr. 1B: Skin corrosion/irritation – Category 1B
Skin Irrit. 2: Skin corrosion/irritation – Category 2
Eye Irrit. 2: Serious eye damage/eye irritation – Category 2
Resp. Sens. 1B: Respiratory sensitisation – Category 1B
Skin Sens. 1: Skin sensitisation – Category 1
Muta. 2: Germ cell mutagenicity – Category 2
Carc. 1B: Carcinogenicity – Category 1B
Repr. 2: Reproductive toxicity – Category 2
STOT SE 2: Specific target organ toxicity (single exposure) – Category 2
Aquatic Chronic 1: Hazardous to the aquatic environment - long-term aquatic hazard – Category 1

GB

化学品安全技术说明书

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在 2017.04.14 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: DAVIDSON'S FIXATIVE, MODIFIED
- 商品编号: 64133-50, 64133-50-SP
- 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:

纯净的, 溶液, 高度易燃液体和蒸气。可能腐蚀金属。吞咽会中毒。皮肤接触可能有害。吸入有害。造成皮肤刺激。造成严重眼刺激。吸入可能导致过敏或哮喘病症状或呼吸困难。可能导致皮肤过敏反应。怀疑会导致遗传性缺陷。可能致癌。怀疑对生育能力或胎儿造成伤害。可能对器官造成损害。对水生生物毒性极大并具有长期持续影响。

· 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



骷髅和交叉骨

急性毒性(经口) 第3类

H301 吞咽会中毒



健康危害

敏化(呼吸) 第1B类

H334 吸入可能导致过敏或哮喘病症状或呼吸困难

生殖细胞致突变性 第2类

H341 怀疑会导致遗传性缺陷

致癌性 第1B类

H350 可能致癌

生殖毒性 第2类

H361 怀疑对生育能力或胎儿造成伤害

特定靶器官系统毒性(单次接触) 第2类

H371 可能对器官造成损害



腐蚀

金属腐蚀物 第1类

H290 可能腐蚀金属

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环境

对水环境的危害(慢性) 第1类

H410 对水生生物毒性极大并具有长期持续影响



急性毒性(吸入) 第4类

H332 吸入有害

皮肤腐蚀/刺激 第2类

H315 造成皮肤刺激

严重眼损伤/眼刺激 类别2A

H319 造成严重眼刺激

敏化(皮肤) 第1类

H317 可能导致皮肤过敏反应

急性毒性(经皮肤) 第5类

H313 皮肤接触可能有害

· 标签因素

· **GHS卷标元素** 本产品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

GHS05

GHS06

GHS08

GHS09

· 名称 危险

· 标签上辨别危险的成份:

福尔马林溶液

· 危险字句

高度易燃液体和蒸气

可能腐蚀金属

吞咽会中毒

皮肤接触可能有害

吸入有害

造成皮肤刺激

造成严重眼刺激

吸入可能导致过敏或哮喘病症状或呼吸困难

可能导致皮肤过敏反应

怀疑会导致遗传性缺陷

可能致癌

怀疑对生育能力或胎儿造成伤害

可能对器官造成损害

对水生生物毒性极大并具有长期持续影响

· 警戒字句

· 事故响应

如误吞咽:立即呼叫急救中心/医生

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

具体治疗(见本标签上的)

· 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

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- 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

- 混合物
- 描述: 由以下含有无害添加剂的成分组成的混合物

· 危险的成分:

| | | |
|---------|---|---------|
| 64-17-5 | 无水酒精 ⚠ 易燃液体 第2类, H225 | 10-25% |
| 50-00-0 | 福尔马林溶液 ⚠ 急性毒性(经口) 第3类, H301; 急性毒性(经皮肤) 第3类, H311; 急性毒性(吸入) 第3类, H331; ⚠ 生殖细胞致突变性 第2类, H341; 致癌性 第1B类, H350; ⚠ 皮肤腐蚀/刺激 第1B类, H314; ⚠ 敏化(皮肤) 第1类, H317 | 10-25% |
| 64-19-7 | 醋酸溶液 ⚠ 易燃液体 第3类, H226; ⚠ 皮肤腐蚀/刺激 第1A类, H314 | 2.5-10% |

4 急救措施

· 应急措施要领

· 总说明:

马上脱下染有该产品的衣服。

中毒的症状可能会在几个小时以后才出现;因此在发生事故之后起码要有 48 小时的医疗观察。

万一出现了不规则的呼吸或呼吸的阻碍,请为病人提供人工呼吸。

· 吸入:

供给新鲜空气并且确保会叫医生。

万一病人不清醒时,请让病人侧躺以便移动。

· 皮肤接触: 马上用水和肥皂进行彻底的冲洗。

· 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: 切勿引发呕吐;请马上寻求医疗的协助。

· 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。

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:

如果渗入了水源或污水系统,请通知有关当局。

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- 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).
根据第 13 条条款弃置受污染物.
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**
确保工作间有良好的通风/排气装置.
小心打开及处理贮藏器.
防止气溶胶的形成.
- **有关火灾及防止爆炸的资料:**
远离火源 - 切勿吸烟.
防热.
防静电.
提供呼吸保护装置.
- **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:** 没有特别的要求.
· **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.
免受接触热力和直接受阳光照射.
- **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

64-17-5 无水酒精

| | |
|----------|---|
| PEL (TW) | PC-TWA: 1880 mg/m ³ , 1000 ppm |
|----------|---|

50-00-0 福尔马林溶液

| | |
|----------|-------------------------------|
| OEL (CN) | 最高容许浓度: 0.5 mg/m ³ |
|----------|-------------------------------|

| | |
|----------|---------------------------------------|
| PEL (TW) | PC-TWA: 1.2 mg/m ³ , 1 ppm |
|----------|---------------------------------------|

64-19-7 醋酸溶液

| | |
|----------|-------------------------------|
| OEL (CN) | PC-STEL: 20 mg/m ³ |
|----------|-------------------------------|

| | |
|--|------------------------------|
| | PC-TWA: 10 mg/m ³ |
|--|------------------------------|

| | |
|----------|---------------------------------------|
| PEL (TW) | PC-TWA: 25 mg/m ³ , 10 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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(在 4 页继续)

· **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.
- 分开储存保护性衣服.
- 避免和眼睛及皮肤接触.

· **呼吸系统防护:**

如果曾短暂接触或在低污染的情况下,请使用呼吸过滤装置. 如果曾深入或较长时间接触,请使用独立的呼吸保护装置.

· **手防护:**



保护手套

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,因为该产品是由很多材料配制而成,手套材料的抵抗力并不可预计,所以,必须在使用之前进行检查

· **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:**

安全眼镜



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:** 溶液
- **颜色:** 纯净的
- **气味:** 类似酒精
- **嗅觉阈限:** 未决定.

· **pH值 在 20 °C:** 2.5

· **条件的更改**

- **熔点:** 未确定的
- **沸点/初沸点和沸程:** -21 °C

· **闪点:** 17 °C

· **可燃性(固体、气体):** 不适用的

· **点火温度:** 300 °C

· **分解温度:** 未决定.

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(在 5 页继续)

| | |
|----------------|-------------------------------|
| · 自燃温度: | 该产品是不自燃的 |
| · 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: | 3.5 Vol % |
| 较高: | 73.0 Vol % |
| · 蒸气压 在 20 °C: | 59 hPa |
| · 密度 在 20 °C: | 0.9501 g/cm ³ |
| · 相对密度 | 未决定. |
| · 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: | 未决定. |
| 运动学的: | 未决定. |
| · 溶剂成份: | |
| 有机溶剂: | 31.0 % |
| 水: | 69.0 % |
| · 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:

50-00-0 福尔马林溶液

| | | |
|----|------|------------------|
| 口腔 | LD50 | >200 mg/kg (rat) |
|----|------|------------------|

- 主要的刺激性影响:
- 皮肤: 刺激皮肤和粘膜.
- 在眼睛上面: 刺激的影响.
- 致敏作用:
 - 通过吸入可能造成敏化作用.
 - 通过皮肤接触可能造成敏化作用.
- 更多毒物的资料:
 - 根据有关配制的一般欧盟分类指南的计算方法 (刊印在最新版本), 该产品显示以下的危险:

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毒性的
有害的
刺激性的
致癌的.

- 对以下组别可能产生影响的数据:
- CMR作用 (致癌、导致基因突变、对生殖系统有害)
生殖细胞致突变性 第2类, 致癌性 第1B类, 生殖毒性 第2类

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。
- 生态毒性的影响:
- 备注: 对鱼类有剧毒
- 额外的生态学资料:
- 总括注解:
水危害级别 2 (德国规例) (通过名单进行自我评估): 对水是危险的
不要让该产品接触地下水、水道或污水系统。
即使是少量的产品渗入地下也会对饮用水造成危险。
对水体中的鱼和浮游生物也有毒害。
对水中的有机物有剧毒。
- 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
- 其他副作用 无相关详细资料。

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 UN1987
- UN适当装船名
- ADR 1987 醇类, 未另作规定的 (乙醇, 冰醋酸), ENVIRONMENTALLY HAZARDOUS
- IMDG ALCOHOLS, N.O.S. (ETHANOL (ETHYL ALCOHOL), ACETIC ACID, GLACIAL), MARINE POLLUTANT

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· IATA ALCOHOLS, N.O.S. (ETHANOL, ACETIC ACID, GLACIAL)

· 运输危险等级

· ADR, IMDG



· 级别

3 易燃液体

· 标签

3

· IATA



· Class

3 易燃液体

· Label

3

· 包装组别

· ADR, IMDG, IATA

III

· 危害环境:

· 海运污染物质:

象征符号(鱼和树)

· 特别标记(ADR):

象征符号(鱼和树)

· 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

· Segregation groups

Acids

· Stowage Category

B

· MARPOL73/78(针对船舶引起的海洋污染预防协议)
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: E1

Maximum net quantity per inner packaging: 30 ml

Maximum net quantity per outer packaging: 1000 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 "标准规定":

UN 1987 醇类, 未另作规定的(乙醇, 冰醋酸), 3, III,
ENVIRONMENTALLY HAZARDOUS

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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
- 新化学物质环境管理办法

- 中国现有化学物质名录

列出所有成分

- **GHS卷标元素** 本产品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 GHS05 GHS06 GHS08 GHS09

- **名称** 危险

- **标签上辨别危险的成份:**

福尔马林溶液

- **危险字句**

高度易燃液体和蒸气

可能腐蚀金属

吞咽会中毒

皮肤接触可能有害

吸入有害

造成皮肤刺激

造成严重眼刺激

吸入可能导致过敏或哮喘病症状或呼吸困难

可能导致皮肤过敏反应

怀疑会导致遗传性缺陷

可能致癌

怀疑对生育能力或胎儿造成伤害

可能对器官造成损害

对水生生物毒性极大并具有长期持续影响

- **警戒字句**

- **事故响应**

如误吞咽:立即呼叫急救中心/医生

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

具体治疗(见本标签上的)

- **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

- **国家的规章:**

- **有关使用限制的资料:** 禁止员工接触在配制中含有致癌的物料。在某些情况中由当局作出例外的决定。

- **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。

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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

ELINCS: European List of Notified 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

vPvB: very Persistent and very Bioaccumulative

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

易燃液体 第3类: Flammable liquids – Category 3

金属腐蚀物 第1类: Corrosive to metals – Category 1

急性毒性(经口) 第3类: Acute toxicity – Category 3

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

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

皮肤腐蚀/刺激 第1A类: Skin corrosion/irritation – Category 1A

皮肤腐蚀/刺激 第1B类: Skin corrosion/irritation – Category 1B

皮肤腐蚀/刺激 第2类: Skin corrosion/irritation – Category 2

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

敏化(呼吸) 第1B类: Respiratory sensitisation – Category 1B

敏化(皮肤) 第1类: Skin sensitisation – Category 1

生殖细胞致突变性 第2类: Germ cell mutagenicity – Category 2

致癌性 第1B类: Carcinogenicity – Category 1B

生殖毒性 第2类: Reproductive toxicity – Category 2

特定靶器官系统毒性(单次接触) 第2类: Specific target organ toxicity (single exposure) – Category 2

对水环境的危害(慢性) 第1类: Hazardous to the aquatic environment - long-term aquatic hazard – Category 1

CN

Sikkerhedsdatablad

ifølge 1907/2006/EF, Artikel 31

Trykdato: 14.04.2017

Revision: 14.04.2017

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

- **1.1 Produktidentifikator**
- **Handelsnavn:** DAVIDSON'S FIXATIVE, MODIFIED
- **Artikelnummer:** 64133-50, 64133-50-SP
- **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.



GHS06 dødningshoved og korslagte knogler

Acute Tox. 3 H301 Giftig ved indtagelse.



GHS08 sundhedsfarer

Resp. Sens. 1B H334 Kan forårsage allergi- eller astmasymptomer eller åndedrætsbesvær ved indånding.

Muta. 2 H341 Mistænkt for at forårsage genetiske defekter.

Carc. 1B H350 Kan fremkalde kræft.

Repr. 2 H361 Mistænkt for at skade forplantningsevnen eller det ufødte barn.

STOT SE 2 H371 Kan forårsage organskader.



GHS05 ætsning

Met. Corr.1 H290 Kan ætse metaller.



GHS09 miljø

Aquatic Chronic 1 H410 Meget giftig med langvarige virkninger for vandlevende organismer.

(Fortsættes på side 2)

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GHS07

Acute Tox. 4 H332 Farlig ved indånding.
 Skin Irrit. 2 H315 Forårsager hudirritation.
 Eye Irrit. 2 H319 Forårsager alvorlig øjenirritation.
 Skin Sens. 1 H317 Kan forårsage allergisk hudreaktion.

· 2.2 Mærkningselementer

- **Mærkning i henhold til forordning (EF) nr. 1272/2008**
 Dette produkt er klassificeret og mærket iht. CLP-forordningen.
- **Farepiktogrammer**



GHS02 GHS05 GHS06 GHS08 GHS09

· Signalord Fare

- **Farebestemmende komponent(er) til etikettering:**
 formaldehyd

· Faresætninger

H225 Meget brandfarlig væske og damp.
 H290 Kan ætse metaller.
 H301 Giftig ved indtagelse.
 H332 Farlig ved indånding.
 H315 Forårsager hudirritation.
 H319 Forårsager alvorlig øjenirritation.
 H334 Kan forårsage allergi- eller astmasymptomer eller åndedrætsbesvær ved indånding.
 H317 Kan forårsage allergisk hudreaktion.
 H341 Mistænkt for at forårsage genetiske defekter.
 H350 Kan fremkalde kræft.
 H361 Mistænkt for at skade forplantningsevnen eller det ufødte barn.
 H371 Kan forårsage organskader.
 H410 Meget giftig med langvarige virkninger for vandlevende organismer.

· Sikkerhedssætninger

P301+P310 I TILFÆLDE AF INDTAGELSE: Ring omgående til en GIFTINFORMATION/læge.
 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.
 P321 Særlig behandling (se på denne etiket).
 P405 Opbevares under lås.
 P501 Bortskaffelse af indholdet/beholderen i henhold til de lokale/regionale/nationale/internationale forskrifter.

· 2.3 Andre farer

- **Resultater af PBT- og vPvB-vurdering**
- **PBT:** Ikke relevant.
- **vPvB:** Ikke relevant.

DK

(Fortsættes på side 3)

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PUNKT 3: Sammensætning af/oplysning om indholdsstoffer

- **3.2 Kemisk betegnelse: Blandinger**
- **Beskrivelse:** Blanding med nedenstående stoffer med ufarlige tilsætningsstoffer.

- **Farlige indholdsstoffer:**

| | | |
|-----------------------------------|---|---------|
| CAS: 64-17-5 EINECS: 200-578-6 | ethanol Flam. Liq. 2, H225 | 10-25% |
| CAS: 50-00-0 EINECS: 200-001-8 | formaldehyd Acute Tox. 3, H301; Acute Tox. 3, H311; Acute Tox. 3, H331; Muta. 2, H341; Carc. 1B, H350; Skin Corr. 1B, H314; Skin Sens. 1, H317 | 10-25% |
| CAS: 64-19-7 EINECS: 200-580-7 | eddikesyre Flam. Liq. 3, H226; Skin Corr. 1A, H314 | 2,5-10% |

- **Yderligere anvisninger:** Teksten til de anførte farehenvisninger fremgår af kapitel 16.

PUNKT 4: Førstehjælpsforanstaltninger

- **4.1 Beskrivelse af førstehjælpsforanstaltninger**
- **Generelle anvisninger:**
Tøj, der er forurennet med produktet, skal tages af med det samme.
Forgiftningssymptomer kan optræde med mange timers forsinkelse, derfor skal lægeovervågningen vare mindst 48 timer efter et uheld.
I tilfælde af uregelmæssigt åndedræt eller hvis åndedrættet ophører, skal der gives kunstigt åndedræt.
- **Efter indånding:**
Rigelig tilførsel af frisk luft. Søg for en sikkerheds skyld læge.
I tilfælde af bevidstløshed skal den tilskadede lægges ned og transporteres i stabilt sideleje.
- **Efter hudkontakt:** Skal omgående vaskes af med vand og sæbe, skyl godt efter.
- **Efter øjenkontakt:**
Skyl øjnene med åbent øjenlåg i flere minutter under rindende vand. Søg læge, hvis problemerne er vedvarende.
- **Efter indtagelse:** Fremkald ikke opkastning, tilkald straks lægehjælp.
- **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.
- **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.

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- **6.2 Miljøbeskyttelsesforanstaltninger:**
I tilfælde af indtrængen i vandløb eller kloaksystem skal de pågældende myndigheder underrettes.
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).
Kontamineret materiale skal bortskaffes som affald ifølge punkt 13.
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**
Sørg for god udluftning/udsugning på arbejdspladsen.
Beholdere skal åbnes og håndteres med forsigtighed.
Undgå aerosoldannelse.
- **Anvisninger vedrørende brand- og eksplosionsbeskyttelse:**
Hold antændelige kilder borte – ingen rygning.
Beskyttes mod varme.
Træf forholdsregler mod elektrostatiske opladninger.
Hold åndedrætsværn i beredskab.
- **7.2 Betingelser for sikker opbevaring, herunder eventuel uforenelighed**
- **Opbevaring:**
- **Krav til opbevaringsrum og beholdere:** Ingen særlige krav.
- **Henvisninger vedrørende opbevaring med andre stoffer:** Ikke påkrævet.
- **Yderligere oplysninger vedrørende opbevaringsbetingelserne:**
Hold beholderen tætsluttende lukket.
Beskyttes mod varme og direkte sollys.
- **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:**

| | |
|----------------------------|--|
| 64-17-5 ethanol | |
| GV | Langtidsværdi: 1900 mg/m ³ , 1000 ppm |
| 50-00-0 formaldehyd | |
| GV | Loftværdi: 0,4 mg/m ³ , 0,3 ppm |
| | LK |
| 64-19-7 eddikesyre | |
| GV | Langtidsværdi: 25 mg/m ³ , 10 ppm |
| | E |

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

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- **8.2 Eksponeringskontrol**
- **Personlige værnemidler:**
- **Generelle forholdsregler vedrørende beskyttelse og hygiejne:**
Skal holdes borte fra føde- og drikkevarer og foderstoffer.
Forurenet, gennemvædet tøj skal det tages af med det samme.
Vask hænder inden der holdes pause og ved arbejdsophør.
Adskilt opbevaring af beskyttelsesklædning.
Undgå kontakt med øjne og hud.
- **Åndedrætsværn:**
Ved kortvarig eller ringe belastning skal der benyttes åndedrætsværn med filter, ved intensiv eller længere eksponering skal der benyttes luftforsynet åndedrætsværn.
- **Håndbeskyttelse:**



Beskyttelseshandsker

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. Da produktet er et præparat af flere forskellige stoffer, kan handskematerialernes bestandighed ikke beregnes på forhånd og skal derfor efterprøves inden brugen.
- **Handskematerialets gennemtrængningstid**
Hos handskefabrikanten skal man forespørge om den nøjagtige gennemtrængningstid og overholde denne.
- **Øjenbeskyttelse:**
Beskyttelsesbriller



Tætssluttende beskyttelsesbriller

PUNKT 9: Fysiske og kemiske egenskaber

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

- **Generelle oplysninger**

- **Udseende:**

Form: Opløsning

Farve: Klar

- **Lugt:** Alkoholagtig

- **Lugttærskel:** Ikke bestemt.

· **pH-værdi ved 20 °C:** 2,5

- **Tilstandsendring**

Smeltepunkt/frysepunkt: Ikke bestemt.

Begyndelseskogepunkt og kogepunktsinterval: -21 °C

· **Flammepunkt:** 17 °C

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

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| | |
|---|---|
| · Antændelsepunkt: | 300 °C |
| · Dekomponeringstemperatur: | Ikke bestemt. |
| · Selvantændelsestemperatur: | Produktet er ikke selvantændeligt. |
| · Eksplorative egenskaber: | Produktet er ikke eksplosivt, der kan dog dannes eksplosive damp-/luftblandinger. |
| · Ekspløsningsgrænser: | |
| Nedre: | 3,5 Vol % |
| Øvre: | 73,0 Vol % |
| · Damptryk ved 20 °C: | 59 hPa |
| · Densitet ved 20 °C: | 0,9501 g/cm ³ |
| · 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: | Ikke bestemt. |
| kinematisk: | Ikke bestemt. |
| · Opløsningsmiddelindhold: | |
| Organiske opløsningsmidler: | 31,0 % |
| Vand | 69,0 % |
| VOC (EU) | 31,00 % |
| · 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**
- Giftig ved indtagelse.
- Farlig ved indånding.

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

50-00-0 formaldehyd

Oral LD50 >200 mg/kg (rat)

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- **Primær irritationsvirkning:**
- **Hudætsning/-irritation**
Forårsager hudirritation.
- **Alvorlig øjenskade/øjenirritation**
Forårsager alvorlig øjenirritation.
- **Respiratorisk sensibilisering eller hudsensibilisering**
Kan forårsage allergi- eller astmasymptomer eller åndedrætsbesvær ved indånding.
Kan forårsage allergisk hudreaktion.
- **CMR-virkninger (kræftfremkaldende egenskaber, mutagenitet og reproduktionstoksicitet)**
- **Kimcellemutagenitet**
Mistænkt for at forårsage genetiske defekter.
- **Kræftfremkaldende egenskaber**
Kan fremkalde kræft.
- **Reproduktionstoksicitet**
Mistænkt for at skade forplantningsevnen eller det ufødte barn.
- **Enkel STOT-eksponering**
Kan forårsage organskader.
- **Gentagne STOT-eksponeringer**
Kriterierne for klassificering kan på grundlag af de foreliggende data ikke anses for at være opfyldt.
- **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 Bioakkumuleringspotentialer** Der står ingen yderligere, relevante informationer til rådighed.
- **12.4 Mobilitet i jord** Der står ingen yderligere, relevante informationer til rådighed.
- **Økotoksicitet**
- **Bemærkning:** Meget giftig for fisk.
- **Yderligere økologiske oplysninger:**
- **Generelle anvisninger:**
Fareklasse for vand 2 (Selvklassificering): vandforurenende
Må ikke udledes i grundvandet, vandløb eller kloaksystemet.
Risiko for forurening af drikkevandet allerede ved udslip af små mængder i undergrunden.
I vandløb også giftig for fisk og plankton.
meget giftig for vandorganismer
- **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.

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· **Anbefalet rengøringsmiddel:** Vand, eventuelt tilsat rengøringsmidler.

PUNKT 14: Transportoplysninger

· 14.1 FN-nummer
· ADR, IMDG, IATA

UN1987

· 14.2 UN-forsendelsesbetegnelse (UN proper shipping name)

· ADR

1987 ALKOHOLER, N.O.S. (ETHANOL (ETHYLALKOHOL), EDDIKESYRE, VANDFRI), MILJØFARLIGT

· IMDG

ALCOHOLS, N.O.S. (ETHANOL (ETHYL ALCOHOL), ACETIC ACID, GLACIAL), MARINE POLLUTANT

· IATA

ALCOHOLS, N.O.S. (ETHANOL, ACETIC ACID, GLACIAL)

· 14.3 Transportfareklasse(r)

· ADR, IMDG



· klasse

3 Brandfarlige væsker

· Faremærkat

3

· IATA



· Class

3 Brandfarlige væsker

· Label

3

· 14.4 Emballagegruppe

· ADR, IMDG, IATA

III

· 14.5 Miljøfarer:

· Marine pollutant:

Symbol (fisk og træ)

· Særlige mærkningsbe (ADR):

Symbol (fisk og træ)

· 14.6 Særlige forsigtighedsregler for brugeren

Advarsel: Brandfarlige væsker

· Kemler-tal:

33

· EMS-nummer:

F-E,S-D

· Segregation groups

Acids

· Stowage Category

B

· 14.7 Bulktransport i henhold til bilag II til MARPOL og IBC-koden

Ikke relevant.

· Transport/yderligere oplysninger:

· ADR

· Begrænsede mængder (LQ)

5L

· Undtagne mængder (EQ)

Kode: E1

Største tilladte nettomængde pr. indvendig emballage: 30 ml

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| | |
|-----------------------------------|---|
| · | Største tilladte nettomængde pr. ydre emballage: 1000 ml |
| · Transportkategori | 3 |
| · Tunnelrestriktionskode | D/E |
| <hr/> | |
| · 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 1987 ALKOHOLER, N.O.S. (ETHANOL (ETHYLALKOHOL), EDDIKESYRE, VANDFRI), 3, III, MILJØFARLIGT |

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 formaldehyd, methanol**
- **Seveso-bestemmelser**
 - E1 Farlig for vandmiljøet
 - P5c BRANDFARLIGE VÆSKER
- **Tærskelmængde (tons) for anvendelse af Kolonne 2-krav 100 t**
- **Tærskelmængde (tons) for anvendelse af Kolonne 3-krav 200 t**
- **Forordning (EF) nr. 1907/2006 BILAG XVII Begrænsninger: 3**
- **Nationale forskrifter:**
- **Oplysninger vedrørende beskæftigelsesbegrænsning:**
Arbejdstagere må ikke udsættes for de kræftfremkaldende farestoffer som dette præparat indeholder. I enkelte tilfælde kan myndighederne bevillige undtagelser.
- **MAL-Code: 5-6**
- **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.

- **Risikoangivelser**
 - H225 Meget brandfarlig væske og damp.
 - H226 Brandfarlig væske og damp.
 - H301 Giftig ved indtagelse.
 - H311 Giftig ved hudkontakt.
 - H314 Forårsager svære forbrændinger af huden og øjenskader.
 - H317 Kan forårsage allergisk hudreaktion.
 - H331 Giftig ved indånding.
 - H341 Mistænkt for at forårsage genetiske defekter.
 - H350 Kan fremkalde kræft.
- **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

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GHS: Globally Harmonised System of Classification and Labelling of Chemicals
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
VOC: Volatile Organic Compounds (USA, EU)
Måleteknisk Arbejdshygiejnisk Luftbehov
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
Flam. Liq. 2: Brandfarlige væsker – Kategori 2
Flam. Liq. 3: Brandfarlige væsker – Kategori 3
Met. Corr.1: Metalætsende – Kategori 1
Acute Tox. 3: Akut toksicitet – Kategori 3
Acute Tox. 4: Akut toksicitet – Kategori 4
Skin Corr. 1A: Hudætsning/hudirritation – Kategori 1A
Skin Corr. 1B: Hudætsning/hudirritation – Kategori 1B
Skin Irrit. 2: Hudætsning/hudirritation – Kategori 2
Eye Irrit. 2: Alvorlige øjenskader/øjenirritation – Kategori 2
Resp. Sens. 1B: Respiratorisk sensibilisering – Kategori 1B
Skin Sens. 1: Hudsensibilisering – Kategori 1
Muta. 2: Kimcellemutagenicitet – Kategori 2
Carc. 1B: Carcinogenicitet – Kategori 1B
Repr. 2: Reproduktionstoksicitet – Kategori 2
STOT SE 2: Specifik målorgantoksicitet (enkelt eksponering) – Kategori 2
Aquatic Chronic 1: Farlig for vandmiljøet - langtidfare for vandmiljøet – Kategori 1

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

· 1.1 Productidentificatie

· **Handelsnaam:** DAVIDSON'S FIXATIVE, MODIFIED

· **Artikelnummer:** 64133-50, 64133-50-SP

· 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

· **Inlichtingengevende 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.



GHS06 doodshoofd met gekruiste beenderen

Acute Tox. 3 H301 Giftig bij inslikken.



GHS08 gezondheidsgevaar

Resp. Sens. 1B H334 Kan bij inademing allergie- of astmasymptomen of ademhalingsmoeilijkheden veroorzaken.

Muta. 2 H341 Verdacht van het veroorzaken van genetische schade.

Carc. 1B H350 Kan kanker veroorzaken.

Repr. 2 H361 Kan mogelijks de vruchtbaarheid of het ongeboren kind schaden.

STOT SE 2 H371 Kan schade aan organen veroorzaken.

(Vervolg op blz. 2)

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GHS05 corrosie

Met. Corr.1 H290 Kan bijtend zijn voor metalen.



GHS09 milieu

Aquatic Chronic 1 H410 Zeer giftig voor in het water levende organismen, met langdurige gevolgen.



GHS07

Acute Tox. 4 H332 Schadelijk bij inademing.
 Skin Irrit. 2 H315 Veroorzaakt huidirritatie.
 Eye Irrit. 2 H319 Veroorzaakt ernstige oogirritatie.
 Skin Sens. 1 H317 Kan een allergische huidreactie veroorzaken.

2.2 Etiketteringselementen

Etikettering overeenkomstig Verordening (EG) nr. 1272/2008

Het product is geclassificeerd en geëtiketteerd volgens de CLP-verordening.

Gevarenpictogrammen



GHS02



GHS05



GHS06



GHS08



GHS09

Signaalwoord Gevaar

Gevaaraanduidende componenten voor de etikettering:

formaldehyde

Gevarenaanduidingen

H225 Licht ontvlambare vloeistof en damp.
 H290 Kan bijtend zijn voor metalen.
 H301 Giftig bij inslikken.
 H332 Schadelijk bij inademing.
 H315 Veroorzaakt huidirritatie.
 H319 Veroorzaakt ernstige oogirritatie.
 H334 Kan bij inademing allergie- of astmasymptomen of ademhalingsmoeilijkheden veroorzaken.
 H317 Kan een allergische huidreactie veroorzaken.
 H341 Verdacht van het veroorzaken van genetische schade.
 H350 Kan kanker veroorzaken.
 H361 Kan mogelijks de vruchtbaarheid of het ongeboren kind schaden.
 H371 Kan schade aan organen veroorzaken.
 H410 Zeer giftig voor in het water levende organismen, met langdurige gevolgen.

Veiligheidsaanbevelingen

P301+P310 NA INSLIKKEN: onmiddellijk een ANTIGIFCENTRUM/arts raadplegen.
 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.
 P321 Specifieke behandeling vereist (zie op dit etiket).

(Vervolg op blz. 3)

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P405 Achter slot bewaren.
 P501 De inhoud en de verpakking verwerken volgens de plaatselijke/regionale/nationale/internationale voorschriften.

- 2.3 Andere gevaren
- Resultaten van PBT- en zPzB-beoordeling
- PBT: Niet bruikbaar.
- zPzB: Niet bruikbaar.

RUBRIEK 3: Samenstelling en informatie over de bestanddelen

- 3.2 Chemische karakterisering: Mengsels
- Beschrijving: Mengsel van na elkaar aangevoerde stoffen met onveerbarelijke bijmengingen.

· Gevaarlijke inhoudstoffen:

| | | |
|-----------------------------------|--|---------|
| CAS: 64-17-5 EINECS: 200-578-6 | ethanol Flam. Liq. 2, H225 | 10-25% |
| CAS: 50-00-0 EINECS: 200-001-8 | formaldehyde Acute Tox. 3, H301; Acute Tox. 3, H311; Acute Tox. 3, H331; Muta. 2, H341; Carc. 1B, H350; Skin Corr. 1B, H314; Skin Sens. 1, H317 | 10-25% |
| CAS: 64-19-7 EINECS: 200-580-7 | azijnzuur Flam. Liq. 3, H226; Skin Corr. 1A, H314 | 2,5-10% |

· Aanvullende gegevens:

De woordelijke inhoud van de opgegeven aanwijzingen inzake de mogelijke gevaren is te vinden in hoofdstuk 16.

RUBRIEK 4: Eerstehulpmaatregelen

- 4.1 Beschrijving van de eerstehulpmaatregelen
- Algemene informatie:
 - Verontreinigde kleding onmiddellijk uittrekken.
 - Het is mogelijk dat vergiftigingssymptomen pas na vele uren optreden. Om deze reden is medische controle gedurende minstens 48 uur na een ongeval noodzakelijk.
 - Bij onregelmatige ademhaling of ademstilstand kunstmatige ademhaling toepassen.
- Na het inademen:
 - Veel verse lucht toedienen en voor alle zekerheid een arts raadplegen.
 - Bij bewusteloosheid ligging en vervoer in stabiele zijligging.
- Na huidcontact: Onmiddellijk met water en zeep afwassen en goed naspoelen.
- Na oogcontact:
 - De ogen gedurende verscheidene minuten onder stromend water afspoelen terwijl de oogspleet geopend blijft. Bij aanhoudende klachten een dokter raadplegen.
- Na inslikken: Geen braken teweegbrengen en onmiddellijk medische hulp raadplegen.
- 4.2 Belangrijkste acute en uitgestelde symptomen en effecten Geen verdere relevante informatie verkrijgbaar.
- 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.

(Vervolg op blz. 4)

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- **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:**
Bij indringen in afvalwater of riolering moet de bevoegde instantie gewaarschuwd worden.
Met veel water verdunnen.
Niet in de riolering/het oppervlaktewater/het grondwater laten terechtkomen.
- **6.3 Insluifings- en reinigingsmethoden en -materiaal:**
Met vloeistofbindend materiaal (zand, bergmeel, zuurbinder, universele binder, zaagmeel) opnemen.
Besmet materiaal zoals afval volgens punt 13 verwijderen.
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**
Voor goede ventilatie/afzuiging op de werkplaatsen zorgen.
Tanks voorzichtig openen en behandelen.
Aërosolvorming vermijden.
- **Informatie m.b.t. brand- en ontploffingsgevaar:**
Onststekingsbronnen op afstand houden - niet roken.
Beschermen tegen hitte.
Maatregelen treffen tegen ontlading van statische elektriciteit.
Ademhalingsstoestellen gereedhouden.
- **7.2 Voorwaarden voor een veilige opslag, met inbegrip van incompatibele producten**
- **Opslag:**
- **Eisen ten opzichte van opslagruimte en tanks:** Geen bijzondere eisen.
- **Informatie m.b.t. gezamenlijke opslag:** Niet noodzakelijk.
- **Verdere inlichtingen over eisen m.b.t. de opslag:**
Tanks ondoordringbaar gesloten houden.
Tegen hitte en directe zonnestralen beschermen.
- **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.

(Vervolg op blz. 5)

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· 8.1 Controleparameters

· **Bestanddelen met grenswaarden die m.b.t. de werkruimte in acht genomen moeten worden:**

64-17-5 ethanol

| | |
|-----|--|
| WGW | Korte termijn waarde: 1900 mg/m ³ , 990 ppm |
| | Lange termijn waarde: 260 mg/m ³ , 35 ppm |

50-00-0 formaldehyde

| | |
|-----|--|
| WGW | Korte termijn waarde: 0,5 mg/m ³ , 0,4 ppm |
| | Lange termijn waarde: 0,15 mg/m ³ , 0,1 ppm |

64-19-7 azijnzuur

| | |
|-----|---|
| WGW | Lange termijn waarde: 25 mg/m ³ , 10 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.
- Beschermende kleding afzonderlijk bewaren.
- Aanraking met de ogen en de huid vermijden.

· **Ademhalingsbescherming:**

Bij korte of geringe belasting ademfiltertoestel; bij intensieve resp. langdurige expositie een van de omringende lucht onafhankelijk ademhalingsstoestel gebruiken.

· **Handbescherming:**



Veiligheidshandschoenen

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. Aangezien het product uit meerdere stoffen is samengesteld, is de duurzaamheid van de handschoenmaterialen niet vooraf berekenbaar en moet derhalve vóór het gebruik worden getest.

· **Doordringingstijd van het handschoenmateriaal**

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

· **Oogbescherming:**

Veiligheidsbril



Nauw aansluitende veiligheidsbril

NL

(Vervolg op blz. 6)

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RUBRIEK 9: Fysische en chemische eigenschappen

· 9.1 Informatie over fysische en chemische basiseigenschappen

· Algemene gegevens

· Voorkomen:

| | |
|--------------------|---------------|
| Vorm: | Oplossing |
| Kleur: | Helder |
| Geur: | Alcoholachtig |
| Geurdrempelwaarde: | Niet bepaald. |

· pH-waarde bij 20 °C: 2,5

· Toestandsverandering

| | |
|-------------------------------|---------------|
| Smelt-/vriespunt: | Niet bepaald. |
| Beginkookpunt en kooktraject: | -21 °C |

· Vlampunt: 17 °C

· Ontvlambaarheid (vast, gas): Niet bruikbaar.

· Ontstekingstemperatuur: 300 °C

· Ontledingstemperatuur: Niet bepaald.

· Zelfontbrandingstemperatuur: Het produkt ontbrandt niet uit zichzelf.

· Ontploffingseigenschappen: Het produkt is niet ontploffingsgevaarlijk, maar de vorming van ontploffingsgevaarlijke damp-/luchtmengsels is mogelijk.

· Ontploffingsgrenzen:

| | |
|-----------|------------|
| Onderste: | 3,5 Vol % |
| Bovenste: | 73,0 Vol % |

· Dampspanning bij 20 °C: 59 hPa

· Dichtheid bij 20 °C: 0,9501 g/cm³

· Relatieve dichtheid: Niet bepaald.

· Dampdichtheid: Niet bepaald.

· Verdampingssnelheid: Niet bepaald.

· Oplosbaarheid in/mengbaarheid met

Water: Volledig mengbaar.

· Verdelingscoëfficiënt: n-octanol/water: Niet bepaald.

· Viscositeit

| | |
|--------------|---------------|
| Dynamisch: | Niet bepaald. |
| Kinematisch: | Niet bepaald. |

· Oplosmiddelgehalte:

| | |
|------------------------|---------|
| Organisch oplosmiddel: | 31,0 % |
| Water: | 69,0 % |
| VOC (EG) | 31,00 % |

· 9.2 Overige informatie: Geen verdere relevante informatie verkrijgbaar.

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.

(Vervolg op blz. 7)

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- **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

Giftig bij inslikken.

Schadelijk bij inademing.

· Indelingsrelevantie LD/LC50-waarden:

50-00-0 formaldehyde

| | | |
|-------|------|------------------|
| Oraal | LD50 | >200 mg/kg (rat) |
|-------|------|------------------|

· Primaire aandoening:

· Huidcorrosie/-irritatie

Veroorzaakt huidirritatie.

· Ernstig oogletsel/oogirritatie

Veroorzaakt ernstige oogirritatie.

· Sensibilisatie van de luchtwegen/de huid

Kan bij inademing allergie- of astmasymptomen of ademhalingsmoeilijkheden veroorzaken.

Kan een allergische huidreactie veroorzaken.

· CMR-effecten (kankerverwekkendheid, mutageniteit en giftigheid voor de voortplanting)

· Mutageniteit in geslachtscellen

Verdacht van het veroorzaken van genetische schade.

· Kankerverwekkendheid

Kan kanker veroorzaken.

· Giftigheid voor de voortplanting

Kan mogelijks de vruchtbaarheid of het ongeboren kind schaden.

· STOT bij eenmalige blootstelling

Kan schade aan organen 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.

· Ecotoxische effecten:

· **Opmerking:** Zeer giftig voor vissen.

· Verdere ecologische informatie:

· Algemene informatie:

Waterbezwaarlijkheid (NL): Z(1)

Gevaar voor water klasse 2 (D) (Zelfclassificatie): gevaar voor water

Niet lozen in grondwater, in oppervlaktewater of in riolering.

Gevaar voor drinkwater zelfs bij uitlopen van geringe hoeveelheden in de ondergrond.

In oppervlaktewater ook giftig voor vissen en plankton.

zeer giftig voor in het water levende organismen

(Vervolg op blz. 8)

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- **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 | UN1987 |
| · 14.2 Juiste ladingnaam overeenkomstig de modelreglementen van de VN | |
| · ADR | 1987 ALCOHOLEN, N.E.G. (ETHANOL (ETHYLALCOHOL), IJSAZIJN), MILIEUGEVAARLIJK |
| · IMDG | ALCOHOLS, N.O.S. (ETHANOL (ETHYL ALCOHOL), ACETIC ACID, GLACIAL), MARINE POLLUTANT |
| · IATA | ALCOHOLS, N.O.S. (ETHANOL, ACETIC ACID, GLACIAL) |
| · 14.3 Transportgevarenklasse(n) | |
| · ADR, IMDG | |
| | |
| · klasse | 3 Brandbare vloeistoffen |
| · Etiket | 3 |
| · IATA | |
| | |
| · Class | 3 Brandbare vloeistoffen |
| · Label | 3 |
| · 14.4 Verpakkingsgroep: | |
| · ADR, IMDG, IATA | III |
| · 14.5 Milieugevaren: | |
| · Marine pollutant: | Symbool (vis en boom) |
| · Bijzondere kenmerking (ADR): | Symbool (vis en boom) |
| · 14.6 Bijzondere voorzorgen voor de gebruiker | Waarschuwing: Brandbare vloeistoffen |
| · Kemler-getal: | 33 |
| · EMS-nummer: | F-E,S-D |

(Vervolg op blz. 9)

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| | |
|--|--|
| · Segregation groups | Acids |
| · Stowage Category | B |
| · 14.7 Vervoer in bulk overeenkomstig bijlage II bij Marpol en de IBC-code | Niet bruikbaar. |
| · Transport/verdere gegevens: | |
| · ADR | |
| · Beperkte hoeveelheden (LQ) | 5L |
| · Uitgezonderde hoeveelheden (EQ) | Code: E1 Grootste netto hoeveelheid per binnenverpakking: 30 ml Grootste netto hoeveelheid per buitenverpakking: 1000 ml |
| · Vervoerscategorie | 3 |
| · Tunnelbeperkingscode | 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 |
| · VN "Model Regulation": | UN 1987 ALCOHOLEN, N.E.G. (ETHANOL (ETHYLALCOHOL), IJSAZIJN), 3, III, MILIEUGEVAARLIJK |

RUBRIEK 15: Regelgeving

· 15.1 Specifieke veiligheids-, gezondheids- en milieureglementen en -wetgeving voor de stof of het mengsel

| | | |
|---|--------------|----|
| · SZW-lijst van kankerverwekkende stoffen | | |
| 64-17-5 | ethanol | |
| 50-00-0 | formaldehyde | |
| · SZW-lijst van mutagene stoffen | | |
| geen der bestanddelen staat op de lijst. | | |
| · NIET-limitatieve lijst van voor de voortplanting giftige stoffen - Vruchtbaarheid | | |
| 64-17-5 | ethanol | IA |
| · NIET-limitatieve lijst van voor de voortplanting giftige stoffen - Ontwikkeling | | |
| 64-17-5 | ethanol | IA |
| 67-56-1 | methanol | IB |
| · NIET-limitatieve lijst van voor de voortplanting giftige stoffen - Borstvoeding | | |
| 64-17-5 | ethanol | x |

· Richtlijn 2012/18/EU

· Gevaarlijke stoffen die met naam genoemd worden - BIJLAGE I formaldehyde, methanol

· Seveso-categorie

E1 Gevaar voor het aquatisch milieu

P5c ONTVLAMBARE VLOEISTOFFEN

· Drempelwaarde (ton) voor toepassing van voorschriften voor lagedrempelinrichtingen 100 t

· Drempelwaarde (ton) voor toepassing van voorschriften voor hogedrempelinrichtingen 200 t

· Verordening (EG) nr. 1907/2006 BIJLAGE XVII Beperkingsvoorwaarden: 3

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- **Nationale voorschriften:**
- **Aanwijzingen m.b.t. tewerkstellingsbeperking:**
Werknemers mogen aan de kankerverwekkende gevaarlijke stoffen van deze toebereiding niet blootgesteld worden. In uitzonderingsgevallen kan de overheid speciale vergunningen afgeven.
- **Gevaarklasse v. water:** Waterbezwaarlijkheid (NL): Z(1)
- **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.

- **Relevante zinnen**
 - H225 Licht ontvlambare vloeistof en damp.
 - H226 Ontvlambare vloeistof en damp.
 - H301 Giftig bij inslikken.
 - H311 Giftig bij contact met de huid.
 - H314 Veroorzaakt ernstige brandwonden en oogletsel.
 - H317 Kan een allergische huidreactie veroorzaken.
 - H331 Giftig bij inademing.
 - H341 Verdacht van het veroorzaken van genetische schade.
 - H350 Kan kanker veroorzaken.
- **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
 - ELINCS: European List of Notified Chemical Substances
 - CAS: Chemical Abstracts Service (division of the American Chemical Society)
 - VOC: Volatile Organic Compounds (USA, EU)
 - 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
 - Flam. Liq. 3: Ontvlambare vloeistoffen – Categorie 3
 - Met. Corr.1: Bijtend voor metalen – Categorie 1
 - Acute Tox. 3: Acute toxiciteit – Categorie 3
 - Acute Tox. 4: Acute toxiciteit – Categorie 4
 - Skin Corr. 1A: Huidcorrosie/irritatie – Categorie 1A
 - Skin Corr. 1B: Huidcorrosie/irritatie – Categorie 1B
 - Skin Irrit. 2: Huidcorrosie/irritatie – Categorie 2
 - Eye Irrit. 2: Ernstig oogletsel/oogirritatie – Categorie 2
 - Resp. Sens. 1B: Sensibilisatie van de luchtwegen – Categorie 1B
 - Skin Sens. 1: Sensibilisatie van de huid – Categorie 1
 - Muta. 2: Mutageniteit in geslachtscellen – Categorie 2
 - Carc. 1B: Kankerverwekkendheid – Categorie 1B
 - Repr. 2: Voortplantingstoxiciteit – Categorie 2
 - STOT SE 2: Specifieke doelorgaantoxiciteit bij eenmalige blootstelling – Categorie 2
 - Aquatic Chronic 1: Gevaar voor het aquatisch milieu - aquatisch gevaar op lange termijn – Categorie 1

Fiche de données de sécurité

selon 1907/2006/CE, Article 31

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Révision: 14.04.2017

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

- **1.1 Identificateur de produit**
- **Nom du produit:** DAVIDSON'S FIXATIVE, MODIFIED
- **Code du produit:** 64133-50, 64133-50-SP
- **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.



GHS06 tête de mort sur deux tibias

Acute Tox. 3 H301 Toxique en cas d'ingestion.



GHS08 danger pour la santé

Resp. Sens. 1B H334 Peut provoquer des symptômes allergiques ou d'asthme ou des difficultés respiratoires par inhalation.

Muta. 2 H341 Susceptible d'induire des anomalies génétiques.

Carc. 1B H350 Peut provoquer le cancer.

Repr. 2 H361 Susceptible de nuire à la fertilité ou au fœtus.

STOT SE 2 H371 Risque présumé d'effets graves pour les organes.



GHS05 corrosion

Met. Corr.1 H290 Peut être corrosif pour les métaux.

(suite page 2)

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GHS09 environnement

Aquatic Chronic 1 H410 Très toxique pour les organismes aquatiques, entraîne des effets néfastes à long terme.



GHS07

Acute Tox. 4 H332 Nocif par inhalation.
 Skin Irrit. 2 H315 Provoque une irritation cutanée.
 Eye Irrit. 2 H319 Provoque une sévère irritation des yeux.
 Skin Sens. 1 H317 Peut provoquer une allergie cutanée.

· 2.2 Éléments d'étiquetage

- **Etiquetage selon le règlement (CE) n° 1272/2008** Le produit est classifié et étiqueté selon le règlement CLP.
- **Pictogrammes de danger**



GHS02



GHS05



GHS06



GHS08



GHS09

- **Mention d'avertissement** Danger

- **Composants dangereux déterminants pour l'étiquetage:**

Formaldéhyde

- **Mentions de danger**

H225 Liquide et vapeurs très inflammables.
 H290 Peut être corrosif pour les métaux.
 H301 Toxique en cas d'ingestion.
 H332 Nocif par inhalation.
 H315 Provoque une irritation cutanée.
 H319 Provoque une sévère irritation des yeux.
 H334 Peut provoquer des symptômes allergiques ou d'asthme ou des difficultés respiratoires par inhalation.
 H317 Peut provoquer une allergie cutanée.
 H341 Susceptible d'induire des anomalies génétiques.
 H350 Peut provoquer le cancer.
 H361 Susceptible de nuire à la fertilité ou au fœtus.
 H371 Risque présumé d'effets graves pour les organes.
 H410 Très toxique pour les organismes aquatiques, entraîne des effets néfastes à long terme.

- **Conseils de prudence**

P301+P310 **EN CAS D'INGESTION:** Appeler immédiatement un CENTRE ANTIPOISON/un médecin.
 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.
 P321 Traitement spécifique (voir sur cette étiquette).
 P405 Garder sous clef.
 P501 Éliminer le contenu/récipient conformément à la réglementation locale/régionale/nationale/internationale.

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- **2.3 Autres dangers**
- **Résultats des évaluations PBT et vPvB**
- **PBT:** Non applicable.
- **vPvB:** Non applicable.

RUBRIQUE 3: Composition/informations sur les composants

- **3.2 Caractérisation chimique: Mélanges**
- **Description:** Mélange des substances mentionnées à la suite avec des additifs non dangereux.

· **Composants dangereux:**

| | | |
|-----------------------------------|--|---------|
| CAS: 64-17-5 EINECS: 200-578-6 | éthanol ☠ Flam. Liq. 2, H225 | 10-25% |
| CAS: 50-00-0 EINECS: 200-001-8 | Formaldéhyde ☠ Acute Tox. 3, H301; Acute Tox. 3, H311; Acute Tox. 3, H331; ☠ Muta. 2, H341; Carc. 1B, H350; ☠ Skin Corr. 1B, H314; ☠ Skin Sens. 1, H317 | 10-25% |
| CAS: 64-19-7 EINECS: 200-580-7 | acide acétique ☠ Flam. Liq. 3, H226; ☠ Skin Corr. 1A, H314 | 2,5-10% |

- **Indications complémentaires:** Pour le libellé des phrases de risque citées, se référer au chapitre 16.

RUBRIQUE 4: Premiers secours

- **4.1 Description des premiers secours**
- **Remarques générales:**
Enlever immédiatement les vêtements contaminés par le produit.
Les symptômes d'intoxication peuvent apparaître après de nombreuses heures seulement; une surveillance médicale est donc nécessaire au moins 48 heures après un accident.
Respiration artificielle dans le cas d'une respiration irrégulière ou d'un arrêt respiratoire.
- **Après inhalation:**
Donner de l'air frais en abondance et consulter un médecin pour plus de sécurité.
En cas d'inconscience, coucher et transporter la personne en position latérale stable.
- **Après contact avec la peau:** Laver immédiatement à l'eau et au savon et bien rincer.
- **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:** Ne pas faire vomir, demander d'urgence une assistance médicale.
- **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.

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.

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- **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:**
En cas de pénétration dans les eaux ou les égouts, avertir les autorités compétentes.
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).
Evacuer les matériaux contaminés en tant que déchets conformément au point 13.
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**
Veiller à une bonne ventilation/aspiration du poste de travail.
Ouvrir et manipuler les récipients avec précaution.
Eviter la formation d'aérosols.
- **Préventions des incendies et des explosions:**
Tenir à l'abri des sources d'inflammation - ne pas fumer.
Tenir à l'abri de la chaleur.
Prendre des mesures contre les charges électrostatiques.
Tenir des appareils de protection respiratoire prêts.
- **7.2 Conditions d'un stockage sûr, y compris d'éventuelles incompatibilités**
- **Stockage:**
- **Exigences concernant les lieux et conteneurs de stockage:** Aucune exigence particulière.
- **Indications concernant le stockage commun:** Pas nécessaire.
- **Autres indications sur les conditions de stockage:**
Tenir les emballages hermétiquement fermés.
Protéger de la forte chaleur et du rayonnement direct du soleil.
- **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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· 8.1 Paramètres de contrôle

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

| | |
|-------------------------------|--|
| 64-17-5 éthanol | |
| VME | Valeur momentanée: 9500 mg/m ³ , 5000 ppm Valeur à long terme: 1900 mg/m ³ , 1000 ppm |
| 50-00-0 Formaldéhyde | |
| VME | Valeur momentanée: 1 ppm Valeur à long terme: 0,5 ppm C2 |
| 64-19-7 acide acétique | |
| VME | Valeur momentanée: 25 mg/m ³ , 10 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.

Conserver à part les vêtements de protection.

Eviter tout contact avec les yeux et avec la peau.

· Protection respiratoire:

En cas d'exposition faible ou de courte durée, utiliser un filtre respiratoire; en cas d'exposition intense ou durable, utiliser un appareil de respiration indépendant de l'air ambiant.

· Protection des mains:



Gants de protection

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 dépend non seulement du matériau, mais aussi d'autres critères de qualité qui peuvent varier d'un fabricant à l'autre. Puisque le produit représente une préparation composée de plusieurs substances, la résistance des matériaux des gants ne peut pas être calculée à l'avance et doit, alors, être contrôlée avant l'utilisation.

· 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



Lunettes de protection hermétiques

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RUBRIQUE 9: Propriétés physiques et chimiques

· 9.1 Informations sur les propriétés physiques et chimiques essentielles

· Indications générales

· Aspect:

| | |
|-----------------|----------------|
| Forme: | Solution |
| Couleur: | Transparent |
| Odeur: | Genre alcool |
| Seuil olfactif: | Non déterminé. |

· valeur du pH à 20 °C: 2,5

· Changement d'état

| | |
|--|----------------|
| Point de fusion/point de congélation: | Non déterminé. |
| Point initial d'ébullition et intervalle d'ébullition: | -21 °C |

· Point d'éclair 17 °C

· Inflammabilité (solide, gaz): Non applicable.

· Température d'inflammation: 300 °C

· Température de décomposition: Non déterminé.

· Température d'auto-inflammabilité: Le produit ne s'enflamme pas spontanément.

· Propriétés explosives: Le produit n'est pas explosif; toutefois, des mélanges explosifs vapeur-air peuvent se former.

· Limites d'explosion:

| | |
|-------------|------------|
| Inférieure: | 3,5 Vol % |
| Supérieure: | 73,0 Vol % |

· Pression de vapeur à 20 °C: 59 hPa

· Densité à 20 °C: 0,9501 g/cm³

· 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: | Non déterminé. |
| Cinématique: | Non déterminé. |

· Teneur en solvants:

| | |
|----------------------|---------|
| Solvants organiques: | 31,0 % |
| Eau: | 69,0 % |
| VOC (CE) | 31,00 % |

· 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.

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- **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

Toxique en cas d'ingestion.

Nocif par inhalation.

· Valeurs LD/LC50 déterminantes pour la classification:

50-00-0 Formaldéhyde

| | | |
|------|------|------------------|
| Oral | LD50 | >200 mg/kg (rat) |
|------|------|------------------|

· Effet primaire d'irritation:

· Corrosion cutanée/irritation cutanée

Provoque une irritation cutanée.

· Lésions oculaires graves/irritation oculaire

Provoque une sévère irritation des yeux.

· Sensibilisation respiratoire ou cutanée

Peut provoquer des symptômes allergiques ou d'asthme ou des difficultés respiratoires par inhalation.

Peut provoquer une allergie cutanée.

· Effets CMR (cancérogène, mutagène et toxique pour la reproduction)

· Mutagénicité sur les cellules germinales

Susceptible d'induire des anomalies génétiques.

· Cancérogénicité

Peut provoquer le cancer.

· Toxicité pour la reproduction

Susceptible de nuire à la fertilité ou au fœtus.

· Toxicité spécifique pour certains organes cibles - exposition unique

Risque présumé d'effets graves pour les organes.

· 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.

· Effets écotoxiques:

· **Remarque:** Très toxique chez les poissons.

· Autres indications écologiques:

· Indications générales:

Catégorie de pollution des eaux 2 (D) (Classification propre): polluant

Ne pas laisser pénétrer dans la nappe phréatique, les eaux ou les canalisations.

Danger pour l'eau potable dès fuite d'une petite quantité dans le sous-sol.

Dans les eaux, également toxique pour les poissons et le plancton.

Très toxique pour organismes aquatiques.

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- **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

- | | |
|--|---|
| <ul style="list-style-type: none"> · 14.1 Numéro ONU · ADR, IMDG, IATA | UN1987 |
| <ul style="list-style-type: none"> · 14.2 Désignation officielle de transport de l'ONU · ADR · IMDG · IATA | 1987 ALCOOLS, N.S.A. (ÉTHANOL (ALCOOL ÉTHYLIQUE), ACIDE ACÉTIQUE GLACIAL), DANGEREUX POUR L'ENVIRONNEMENT ALCOHOLS, N.O.S. (ETHANOL (ETHYL ALCOHOL), ACETIC ACID, GLACIAL), MARINE POLLUTANT ALCOHOLS, N.O.S. (ETHANOL, ACETIC ACID, GLACIAL) |
| <ul style="list-style-type: none"> · 14.3 Classe(s) de danger pour le transport · ADR, IMDG | <div style="display: flex; align-items: center; gap: 10px;">   </div> |
| <ul style="list-style-type: none"> · Classe · Étiquette | 3 Liquides inflammables. 3 |
| <ul style="list-style-type: none"> · IATA | <div style="display: flex; align-items: center; gap: 10px;">  </div> |
| <ul style="list-style-type: none"> · Class · Label | 3 Liquides inflammables. 3 |
| <ul style="list-style-type: none"> · 14.4 Groupe d'emballage · ADR, IMDG, IATA | III |
| <ul style="list-style-type: none"> · 14.5 Dangers pour l'environnement: · Marine Pollutant: · Marquage spécial (ADR): | Signe conventionnel (poisson et arbre) Signe conventionnel (poisson et arbre) |

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| | |
|--|---|
| <ul style="list-style-type: none"> · 14.6 Précautions particulières à prendre par l'utilisateur · Indice Kemler: · No EMS: · Segregation groups · Stowage Category | <p>Attention: Liquides inflammables.</p> <p>33</p> <p>F-E,S-D</p> <p>Acids</p> <p>B</p> |
| <ul style="list-style-type: none"> · 14.7 Transport en vrac conformément à l'annexe II de la convention Marpol et au recueil IBC | <p>Non applicable.</p> |
| <p>· Indications complémentaires de transport:</p> | |
| <ul style="list-style-type: none"> · ADR · Quantités limitées (LQ) · Quantités exceptées (EQ) | <p>5L</p> <p>Code: E1</p> <p>Quantité maximale nette par emballage intérieur: 30 ml</p> <p>Quantité maximale nette par emballage extérieur: 1000 ml</p> |
| <ul style="list-style-type: none"> · Catégorie de transport · Code de restriction en tunnels | <p>3</p> <p>D/E</p> |
| <ul style="list-style-type: none"> · IMDG · Limited quantities (LQ) · Excepted quantities (EQ) | <p>1L</p> <p>Code: E2</p> <p>Maximum net quantity per inner packaging: 30 ml</p> <p>Maximum net quantity per outer packaging: 500 ml</p> |
| <ul style="list-style-type: none"> · "Règlement type" de l'ONU: | <p>UN 1987 ALCOOLS, N.S.A. (ÉTHANOL (ALCOOL ÉTHYLIQUE), ACIDE ACÉTIQUE GLACIAL), 3, III, DANGEREUX POUR L'ENVIRONNEMENT</p> |

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** Formaldéhyde, méthanol
- **Catégorie SEVESO**
E1 Danger pour l'environnement aquatique
P5c LIQUIDES INFLAMMABLES
- **Quantité seuil (tonnes) pour l'application des exigences relatives au seuil bas 100 t**
- **Quantité seuil (tonnes) pour l'application des exigences relatives au seuil haut 200 t**
- **RÈGLEMENT (CE) N° 1907/2006 ANNEXE XVII** Conditions de limitation: 3
- **Prescriptions nationales:**
- **Indications sur les restrictions de travail:**
Le personnel ne doit pas être exposé aux substances dangereuses cancérogènes contenues dans cette préparation.
Les autorités peuvent autoriser des exceptions dans des cas particuliers.
- **15.2 Évaluation de la sécurité chimique:** Une évaluation de la sécurité chimique n'a pas été réalisée.

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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.

· **Phrases importantes**

H225 Liquide et vapeurs très inflammables.

H226 Liquide et vapeurs inflammables.

H301 Toxique en cas d'ingestion.

H311 Toxique par contact cutané.

H314 Provoque des brûlures de la peau et des lésions oculaires graves.

H317 Peut provoquer une allergie cutanée.

H331 Toxique par inhalation.

H341 Susceptible d'induire des anomalies génétiques.

H350 Peut provoquer le cancer.

· **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

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

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

VOC: Volatile Organic Compounds (USA, EU)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

Flam. Liq. 2: Liquides inflammables – Catégorie 2

Flam. Liq. 3: Liquides inflammables – Catégorie 3

Met. Corr.1: Substances ou mélanges corrosifs pour les métaux – Catégorie 1

Acute Tox. 3: Toxicité aiguë – Catégorie 3

Acute Tox. 4: Toxicité aiguë – Catégorie 4

Skin Corr. 1A: Corrosion cutanée/irritation cutanée – Catégorie 1A

Skin Corr. 1B: Corrosion cutanée/irritation cutanée – Catégorie 1B

Skin Irrit. 2: Corrosion cutanée/irritation cutanée – Catégorie 2

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

Resp. Sens. 1B: Sensibilisation respiratoire – Catégorie 1B

Skin Sens. 1: Sensibilisation cutanée – Catégorie 1

Muta. 2: Mutagénicité sur les cellules germinales – Catégorie 2

Carc. 1B: Cancérogénicité – Catégorie 1B

Repr. 2: Toxicité pour la reproduction – Catégorie 2

STOT SE 2: Toxicité spécifique pour certains organes cibles (exposition unique) – Catégorie 2

Aquatic Chronic 1: Dangers pour le milieu aquatique- toxicité à long terme pour le milieu aquatique – Catégorie 1

Sicherheitsdatenblatt

gemäß 1907/2006/EG, Artikel 31

Druckdatum: 14.04.2017

überarbeitet am: 14.04.2017

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

- **1.1 Produktidentifikator**
- **Handelsname:** DAVIDSON'S FIXATIVE, MODIFIED
- **Artikelnummer:** 64133-50, 64133-50-SP
- **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

24h Giftnotruf Munchen: +49 (0)89 19240
Toxikologische Abteilung der II. Medizinischen Klinik
rechts der Isar, Munchen. - www.toxinfo.org
- **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.



GHS06 Totenkopf mit gekreuzten Knochen

Acute Tox. 3 H301 Giftig bei Verschlucken.



GHS08 Gesundheitsgefahr

Resp. Sens. 1B H334 Kann bei Einatmen Allergie, asthmaartige Symptome oder Atembeschwerden verursachen.

Muta. 2 H341 Kann vermutlich genetische Defekte verursachen.

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· Sicherheitshinweise

- P301+P310 **BEI VERSCHLUCKEN:** Sofort GIFTINFORMATIONSZENTRUM/Arzt anrufen.
- 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.
- P321 **Besondere Behandlung (siehe auf diesem Kennzeichnungsetikett).**
- P405 **Unter Verschluss aufbewahren.**
- P501 **Entsorgung des Inhalts / des Behälters gemäß den örtlichen / regionalen / nationalen / internationalen Vorschriften.**

· Zusätzliche Angaben:

Nur für gewerbliche Anwender.

· 2.3 Sonstige Gefahren**· Ergebnisse der PBT- und vPvB-Beurteilung****· PBT:** Nicht anwendbar.**· vPvB:** Nicht anwendbar.

ABSCHNITT 3: Zusammensetzung/Angaben zu Bestandteilen

· 3.2 Chemische Charakterisierung: Gemische**· Beschreibung:** Gemisch aus nachfolgend angeführten Stoffen mit ungefährlichen Beimengungen.**· Gefährliche Inhaltsstoffe:**

| | | |
|-----------------------------------|---|---------|
| CAS: 64-17-5 EINECS: 200-578-6 | Ethanol Flam. Liq. 2, H225 | 10-25% |
| CAS: 50-00-0 EINECS: 200-001-8 | Formaldehyd Acute Tox. 3, H301; Acute Tox. 3, H311; Acute Tox. 3, H331; Muta. 2, H341; Carc. 1B, H350; Skin Corr. 1B, H314; Skin Sens. 1, H317 | 10-25% |
| CAS: 64-19-7 EINECS: 200-580-7 | Essigsäure Flam. Liq. 3, H226; Skin Corr. 1A, H314 | 2,5-10% |

· Zusätzliche Hinweise: Der Wortlaut der angeführten Gefahrenhinweise ist dem Abschnitt 16 zu entnehmen.

ABSCHNITT 4: Erste-Hilfe-Maßnahmen

· 4.1 Beschreibung der Erste-Hilfe-Maßnahmen**· Allgemeine Hinweise:**

Mit Produkt verunreinigte Kleidungsstücke unverzüglich entfernen.

Vergiftungssymptome können erst nach vielen Stunden auftreten, deshalb ärztliche Überwachung mindestens 48 Stunden nach einem Unfall.

Bei unregelmäßiger Atmung oder Atemstillstand künstliche Beatmung.

· Nach Einatmen:

Reichlich Frischluftzufuhr und sicherheitshalber Arzt aufsuchen.

Bei Bewußtlosigkeit Lagerung und Transport in stabiler Seitenlage.

· Nach Hautkontakt: Sofort mit Wasser und Seife abwaschen und gut nachspülen.**· Nach Augenkontakt:**

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

· Nach Verschlucken: Kein Erbrechen herbeiführen, sofort Arzthilfe zuziehen.**· 4.2 Wichtigste akute und verzögert auftretende Symptome und Wirkungen**

Keine weiteren relevanten Informationen verfügbar.

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- **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:**
Bei Eindringen in Gewässer oder Kanalisation zuständige Behörden benachrichtigen.
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.
Kontaminiertes Material als Abfall nach Abschnitt 13 entsorgen.
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**
Für gute Belüftung/Absaugung am Arbeitsplatz sorgen.
Behälter mit Vorsicht öffnen und handhaben.
Aerosolbildung vermeiden.
- **Hinweise zum Brand- und Explosionsschutz:**
Zündquellen fernhalten - nicht rauchen.
Vor Hitze schützen.
Maßnahmen gegen elektrostatische Aufladung treffen.
Atemschutzgeräte bereithalten.
- **7.2 Bedingungen zur sicheren Lagerung unter Berücksichtigung von Unverträglichkeiten**
- **Lagerung:**
- **Anforderung an Lagerräume und Behälter:** Keine besonderen Anforderungen.
- **Zusammenlagerungshinweise:** Nicht erforderlich.
- **Weitere Angaben zu den Lagerbedingungen:**
Behälter dicht geschlossen halten.
Vor Hitze und direkter Sonnenbestrahlung schützen.

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- **Lagerklasse:**
- **Klassifizierung nach Betriebsicherheitsverordnung (BetrSichV):**
Auf Metalle korrosiv wirkende Stoffe oder Gemische
- **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:
64-17-5 Ethanol

 AGW Langzeitwert: 960 mg/m³, 500 ml/m³
2(II);DFG, Y

50-00-0 Formaldehyd

 AGW Langzeitwert: 0,37 mg/m³, 0,3 ml/m³
2(I);AGS, Sh, Y, X

64-19-7 Essigsäure

 AGW Langzeitwert: 25 mg/m³, 10 ml/m³
2(I);DFG, EU, Y

- **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.
Getrennte Aufbewahrung der Schutzkleidung.
Berührung mit den Augen und der Haut vermeiden.
- **Atemschutz:**
Bei kurzzeitiger oder geringer Belastung Atemfiltergerät; bei intensiver bzw. längerer Exposition unluftunabhängiges Atemschutzgerät verwenden.
- **Handschutz:**



Schutzhandschuhe

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. Da das Produkt eine Zubereitung aus mehreren Stoffen darstellt, ist die Beständigkeit von Handschuhmaterialien nicht vorausberechenbar und muß deshalb vor dem Einsatz überprüft werden.

Durchdringungszeit des Handschuhmaterials

Die genaue Durchbruchzeit ist beim Schutzhandschuhhersteller zu erfahren und einzuhalten.

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- **Augenschutz:**
Schutzbrille



Dichtschließende Schutzbrille

ABSCHNITT 9: Physikalische und chemische Eigenschaften

· 9.1 Angaben zu den grundlegenden physikalischen und chemischen Eigenschaften

· Allgemeine Angaben

· Aussehen:

| | |
|---------------------------|-----------------|
| Form: | Lösung |
| Farbe: | Klar |
| · Geruch: | Alkoholartig |
| · Geruchsschwelle: | Nicht bestimmt. |

· **pH-Wert bei 20 °C:** 2,5

· Zustandsänderung

| | |
|--------------------------------------|-----------------|
| Schmelzpunkt/Gefrierpunkt: | Nicht bestimmt. |
| Siedebeginn und Siedebereich: | -21 °C |

· **Flammpunkt:** 17 °C

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

· **Zündtemperatur:** 300 °C

· **Zersetzungstemperatur:** Nicht bestimmt.

· **Selbstentzündungstemperatur:** Das Produkt ist nicht selbstentzündlich.

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

· Explosionsgrenzen:

| | |
|----------------|------------|
| Untere: | 3,5 Vol % |
| Obere: | 73,0 Vol % |

· **Dampfdruck bei 20 °C:** 59 hPa

· **Dichte bei 20 °C:** 0,9501 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: | Nicht bestimmt. |
| Kinematisch: | Nicht bestimmt. |

· Lösemittelgehalt:

| | |
|-------------------------------|--------|
| Organische Lösemittel: | 31,0 % |
| Wasser: | 69,0 % |

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| | |
|-------------------------------|--|
| VOC (EU) | 31,00 % |
| · 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.
- **10.6 Gefährliche Zersetzungsprodukte:** Keine gefährlichen Zersetzungsprodukte bekannt.

ABSCHNITT 11: Toxikologische Angaben

- **11.1 Angaben zu toxikologischen Wirkungen**
 - **Akute Toxizität**
Giftig bei Verschlucken.
Gesundheitsschädlich bei Einatmen.
- | | | |
|--|------|------------------|
| · Einstufungsrelevante LD/LC50-Werte: | | |
| 50-00-0 Formaldehyd | | |
| Oral | LD50 | >200 mg/kg (rat) |
- **Primäre Reizwirkung:**
 - **Ätz-/Reizwirkung auf die Haut**
Verursacht Hautreizungen.
 - **Schwere Augenschädigung/-reizung**
Verursacht schwere Augenreizung.
 - **Sensibilisierung der Atemwege/Haut**
Kann bei Einatmen Allergie, asthmaartige Symptome oder Atembeschwerden verursachen.
Kann allergische Hautreaktionen verursachen.
 - **CMR-Wirkungen (krebserzeugende, erbgutverändernde und fortpflanzungsgefährdende Wirkung)**
 - **Keimzell-Mutagenität**
Kann vermutlich genetische Defekte verursachen.
 - **Karzinogenität**
Kann Krebs erzeugen.
 - **Reproduktionstoxizität**
Kann vermutlich die Fruchtbarkeit beeinträchtigen oder das Kind im Mutterleib schädigen.
 - **Spezifische Zielorgan-Toxizität bei einmaliger Exposition**
Kann die Organe schädigen.
 - **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.

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- **12.3 Bioakkumulationspotenzial** Keine weiteren relevanten Informationen verfügbar.
- **12.4 Mobilität im Boden** Keine weiteren relevanten Informationen verfügbar.
- **Ökotoxische Wirkungen:**
- **Bemerkung:** Sehr giftig für Fische.
- **Weitere ökologische Hinweise:**
- **Allgemeine Hinweise:**
Wassergefährdungsklasse 2 (Selbsteinstufung): wassergefährdend
Nicht in das Grundwasser, in Gewässer oder in die Kanalisation gelangen lassen.
Trinkwassergefährdung bereits beim Auslaufen geringer Mengen in den Untergrund.
In Gewässern auch giftig für Fische und Plankton.
sehr giftig für Wasserorganismen
- **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.
- **Empfohlenes Reinigungsmittel:** Wasser, gegebenenfalls mit Zusatz von Reinigungsmitteln.

ABSCHNITT 14: Angaben zum Transport

- | | |
|--|---|
| <ul style="list-style-type: none"> · 14.1 UN-Nummer · ADR, IMDG, IATA | <p style="text-align: center;">UN1987</p> |
| <ul style="list-style-type: none"> · 14.2 Ordnungsgemäße UN-Versandbezeichnung · ADR · IMDG · IATA | <p>1987 ALKOHOLE, N.A.G. (ETHANOL (ETHYLALKOHOL), EISESSIG), UMWELTGEFÄHRDEND</p> <p>ALCOHOLS, N.O.S. (ETHANOL (ETHYL ALCOHOL), ACETIC ACID, GLACIAL), MARINE POLLUTANT</p> <p>ALCOHOLS, N.O.S. (ETHANOL, ACETIC ACID, GLACIAL)</p> |
| <ul style="list-style-type: none"> · 14.3 Transportgefahrenklassen · ADR, IMDG | <div style="display: flex; align-items: center; gap: 10px;">   </div> <p>· Klasse 3 Entzündbare flüssige Stoffe</p> <p>· Gefahrzettel 3</p> |

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· IATA



· Class 3 Entzündbare flüssige Stoffe
 · Label 3

· 14.4 Verpackungsgruppe III
 · ADR, IMDG, IATA

· 14.5 Umweltgefahren:
 · Marine pollutant: Symbol (Fisch und Baum)
 · Besondere Kennzeichnung (ADR): Symbol (Fisch und Baum)

· 14.6 Besondere Vorsichtsmaßnahmen für den Verwender Achtung: Entzündbare flüssige Stoffe
 · Kemler-Zahl: 33
 · EMS-Nummer: F-E,S-D
 · Segregation groups Acids
 · Stowage Category B

· 14.7 Massengutbeförderung gemäß Anhang II des MARPOL-Übereinkommens und gemäß IBC-Code Nicht anwendbar.

· Transport/weitere Angaben:

· ADR
 · Begrenzte Menge (LQ) 5L
 · Freigestellte Mengen (EQ) Code: E1
 Höchste Nettomenge je Innenverpackung: 30 ml
 Höchste Nettomenge je Außenverpackung: 1000 ml
 · Beförderungskategorie 3
 · 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 1987 ALKOHOLE, N.A.G. (ETHANOL (ETHYLALKOHOL), EISESSIG), 3, III, UMWELTGEFÄHRDEND

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 Formaldehyd, Methanol
- Seveso-Kategorie
 E1 Gewässergefährdend
 P5c ENTZÜNDBARE FLÜSSIGKEITEN
- Mengenschwelle (in Tonnen) für die Anwendung in Betrieben der unteren Klasse 100 t

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- **Mengenschwelle (in Tonnen) für die Anwendung in Betrieben der oberen Klasse 200 t**
- **VERORDNUNG (EG) Nr. 1907/2006 ANHANG XVII Beschränkungsbedingungen: 3**

- **Nationale Vorschriften:**

- **Hinweise zur Beschäftigungsbeschränkung:**

Arbeitnehmer dürfen den in dieser Zubereitung enthaltenen krebserzeugenden Gefahrstoffen nicht ausgesetzt sein. Im Einzelfall kann die Behörde Ausnahmen zulassen.

- **Technische Anleitung Luft:**

| Klasse | Anteil in % |
|--------|-------------|
| Wasser | 69,0 |
| I | 11,8 |
| II | 5,0 |
| NK | 14,3 |

- **Wassergefährdungsklasse: WGK 2 (Selbsteinstufung): 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.

- **Relevante Sätze**

- H225 Flüssigkeit und Dampf leicht entzündbar.
- H226 Flüssigkeit und Dampf entzündbar.
- H301 Giftig bei Verschlucken.
- H311 Giftig bei Hautkontakt.
- H314 Verursacht schwere Verätzungen der Haut und schwere Augenschäden.
- H317 Kann allergische Hautreaktionen verursachen.
- H331 Giftig bei Einatmen.
- H341 Kann vermutlich genetische Defekte verursachen.
- H350 Kann Krebs erzeugen.

- **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
- ELINCS: European List of Notified Chemical Substances
- CAS: Chemical Abstracts Service (division of the American Chemical Society)
- VOC: Volatile Organic Compounds (USA, EU)
- 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
- Flam. Liq. 3: Entzündbare Flüssigkeiten – Kategorie 3
- Met. Corr. 1: Korrosiv gegenüber Metallen – Kategorie 1
- Acute Tox. 3: Akute Toxizität – Kategorie 3
- Acute Tox. 4: Akute Toxizität – Kategorie 4
- Skin Corr. 1A: Hautreizende/-ätzende Wirkung – Kategorie 1A
- Skin Corr. 1B: Hautreizende/-ätzende Wirkung – Kategorie 1B
- Skin Irrit. 2: Hautreizende/-ätzende Wirkung – Kategorie 2
- Eye Irrit. 2: Schwere Augenschädigung/Augenreizung – Kategorie 2
- Resp. Sens. 1B: Sensibilisierung der Atemwege – Kategorie 1B
- Skin Sens. 1: Sensibilisierung der Haut – Kategorie 1
- Muta. 2: Keimzellmutagenität – Kategorie 2
- Carc. 1B: Karzinogenität – Kategorie 1B

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*Repr. 2: Reproduktionstoxizität – Kategorie 2**STOT SE 2: Spezifische Zielorgan-Toxizität (einmalige Exposition) – Kategorie 2**Aquatic Chronic 1: Gewässergefährdend - langfristig gewässergefährdend – Kategorie 1*

-DE-

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

Stampato il: 14.04.2017

Revisione: 14.04.2017

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

- **1.1 Identificatore del prodotto**
- **Denominazione commerciale:** DAVIDSON'S FIXATIVE, MODIFIED
- **Articolo numero:** 64133-50, 64133-50-SP
- **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.



GHS06 teschio e tibie incrociate

Acute Tox. 3 H301 Tossico se ingerito.



GHS08 pericolo per la salute

Resp. Sens. 1B H334 Può provocare sintomi allergici o asmatici o difficoltà respiratorie se inalato.

Muta. 2 H341 Sospettato di provocare alterazioni genetiche.

Carc. 1B H350 Può provocare il cancro.

Repr. 2 H361 Sospettato di nuocere alla fertilità o al feto.

STOT SE 2 H371 Può provocare danni agli organi.

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GHS05 corrosione

Met. Corr.1 H290 Può essere corrosivo per i metalli.



GHS09 ambiente

Aquatic Chronic 1 H410 Molto tossico per gli organismi acquatici con effetti di lunga durata.



GHS07

Acute Tox. 4 H332 Nocivo se inalato.
 Skin Irrit. 2 H315 Provoca irritazione cutanea.
 Eye Irrit. 2 H319 Provoca grave irritazione oculare.
 Skin Sens. 1 H317 Può provocare una reazione allergica cutanea.

· **2.2 Elementi dell'etichetta**

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

Il prodotto è classificato ed etichettato conformemente al regolamento CLP.

· **Pittogrammi di pericolo**



GHS02



GHS05



GHS06



GHS08



GHS09

· **Avvertenza Pericolo**

· **Componenti pericolosi che ne determinano l'etichettatura:**
 formaldeide

· **Indicazioni di pericolo**

H225 Liquido e vapori facilmente infiammabili.
 H290 Può essere corrosivo per i metalli.
 H301 Tossico se ingerito.
 H332 Nocivo se inalato.
 H315 Provoca irritazione cutanea.
 H319 Provoca grave irritazione oculare.
 H334 Può provocare sintomi allergici o asmatici o difficoltà respiratorie se inalato.
 H317 Può provocare una reazione allergica cutanea.
 H341 Sospettato di provocare alterazioni genetiche.
 H350 Può provocare il cancro.
 H361 Sospettato di nuocere alla fertilità o al feto.
 H371 Può provocare danni agli organi.
 H410 Molto tossico per gli organismi acquatici con effetti di lunga durata.

· **Consigli di prudenza**

P301+P310 IN CASO DI INGESTIONE: contattare immediatamente un CENTRO ANTIVELENI/un medico.
 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.

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P321 Trattamento specifico (vedere su questa etichetta).
 P405 Conservare sotto chiave.
 P501 Smaltire il prodotto/recipiente in conformità con le disposizioni locali / regionali / nazionali / internazionali.

- **2.3 Altri pericoli**
- **Risultati della valutazione PBT e vPvB**
- **PBT:** Non applicabile.
- **vPvB:** Non applicabile.

SEZIONE 3: Composizione/informazioni sugli ingredienti

- **3.2 Caratteristiche chimiche: Miscela**
- **Descrizione:** Miscela delle seguenti sostanze con additivi non pericolosi.

- **Sostanze pericolose:**

| | | |
|-----------------------------------|---|---------|
| CAS: 64-17-5 EINECS: 200-578-6 | etanolo Flam. Liq. 2, H225 | 10-25% |
| CAS: 50-00-0 EINECS: 200-001-8 | formaldeide Acute Tox. 3, H301; Acute Tox. 3, H311; Acute Tox. 3, H331; Muta. 2, H341; Carc. 1B, H350; Skin Corr. 1B, H314; Skin Sens. 1, H317 | 10-25% |
| CAS: 64-19-7 EINECS: 200-580-7 | acido acetico Flam. Liq. 3, H226; Skin Corr. 1A, H314 | 2,5-10% |

- **Ulteriori indicazioni:** Il testo dell'avvertenza dei pericoli citati può essere appreso dal capitolo 16

SEZIONE 4: Misure di primo soccorso

- **4.1 Descrizione delle misure di primo soccorso**
- **Indicazioni generali:**
Allontanare immediatamente gli abiti contaminati dal prodotto.
I sintomi di avvelenamento possono comparire dopo molte ore, per tale motivo è necessaria la sorveglianza di un medico nelle 48 ore successive all'incidente.
In caso di respirazione irregolare o di blocco respiratorio praticare la respirazione artificiale.
- **Inalazione:**
Portare il soggetto in zona molto ben areata e per sicurezza consultare un medico.
Se il soggetto è svenuto provvedere a tenerlo durante il trasporto in posizione stabile su un fianco.
- **Contatto con la pelle:** Lavare immediatamente con acqua e sapone sciacquando accuratamente.
- **Contatto con gli occhi:**
Lavare con acqua corrente per diversi minuti tenendo le palpebre ben aperte Se persiste il dolore consultare il medico.
- **Ingestione:** Non provocare il vomito, chiamare subito il medico.
- **4.2 Principali sintomi ed effetti, sia acuti che ritardati** Non sono disponibili altre informazioni.
- **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.

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- **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:**
In caso di infiltrazione nei corpi d'acqua o nelle fognature avvertire le autorità competenti.
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).
Smaltimento del materiale contaminato conformemente al punto 13.
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**
Accurata ventilazione/aspirazione nei luoghi di lavoro.
Aprire e manipolare i recipienti con cautela.
Evitare la formazione di aerosol.
- **Indicazioni in caso di incendio ed esplosione:**
Tenere lontano da fonti di calore, non fumare.
Proteggere dal calore.
Adottare provvedimenti contro cariche elettrostatiche.
Tener pronto il respiratore.
- **7.2 Condizioni per lo stoccaggio sicuro, comprese eventuali incompatibilità**
- **Stoccaggio:**
- **Requisiti dei magazzini e dei recipienti:** Non sono richiesti requisiti particolari.
- **Indicazioni sullo stoccaggio misto:** Non necessario.
- **Ulteriori indicazioni relative alle condizioni di immagazzinamento:**
Mantenere i recipienti ermeticamente chiusi.
Proteggere dal calore e dai raggi diretti del sole.
- **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.
- **8.1 Parametri di controllo**

· **Componenti i cui valori limite devono essere tenuti sotto controllo negli ambienti di lavoro:**

64-17-5 etanolo

| | |
|-----|---|
| TWA | Valore a breve termine: 1884 mg/m ³ , 1000 ppm |
| A3 | |

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50-00-0 formaldeide

TWA Limite Ceiling: 0,37 mg/m³, 0,3 ppm
sen, A2

64-19-7 acido acetico

TWA Valore a breve termine: 37 mg/m³, 15 ppm
Valore a lungo termine: 25 mg/m³, 10 ppm

· **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.

Custodire separatamente l'equipaggiamento protettivo.

Evitare il contatto con gli occhi e la pelle.

· **Maschera protettiva:**

Nelle esposizioni brevi e minime utilizzare la maschera; nelle esposizioni più intense e durature indossare l'autorespiratore.

· **Guanti protettivi:**

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. Poiché il prodotto rappresenta una formulazione di più sostanze, la stabilità dei materiali dei guanti non è calcolabile in anticipo e deve essere testata prima dell'impiego

· **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



Occhiali protettivi a tenuta

SEZIONE 9: Proprietà fisiche e chimiche

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

Forma: Soluzione

Colore: Chiaro

· **Odore:** Simile all'alcool

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| | |
|---|---|
| · Soglia olfattiva: | Non definito. |
| · valori di pH a 20 °C: | 2,5 |
| · Cambiamento di stato Punto di fusione/punto di congelamento: | Non definito. |
| Punto di ebollizione iniziale e intervallo di ebollizione: | -21 °C |
| · Punto di infiammabilità: | 17 °C |
| · Infiammabilità (solidi, gas): | Non applicabile. |
| · Temperatura di accensione: | 300 °C |
| · Temperatura di decomposizione: | Non definito. |
| · Temperatura di autoaccensione: | Prodotto non autoinfiammabile. |
| · Proprietà esplosive: | Prodotto non è esplosivo, è tuttavia possibile la formazione di miscele di vapori/aria esplosive. |
| · Limiti di infiammabilità: Inferiore: | 3,5 Vol % |
| Superiore: | 73,0 Vol % |
| · Tensione di vapore a 20 °C: | 59 hPa |
| · Densità a 20 °C: | 0,9501 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: | Non definito. |
| Cinematica: | Non definito. |
| · Tenore del solvente: Solventi organici: | 31,0 % |
| Acqua: | 69,0 % |
| VOC (CE) | 31,00 % |
| · 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.

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SEZIONE 11: Informazioni tossicologiche

· **11.1 Informazioni sugli effetti tossicologici**

· **Tossicità acuta**

Tossico se ingerito.

Nocivo se inalato.

· **Valori LD/LC50 rilevanti per la classificazione:**

50-00-0 formaldeide

| | | |
|-------|------|------------------|
| Orale | LD50 | >200 mg/kg (rat) |
|-------|------|------------------|

· **Irritabilità primaria:**

· **Corrosione/irritazione cutanea**

Provoca irritazione cutanea.

· **Lesioni oculari gravi/irritazioni oculari gravi**

Provoca grave irritazione oculare.

· **Sensibilizzazione respiratoria o cutanea**

Può provocare sintomi allergici o asmatici o difficoltà respiratorie se inalato.

Può provocare una reazione allergica cutanea.

· **Effetti CMR (cancerogenicità, mutagenicità e tossicità per la riproduzione)**

· **Mutagenicità delle cellule germinali**

Sospettato di provocare alterazioni genetiche.

· **Cancerogenicità**

Può provocare il cancro.

· **Tossicità per la riproduzione**

Sospettato di nuocere alla fertilità o al feto.

· **Tossicità specifica per organi bersaglio (STOT) - esposizione singola**

Può provocare danni agli organi.

· **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.

· **Effetti tossici per l'ambiente:**

· **Osservazioni:** Molto tossico per i pesci.

· **Ulteriori indicazioni in materia ambientale:**

· **Ulteriori indicazioni:**

Pericolosità per le acque classe 2 (D) (Autoclassificazione): pericoloso

Non immettere nelle acque freatiche, nei corsi d'acqua o nelle fognature.

Pericolo per le acque potabili anche in caso di perdite nel sottosuolo di piccole quantità di prodotto.

Tossico per pesci e plancton.

Molto tossico per gli organismi acquatici

· **12.5 Risultati della valutazione PBT e vPvB**

· **PBT:** Non applicabile.

· **vPvB:** Non applicabile.

· **12.6 Altri effetti avversi** Non sono disponibili altre informazioni.

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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 | UN1987 |
| · 14.2 Nome di spedizione dell'ONU · ADR · IMDG · IATA | 1987 ALCOLI, N.A.S. (ETANOLO (ALCOL ETILICO), ACIDO ACETICO GLACIALE), PERICOLOSO PER L'AMBIENTE ALCOHOLS, N.O.S. (ETHANOL (ETHYL ALCOHOL), ACETIC ACID, GLACIAL), MARINE POLLUTANT ALCOHOLS, N.O.S. (ETHANOL, ACETIC ACID, GLACIAL) |
| · 14.3 Classi di pericolo connesso al trasporto · ADR, IMDG | |
|  | |
| · Classe · Etichetta | 3 Liquidi infiammabili 3 |
| · IATA | |
|  | |
| · Class · Label | 3 Liquidi infiammabili 3 |
| · 14.4 Gruppo di imballaggio · ADR, IMDG, IATA | III |
| · 14.5 Pericoli per l'ambiente: · Marine pollutant: · Marcatura speciali (ADR): | Simbolo (pesce e albero) Simbolo (pesce e albero) |
| · 14.6 Precauzioni speciali per gli utilizzatori · Numero Kemler: · Numero EMS: · Segregation groups · Stowage Category | Attenzione: Liquidi infiammabili 33 F-E,S-D Acids B |
| · 14.7 Trasporto di rinfuse secondo l'allegato II di MARPOL ed il codice IBC | Non applicabile. |

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· Trasporto/ulteriori indicazioni:

· ADR

· **Quantità limitate (LQ)**

5L

· **Quantità esenti (EQ)**

Codice: E1

Quantità massima netta per imballaggio interno: 30 ml

Quantità massima netta per imballaggio esterno: 1000 ml

· **Categoria di trasporto**

3

· **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 1987 ALCOLI, N.A.S. (ETANOLO (ALCOL ETILICO), ACIDO ACETICO GLACIALE), 3, III, PERICOLOSO PER L'AMBIENTE

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 formaldeide, metanolo**

· **Categoria Seveso**

E1 Pericoloso per l'ambiente acquatico

P5c LIQUIDI INFIAMMABILI

· **Quantità limite (tonnellate) ai fini dell'applicazione dei requisiti di soglia inferiore 100 t**

· **Quantità limite (tonnellate) ai fini dell'applicazione dei requisiti di soglia superiore 200 t**

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

· **Disposizioni nazionali:**

· **Indicazioni relative alla limitazione delle attività lavorative:**

Il personale non deve essere esposto alle sostanze cancerogene contenute in questo preparato L'autorità può ammettere nei singoli casi delle eccezioni.

· **Istruzione tecnica aria:**

| Classe | quota in % |
|--------|------------|
| NC | 31,0 |

· **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.

· **Frasei rilevanti**

H225 Liquido e vapori facilmente infiammabili.

H226 Liquido e vapori infiammabili.

H301 Tossico se ingerito.

H311 Tossico per contatto con la pelle.

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*H314 Provoca gravi ustioni cutanee e gravi lesioni oculari.**H317 Può provocare una reazione allergica cutanea.**H331 Tossico se inalato.**H341 Sospettato di provocare alterazioni genetiche.**H350 Può provocare il cancro.***· 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**ELINCS: European List of Notified Chemical Substances**CAS: Chemical Abstracts Service (division of the American Chemical Society)**VOC: Volatile Organic Compounds (USA, EU)**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**Flam. Liq. 3: Liquidi infiammabili – Categoria 3**Met. Corr. 1: Sostanze o miscele corrosive per i metalli – Categoria 1**Acute Tox. 3: Tossicità acuta – Categoria 3**Acute Tox. 4: Tossicità acuta – Categoria 4**Skin Corr. 1A: Corrosione/irritazione della pelle – Categoria 1A**Skin Corr. 1B: Corrosione/irritazione della pelle – Categoria 1B**Skin Irrit. 2: Corrosione/irritazione della pelle – Categoria 2**Eye Irrit. 2: Gravi lesioni oculari/irritazione oculare – Categoria 2**Resp. Sens. 1B: Sensibilizzazione delle vie respiratorie – Categoria 1B**Skin Sens. 1: Sensibilizzazione della pelle – Categoria 1**Muta. 2: Mutagenicità sulle cellule germinali – Categoria 2**Carc. 1B: Cancerogenicità – Categoria 1B**Repr. 2: Tossicità per la riproduzione – Categoria 2**STOT SE 2: Tossicità specifica per organi bersaglio (esposizione singola) – Categoria 2**Aquatic Chronic 1: Pericoloso per l'ambiente acquatico - pericolo a lungo termine per l'ambiente acquatico – Categoria 1*

製品安全データシート

JIS Z7253 による分類

印刷日: 2017.04.14

改訂日: 2017.04.14

1 化学物質等及び会社情報

- ・製品識別子
- ・商品名: DAVIDSON'S FIXATIVE, MODIFIED
- ・製品番号: 64133-50, 64133-50-SP
- ・該当純物質または混合物の関連特定用途及び使用禁止用途 追加的な関連情報は得られていません。
- ・成分の利用/調合 実験用化学物質
- ・安全データシートの供給元の詳細情報
- ・製造者/納入者:
Electron Microscopy Sciences
1560 Industry Road
USA-Hatfield, PA 19440
Tel: 215-412-8400 Fax: 215-412-8450
email: sgkck@aol.com
www.emsdiasum.com
- ・その他の情報問い合わせ先: Product safety department
- ・緊急通報用電話番号:
ChemTrec 1-800-424-9300 Contract CCN7661
1-703-527-3887

2 危険有害性の要約

・純物質または混合物の分類



火炎

引火性液体 区分2

H225 引火性の高い液体及び蒸気



頭蓋骨と大たい骨

急性毒性(経口) 区分3

H301 飲み込むと有毒



健康に危険

感作性(呼吸器) 区分1B

H334 吸入するとアレルギー, ぜん(喘)息又は呼吸困難を起すおそれ

生殖細胞変異原性 区分2

H341 遺伝性疾患のおそれの疑い

発がん性 区分1B

H350 発がんのおそれ

生殖毒性 区分2

H361 生殖能又は胎児への悪影響のおそれの疑い

特定標的臓器有害性(単回暴露) 区分2 H371 臓器の障害のおそれ



腐食

金属腐食性物質 区分1

H290 金属腐食のおそれ



環境

水生環境有害性(慢性毒性) 区分1

H410 長期継続的影響によって水生生物に非常に強い毒性

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| | |
|--------------------|------------------------|
| 急性毒性(吸入) 区分4 | H332 吸入すると有害 |
| 皮膚腐食性/刺激性 区分2 | H315 皮膚刺激 |
| 重篤な眼の損傷性/眼刺激性 区分2A | H319 強い眼刺激 |
| 感作性(皮膚) 区分1 | H317 アレルギー性皮膚反応を起こすおそれ |

ラベル要素

GHS ラベル要素

本製品はGHS(化学品の分類および表示に関する世界調和システム)により分類及び表示されています。

危険図表



GHS02 GHS05 GHS06 GHS08 GHS09

表示語 危険

危険と定められた成分をラベル表示:

ホルムアルデヒド

危険文句

引火性の高い液体及び蒸気
 金属腐食のおそれ
 飲み込むと有毒
 吸入すると有害
 皮膚刺激
 強い眼刺激
 吸入するとアレルギー、ぜん(喘)息又は呼吸困難を起こすおそれ
 アレルギー性皮膚反応を起こすおそれ
 遺伝性疾患のおそれの疑い
 発がんのおそれ
 生殖能又は胎児への悪影響のおそれの疑い
 臓器の障害のおそれ
 長期継続的影響によって水生生物に非常に強い毒性

注意文句

飲み込んだ場合: ただちに毒物センター/医師に連絡すること。
 皮膚(または髪)に付着した場合: 直ちに汚染された衣類をすべて脱ぐこと。皮膚を流水/シャワーで洗うこと。
 眼に入った場合: 水で数分間注意深く洗うこと。次にコンタクトレンズを着用していて容易に外せる場合は外すこと。その後も洗浄を続けること。
 特別な処置が必要である(このラベルのを見よ)。
 施錠して保管すること。
 現地/地域/国/国際規定に従い内容物・容器の露出

その他の危険性

- ・PBT(残留性、生物濃縮性、毒性物質)及びvPvB(高残留性、高生物濃縮性物質)アセスメント
- ・PBT(残留性、生物濃縮性、毒性物質): 情報なし
- ・vPvB(高残留性、高生物濃縮性物質): 情報なし

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3 組成・成分情報

- ・化学的特性: 混合物
- ・説明: 危険のない混ぜ合わせかたをした以下成分からなる混合物

・危険な含有成分:

| | | |
|---------|--|---------|
| 64-17-5 | Ethyl Alcohol, denatured ⚠ 引火性液体 区分2, H225 | 10-25% |
| 50-00-0 | ホルムアルデヒド ⚠ 急性毒性(経口) 区分3, H301; 急性毒性(経皮) 区分3, H311; 急性毒性(吸入) 区分3, H331; ⚠ 生殖細胞変異原性 区分2, H341; 発がん性 区分1B, H350; ⚠ 皮膚腐食性/刺激性 区分1B, H314; ⚠ 感作性(皮膚) 区分1, H317 | 10-25% |
| 64-19-7 | Acetic Acid Glacial ⚠ 引火性液体 区分3, H226; ⚠ 皮膚腐食性/刺激性 区分1A, H314 | 2.5-10% |

4 応急措置

- ・応急手当処置に関する説明
- ・一般情報:
プロダクトの付着した衣類は速やかに脱ぐこと
中毒症状は時間がかなり経過した後に現れる場合もあるため、事故後最低 4 8 時間は医師の監視のもとで過ごすこと
呼吸が不規則な場合あるいは呼吸停止の際には人工呼吸器を使用のこと
- ・吸い込んだ場合:
外気を十分に送り込み、安全のため医師を呼ぶ
意識不明の場合には安定させた状態で横向きに寝かせ、移送する
- ・皮膚が触れた場合: 即刻石鹼と水で洗い、よくすすぐ
- ・眼に入った場合:
瞼を開けたまま、流水で何分間か眼をすすぎ、状態がよくなる場合には医者に相談する
- ・飲み込んだ場合: 吐かずに、即医者を呼ぶ
- ・医師への指示事項:
最も重要な急性及び慢性の症状及び影響 追加的な関連情報は得られていません。
何らかの即時医療処置及び特別治療の必要性を示す兆候 追加的な関連情報は得られていません。

5 火災時の措置

- ・消火剤
- ・適切な消火剤:
CO₂, 消火粉末剤あるいは水放射。火が大きい場合には水放射もしくは耐アルコール性泡を使用
- ・本化学物質または混合物から発生する特別な危険性 追加的な関連情報は得られていません。
- ・消防士向けアドバイス
- ・特別な保護装備: 特別な措置は必要としない

6 漏出時の措置

- ・個人的予防措置、保護具及び応急処置法 防護服を着用。防護服を着用していない人は近づけない
- ・環境関連予防措置:
河川、下水処理施設に流れ込んだ場合には関係当局に連絡する
大量の水で薄める
下水処理施設、地上水あるいは地下水に達しないようにする

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- ・ **封じ込め及び浄化のための方法及び材料:**
液体吸収材 (砂、珪藻土、酸結合剤、ユニバーサル結合剤、おがくず) で吸収する
13 項に下がい汚染材は廃棄物として処理する
十分な換気を心がける
- ・ **他のセクションへの言及**
安全な取り扱い方に関しては 7 項を参照
人の保護装備の情報に関しては 8 項を参照
廃棄処分に関しては 13 項参照

7 取扱い・保管上の注意

- ・ **取り扱い方:**
- ・ **安全操作のための予防措置**
作業場では十分な換気、埃を吸い取るよう心がける
容器は十分に注意しながら開封し、取り扱う
エアゾールの発生を防ぐ
- ・ **火災および爆発防止に関する注意事項:**
発火元は遠ざける。禁煙
高温から保護する
静電荷を防ぐ措置をほどこす
呼吸保護装置を用意しておく
- ・ **混融危険性を含めた安全貯蔵条件**
- ・ **保管:**
- ・ **保管スペースおよび容器に関する要求事項:** 特別な要求事項なし
- ・ **同じ場所に保管する際の注意事項:** 必要ない
- ・ **保管条件に関するその他の注意事項:**
容器は密閉した状態に保つ
熱および直射日光は避ける
- ・ **特定の最終用途** 追加的な関連情報は得られていません。

8 暴露防止及び保護措置

- ・ **技術設備の形体に関する追加注意事項:** その他の申し立てなし、7 項参照
- ・ **管理パラメーター**

- ・ **作業場において限界値の監視を要する成分:**

50-00-0 ホルムアルデヒド

| | |
|-----|--|
| OEL | 長期値: 0.12 mg/m ³ , 0.1 ppm |
| | 最大許容濃度: 0.24 mg/m ³ , 0.2 ppm |

64-19-7 Acetic Acid Glacial

| | |
|-----|------------------------------------|
| OEL | 長期値: 25 mg/m ³ , 10 ppm |
|-----|------------------------------------|

- ・ **追加注意事項:** 生成時に有効なリストがもとなっている
- ・ **暴露管理**
- ・ **人的保護装備:**
- ・ **一般防止措置および衛生措置:**
食物、飲み物、飼料からは遠ざける
汚れのしみ込んだ衣類は即刻脱ぐ
休憩の前、作業終了後には手を洗う
防護服は別に保管する
眼に入らないよう、また皮膚に接触しないよう注意する

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呼吸保護器具:

短時間もしくは負担が小さい場合には呼吸フィルター付装置を、集中的にあるいは長時間触れる場合には、酸素ポンベ付き呼吸保護装置を使用すること

手の保護:



保護手袋

手袋の材質は物質/材料/調合剤に対して耐性であり、成分を通すことがあってはならないテストをおこなっていないため、物質/調合剤/化合物を取り扱う際の手袋の材質として勧められるものはない

浸透時間、透過性および劣化の点を留意しながら手袋の材質を選択する

手袋材

適当な手袋は材質だけではなく、その他の品質によっても変わり、各メーカーによって異なる。調合する際の物質は複数の成分から生成されるため、手袋材の耐久性は予想できない。このため使用前には必ずチェックしなければならない

手袋材の浸透時間 正確な浸透時間については保護手袋メーカーに問い合わせ、それを遵守すること

眼の保護:

保護めがね



密閉式保護めがね

9 物理的及び化学的性質

基本的な物理及び化学特性に関する情報

一般指示事項

外観

| | |
|------|-----------|
| 形: | 溶剤 |
| 色: | 透明 |
| におい: | アルコールのような |
| 嗅覚閾値 | 決まっていない。 |

pH-値 約 20 °C: 2.5

状態の変化

| | |
|----------|---------|
| 融点/融解範囲: | 決まっていない |
| 沸点/沸点範囲: | -21 °C |

引火点: 17 °C

発火性 (個体、気体): 情報なし

発火温度: 300 °C

分解温度: 決まっていない。

自然発火性: プロダクトは自然発火しない

爆発の危険: プロダクトは爆発する危険はない。ただし爆発する危険のある蒸気と空気の混合物を形成する可能性はある

爆発限界:

下限: 3.5 Vol %

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| | |
|---------------------|--------------------------|
| 上限: | 73.0 Vol % |
| ・蒸気圧 約 20 °C: | 59 hPa |
| ・密度 約 20 °C: | 0.9501 g/cm ³ |
| ・相対的密度 | 決まっていない. |
| ・蒸気密度 | 決まっていない. |
| ・気化速度 | 決まっていない. |
| ・以下成分における消和性/との混和性 | |
| 水: | 完全に混合できる |
| ・分配係数 (n-オクタノール/水): | 決まっていない. |
| ・粘性: | |
| 力学的: | 決まっていない. |
| 運動性: | 決まっていない. |
| ・溶剤含有量: | |
| 有機溶剤: | 31.0 % |
| 水: | 69.0 % |
| ・他の情報 | 追加的な関連情報は得られていません. |

10 安定性及び反応性

- ・反応性 追加的な関連情報は得られていません.
- ・化学的安定性
- ・熱分解/回避すべき条件: 規定どおりの使用では分解しない
- ・危険反応の可能性 危険な反応は起きていない
- ・避けるべき条件 追加的な関連情報は得られていません.
- ・不適合物質: 追加的な関連情報は得られていません.
- ・危険な分解生成物: 危険な分解プロダクトはない

11 有害性情報

- ・毒性学的影響に関する情報
- ・急性毒性:

・分類上の LD/LC50 値:

50-00-0 ホルムアルデヒド

□ LD50 >200 mg/kg (rat)

- ・初期刺激作用:

・皮膚において: 皮膚と粘膜を刺激

・眼において: 刺激作用

- ・感作作用:

吸い込むことで感作作用がある場合あり

皮膚接触によって感作作用の可能性あり

- ・毒性に関する補足注意事項:

調合に関する EU の最新の一般分類ガイドラインの計算によれば、プロダクトでは以下の危険が見込まれる

毒性が強い

毒性がある

刺激的

発ガン性

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- ・ 次の種類の潜在的な効果に対する情報
- ・ CMR-作用 (癌誘発、因子変異、そして進化危険作用)
生殖細胞変異原性 区分2, 発がん性 区分1B, 生殖毒性 区分2

12 環境影響情報

- ・ 毒性
- ・ 水生生物に対する毒性: 追加的な関連情報は得られていません。
- ・ 持続性及び分解性 追加的な関連情報は得られていません。
- ・ 環境システムにおける作用:
- ・ 生体内蓄積能 追加的な関連情報は得られていません。
- ・ 土壌内移動性 追加的な関連情報は得られていません。
- ・ 生態毒性作用:
- ・ 注: 魚類に対して毒性が非常に高い
- ・ その他のエコロジーに関する注意事項:
- ・ 一般注意事項:
水への危険度分類2 (ドイツの規定) (自己査定): 水に対する危険性あり
地下水、河川あるいは下水設備に流してはならない
地下に少量流れ込んでも飲料水を汚染する
水域においては魚やプランクトンにも毒性がある
水生生物にとり非常に毒性が高い
- ・ PBT (残留性、生物濃縮性、毒性物質) 及び vPvB (高残留性、高生物濃縮性物質) アセスメント
- ・ PBT (残留性、生物濃縮性、毒性物質): 情報なし
- ・ vPvB (高残留性、高生物濃縮性物質): 情報なし
- ・ 他の副作用 追加的な関連情報は得られていません。

13 廃棄上の注意

- ・ 廃棄物処理方法
- ・ 勧告: 家庭ごみとはいっしょに処分できない。下水処理施設に流してはならない
- ・ 洗浄されていないパッケージ:
- ・ 勧告: 関係当局の規則に従って処分する
- ・ 推薦する洗剤: 水、場合に応じて洗剤も使って

14 輸送上の注意

- | | |
|-------------------|--|
| ・ UN 番号 | UN1987 |
| ・ ADR, IMDG, IATA | |
| ・ 国連出荷正式名 | |
| ・ ADR | 1987 ALCOHOLS, N.O.S. (ETHANOL (ETHYL ALCOHOL), ACETIC ACID, GLACIAL), ENVIRONMENTALLY HAZARDOUS |
| ・ IMDG | ALCOHOLS, N.O.S. (ETHANOL (ETHYL ALCOHOL), ACETIC ACID, GLACIAL), MARINE POLLUTANT |
| ・ IATA | ALCOHOLS, N.O.S. (ETHANOL, ACETIC ACID, GLACIAL) |

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・ 輸送の危険性クラス

・ ADR, IMDG



・ 分類 3 可燃性液体成分
 ・ 危険物ラベル 3

・ IATA



・ Class 3 可燃性液体成分
 ・ Label 3

・ パッケージの分類

・ ADR, IMDG, IATA III

・ 環境危険:

・ 海の汚染物質: シンボル (魚やツリー)
 ・ 特別マーキング (ADR): シンボル (魚やツリー)

・ ユーザー用特別予防措置

警告: 可燃性液体成分

・ ケムラー符号:

33

・ EMS (電子メールサービス番号) 番号:

F-E,S-D

・ Segregation groups

Acids

・ Stowage Category

B

・ マルポール条約 (MARPOL73/78) 付属書II及び
 IBCコードに準じたバルク輸送

情報なし

・ 輸送/その他の説明:

・ ADR

・ Excepted quantities (EQ)

Code: E1

Maximum net quantity per inner packaging: 30 ml

Maximum net quantity per outer packaging: 1000 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 模範規制:

UN 1987 ALCOHOLS, N.O.S. (ETHANOL (ETHYL ALCOHOL), ACETIC ACID, GLACIAL), 3, III, ENVIRONMENTALLY HAZARDOUS

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15 適用法令

- ・ 該当純物質または混合物に対する安全、衛生及び環境規制・法律
- ・ 化審法

・ 既存化学物質

| | | |
|---------|--------------------------|-------|
| 64-17-5 | Ethyl Alcohol, denatured | 2-202 |
| 50-00-0 | ホルムアルデヒド | 2-482 |
| 64-19-7 | Acetic Acid Glacial | 2-688 |
| 67-56-1 | Methyl Alcohol | 2-201 |

・ 特定化学物質

内容成分はリストアップされていない

・ 監視化学物質、旧第二種監視化学物質、旧第三種監視化学物質

| | | |
|---------|----------|------------|
| 50-00-0 | ホルムアルデヒド | 旧第二種監視化学物質 |
|---------|----------|------------|

・ 優先評価化学物質

| | | |
|---------|----------------|--|
| 50-00-0 | ホルムアルデヒド | |
| 67-56-1 | Methyl Alcohol | |

・ 白物質

内容成分はリストアップされていない

・ 既存化学物質安全性点検結果 (分解性・蓄積性)

| | | |
|---------|--------------------------|--|
| 64-17-5 | Ethyl Alcohol, denatured | |
| 50-00-0 | ホルムアルデヒド | |
| 64-19-7 | Acetic Acid Glacial | |
| 67-56-1 | Methyl Alcohol | |

・ 既存化学物質安全性点検結果 (毒性)

内容成分はリストアップされていない

・ PRTR Class 1 designated substances

PRTR 制度 - 第一種指定化学物質

| | | |
|---------|----------|-----|
| 50-00-0 | ホルムアルデヒド | 411 |
|---------|----------|-----|

・ PRTR Class 2 designated substances

PRTR 制度 - 第二種指定化学物質

内容成分はリストアップされていない

・ Poisonous and Deleterious Substances Control Act - Deleterious Substances

毒物及び劇物取締法 - 劇物

| | | |
|---------|----------------|--|
| 50-00-0 | ホルムアルデヒド | |
| 67-56-1 | Methyl Alcohol | |

・ Poisonous and Deleterious Substances Control Act - Poisonous Substances

毒物及び劇物取締法 - 毒物

内容成分はリストアップされていない

・ Poisonous and Deleterious Substances Control Act - Specified Poisonous Substances

毒物及び劇物取締法 - 特定毒物

内容成分はリストアップされていない

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製品安全データシート

JIS Z7253 による分類

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- ・労働安全衛生法

- ・危険物

- ・爆発性の物 (施行令別表第 1 第 1 号)

内容成分はリストアップされていない

- ・発火性の物 (施行令別表第 1 第 2 号)

内容成分はリストアップされていない

- ・酸化性の物 (施行令別表第 1 第 3 号)

内容成分はリストアップされていない

- ・引火性の物 (施行令別表第 1 第 4 号)

64-17-5 Ethyl Alcohol, denatured

64-19-7 Acetic Acid Glacial

67-56-1 Methyl Alcohol

- ・可燃性のガス (施行令別表第 1 第 5 号)

内容成分はリストアップされていない

- ・特定化学物質等

- ・第一類物質

内容成分はリストアップされていない

- ・第二類物質

50-00-0 ホルムアルデヒド

- ・第三類物質

内容成分はリストアップされていない

- ・名称等を通知すべき有害物 (別表第 9)

64-17-5 Ethyl Alcohol, denatured

61

50-00-0 ホルムアルデヒド

548

64-19-7 Acetic Acid Glacial

176

67-56-1 Methyl Alcohol

560

- ・製造許可物質

内容成分はリストアップされていない

- ・鉛中毒予防規則 (施行令別表第 4)

内容成分はリストアップされていない

- ・四アルキル鉛中毒予防規則 (施行令別表第 5)

内容成分はリストアップされていない

- ・有機溶剤中毒予防規則第 (施行令別表第 6 の 2)

- ・第一種有機溶剤等

内容成分はリストアップされていない

- ・第二種有機溶剤等

67-56-1 Methyl Alcohol

- ・第三種有機溶剤等

内容成分はリストアップされていない

- ・GHS ラベル要素

本製品はGHS(化学品の分類および表示に関する世界調和システム)により分類及び表示されています。

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危険図表



GHS02 GHS05 GHS06 GHS08 GHS09

表示語 危険

危険と定められた成分をラベル表示:

ホルムアルデヒド

危険文句

引火性の高い液体及び蒸気

金属腐食のおそれ

飲み込むと有毒

吸入すると有害

皮膚刺激

強い眼刺激

吸入するとアレルギー、ぜん（喘）息又は呼吸困難を起こすおそれ

アレルギー性皮膚反応を起こすおそれ

遺伝性疾患のおそれの疑い

発がんのおそれ

生殖能又は胎児への悪影響のおそれの疑い

臓器の障害のおそれ

長期継続的影響によって水生生物に非常に強い毒性

注意文句

飲み込んだ場合：ただちに毒物センター/医師に連絡すること。

皮膚（または髪）に付着した場合：直ちに汚染された衣類をすべて脱ぐこと。皮膚を流水 / シャワーで洗うこと。

眼に入った場合：水で数分間注意深く洗うこと。次にコンタクトレンズを着用していて容易に外せる場合は外すこと。その後も洗浄を続けること。

特別な処置が必要である（このラベルのを見よ）。

施錠して保管すること。

現地/地域/国/国際規定に従い内容物・容器の露出

国内規定:

使用上の制約に関する注意事項:

被用者はこの調合に含まれる発ガン性危険成分に暴露されてはならない。ただし、場合に応じて関係当局が例外許可をおろすこともある

化学物質の安全性評価: 化学物質安全性評価が遂行されていない

16 その他の情報

この情報は現在の我々の認識に基づいている。ただし、プロダクトの特性を保証するものではなく、また契約において法的根拠にはならない

縮約と二文字語:

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

ELINCS: European List of Notified 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

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vPvB: very Persistent and very Bioaccumulative
PRTR/化管法: 化学物質排出把握管理促進法
引火性液体 区分2: Flammable liquids – Category 2
引火性液体 区分3: Flammable liquids – Category 3
金属腐食性物質 区分1: Corrosive to metals – Category 1
急性毒性(経口) 区分3: Acute toxicity – Category 3
急性毒性(吸入) 区分4: Acute toxicity – Category 4
皮膚腐食性/刺激性 区分1A: Skin corrosion/irritation – Category 1A
皮膚腐食性/刺激性 区分1B: Skin corrosion/irritation – Category 1B
皮膚腐食性/刺激性 区分2: Skin corrosion/irritation – Category 2
重篤な眼の損傷性/眼刺激性 区分2A: Serious eye damage/eye irritation – Category 2A
感作性(呼吸器) 区分1B: Respiratory sensitisation – Category 1B
感作性(皮膚) 区分1: Skin sensitisation – Category 1
生殖細胞変異原性 区分2: Germ cell mutagenicity – Category 2
発がん性 区分1B: Carcinogenicity – Category 1B
生殖毒性 区分2: Reproductive toxicity – Category 2
特定標的臓器有害性(単回暴露) 区分2: Specific target organ toxicity (single exposure) – Category 2
水生環境有害性(慢性毒性) 区分1: Hazardous to the aquatic environment - long-term aquatic hazard – Category 1

물질안전보건자료 GHS에 따라

기압점: 2017.04.14

개정: 2017.04.14

1 화학제품과 회사에 관한 정보

- **제품 식별자**
- **제품명: DAVIDSON'S FIXATIVE, MODIFIED**
- **상품번호:** 64133-50, 64133-50-SP
- **해당 순물질이나 혼합물의 관련 하위용도 및 사용금지용도** 추가적인 정보가 존재하지 않습니다.
- **제품의 권고 용도와 사용상의 제한:** 실험실화학품
- **안전데이터표(Safety Data Sheet)내 공급업체 관련 상세 정보**
- **제조사/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
- **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



두개골과 대퇴골

급성 독성 - 경구 - 구분 3

H301 삼키면 유독함



건강에 위험

호흡기 과민성 - 구분 1

H334 흡입시 알레르기성 반응, 천식 또는 호흡 곤란을 일으킬 수 있음

생식세포 변이원성 - 구분 2

H341 유전적인 결함을 일으킬 것으로 의심됨

발암성 - 구분 1B

H350 암을 일으킬 수 있음

생식독성 - 구분 2

H361 태아 또는 생식능력에 손상을 일으킬 것으로 의심됨

특정표적장기 독성 - 1회 노출 - 구분 2

H371 신체 중에 손상을 일으킬 수 있음



부식

금속부식성 물질 - 구분 1

H290 금속을 부식시킬 수 있음

(2 쪽에 계속)

물질안전보건자료

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(1 쪽부터계속)



환경

수생환경 유해성 - 만성1

H410 장기적인 영향에 의해 수생생물에게 매우 유독함



급성 독성 - 흡입 - 구분 4

H332 흡입하면 유해함

피부 부식성/피부 자극성 - 구분 2

H315 피부에 자극을 일으킴

심한 눈 손상성/눈 자극성 - 구분 2

H319 눈에 심한 자극을 일으킴

피부 과민성 - 구분 1

H317 알레르기성 피부 반응을 일으킬 수 있음

라벨표기 요소

GHS 라벨 요소

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

그림문자



GHS02



GHS05



GHS06



GHS08



GHS09

신호어 위험

상표상에명확히위험성이표시된성분:

formaldehyde

유해.위험 문구

고인화성 액체 및 증기

금속을 부식시킬 수 있음

삼키면 유독함

흡입하면 유해함

피부에 자극을 일으킴

눈에 심한 자극을 일으킴

흡입시 알레르기성 반응, 천식 또는 호흡 곤란을 일으킬 수 있음

알레르기성 피부 반응을 일으킬 수 있음

유전적인 결함을 일으킬 것으로 의심됨

암을 일으킬 수 있음

태아 또는 생식능력에 손상을 일으킬 것으로 의심됨

신체 중에 손상을 일으킬 수 있음

장기적인 영향에 의해 수생생물에게 매우 유독함

예방조치 문구

삼켰을 시: 즉시 독성물질센터/병원 연락 필요.

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

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

(라벨 참조) 처치를 하시오.

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.

(3 쪽에계속)

물질안전보건자료

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· vPvB(고 잔류성, 고 생물농축성 물질): 해당사항 없음.

3 구성성분의 명칭 및 함유량

- **화학적 특성:** 혼합물
- **설명:** 무해한 첨가물이 함유된 아래에 열거된 물질로 만들어진 혼합물.

· **위험요소:**

| | | |
|---------|--|---------|
| 64-17-5 | Ethyl Alcohol, denatured ⚠ 인화성 액체 - 구분 2, H225 | 10-25% |
| 50-00-0 | formaldehyde ⚠ 급성독성 - 경구 - 구분 3, H301; ⚠ 급성독성 - 경피 - 구분 3, H311; ⚠ 급성독성 - 흡입 - 구분 3, H331; ⚠ 생식세포 변이원성 - 구분 2, H341; ⚠ 발암성 - 구분 1B, H350; ⚠ 피부 부식성/피부 자극성 - 구분 1, H314; ⚠ 피부 과민성 - 구분 1, H317 | 10-25% |
| 64-19-7 | Acetic Acid Glacial ⚠ 인화성 액체 - 구분 3, H226; ⚠ 피부 부식성/피부 자극성 - 구분 1, H314 | 2.5-10% |

4 응급조치 요령

· **응급조치요령 내용**

· **일반적 정보:**

이제품에 의해 오염된 의상은 즉시 제거한다.
중독 증상은 몇 시간이 지난 뒤에 발생할 수 있다. 따라서 사고가 발생한 후에 적어도 48 시간동안은 의료진의 관찰을 받아야 한다.
불규칙적인 호흡이나 호흡 정지 상태에서는 인공 호흡을 실시한다.

· **흡입했을 때:**

신선한 공기를 쐬고 나서 반드시 의료진의 도움을 구한다.
환자가 의식을 잃었을 경우에는 안전한 자세에서 환자를 운반한다.

· **피부에 접촉했을 때:** 즉시 물과 비누로 씻고 잘 행군다.

· **눈에 들어갔을 때:** 흐르는 물에 눈을 몇분동안 씻어내고 나서, 증상이 지속될 경우에는 의사와 상담한다

· **먹었을 때:** 구토를 유발시키지 않는다. 즉시 의료진의 도움을 구한다.

· **기타 의사의 주의사항:**

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

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

5 폭발·화재시 대처방법

· **소화제**

· **적절한 소화제:**

이산화탄소, 진화용 석회 가루 또는 물방사를 사용하고, 더 큰 화재는 물을 분사하거나 알코올이 함유된 거품으로 끈다.

· **본 화학물질이나 혼합물에서 발생하는 특별 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 응급처리 절차** 안전장비 착용하고, 무방비의 사람은 격리시킨다.

· **환경 관련 예방조치:**

하천이나 하수도로 유입되었을 경우 해당관청에 보고한다.

(4 쪽에계속)

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(3 쪽부터계속)

많은 물로 희석 시킨다.

하수도망/해수면위의물/지하수로도달하지않게한다.

· 밀폐 및 정화 방법과 소재:

액체가 혼합된 물질 (모래, 구조토, 산성 결합물, 일반 결합물, 톱밥)에 흡입되도록 한다.

항목 13에 따라 오염된 물질을 쓰레기로 처분한다.

충분한 환기가 되도록 한다.

· 타 섹션 참조

안전관리에 대한 정보는 제7 장 을 참고하시오.

개인보호 장비에 대한 정보는 제8 장 을 참고하시오.

쓰레기 처리에 대한 정보는 제13 장 을 참고하시오.

7 취급 및 저장방법

· 취급:

· 안전 취급을 위한 예방조치

작업장에서는 통풍이 잘 되고/습기 제거가 잘 되게 주의한다.

조심스럽게 용기를 개봉하거나 취급한다.

연무질이 형성되는 것을 피한다.

· 화재 및 폭발 사고 예방대책에 관한 정보:

발화 요소는 멀리 둔다-급연.

열로부터 보호한다.

정전기의 충전으로부터 보호한다.

호흡보호장비를 항상 비치한다.

· 혼합위험성 등 안전 저장 조건

· 보관:

· 안전한 저장 방법: 특별한 요구사항이 없음.

· 하나의 공동 보관 시설에 대한 보관 관련 정보: 필요없음

· 보관 조건에 관한 추가적인 정보:

용기를 새지 않게 밀폐한 채 보관한다.

열이나 직사광선으로부터 보호한다.

· 구체적인 최종 사용자 추가적인 정보가 존재하지 않습니다.

8 노출방지 및 개인보호구

· 첨단시설 디자인에 대한 추가정보: 더 이상 의 자료는 없음. 항목 7 을 참고하시오.

· 통제 변수

· 화학물질의 노출기준, 생물학적 노출기준 등:

64-17-5 Ethyl Alcohol, denatured

TLV (KR) 장기간의값: 1900 mg/m³, 1000 ppm

PEL (US) 장기간의값: 1900 mg/m³, 1000 ppm

REL (US) 장기간의값: 1900 mg/m³, 1000 ppm

TLV (US) 단기간의값: 1880 mg/m³, 1000 ppm

50-00-0 formaldehyde

TLV (KR) 단기간의값: 1.5 mg/m³, 1 ppm

장기간의값: 0.75 mg/m³, 0.5 ppm

(5 쪽에계속)

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| | |
|------------------------------------|--|
| PEL (US) | 단기간의값: 2 ppm 장기간의값: 0.75 ppm see 29 CFR 1910.1048(c) |
| REL (US) | 장기간의값: 0.016 ppm 최고노출기준: 0.1* ppm *15-min; See Pocket Guide App. A |
| TLV (US) | 단기간의값: NIC-0.37 mg/m ³ , NIC-0.3 ppm 장기간의값: NIC-0.12 mg/m ³ , NIC-0.1 ppm 최고노출기준: (0.37) mg/m ³ , (0.3) ppm NIC-A1; DSEN; RSEN |
| 64-19-7 Acetic Acid Glacial | |
| TLV (KR) | 단기간의값: 37 mg/m ³ , 15 ppm 장기간의값: 25 mg/m ³ , 10 ppm |
| IOELV (EU) | 장기간의값: 25 mg/m ³ , 10 ppm |
| PEL (US) | 장기간의값: 25 mg/m ³ , 10 ppm |
| REL (US) | 단기간의값: 37 mg/m ³ , 15 ppm 장기간의값: 25 mg/m ³ , 10 ppm |
| TLV (US) | 단기간의값: 37 mg/m ³ , 15 ppm 장기간의값: 25 mg/m ³ , 10 ppm |

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

· **노출 통제**

· **개인 보호구**

· **일반적보호조치및위생조치:**

- 식료품, 음료수와 사료로부터 멀리 떨어져 두어 놓는다.
- 더러워지거나 음료수가 묻은 옷은 즉시 탈의한다.
- 휴식 전이나 작업이 끝날때마다 손을 씻는다.
- 방호복은 따로 보관한다.
- 눈과 피부와의 접촉을 피한다.

· **호흡기 보호:**

· 단시간 또는 경미한 오염의 경우에는 호흡여과기를 사용한다. 심각한 또는 장기간 노출시에는 호흡보호장비를 사용한다.

· **손 보호:**



보호용 장갑

· 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.

· **장갑의재료**

· 적합한장갑의선택은재질차이뿐만아니라품질기준의차이도고려하여이루어져야하고제조업종에따라서도다르게선택되어야한다. 제품은다양한재료로부터의조제로이루어지는것이기때문에, 장갑재질의안정성은사전예측되어질수있는것이아니고, 반드시사용전에 (그안전성이) 체크되어야한다.

· **장갑재료의투과시간** 정확한관통시간은보호장갑제조자에의하여인지되고, 준수되어야한다.

· **눈 보호:**

· 보호안경

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꼭조이는보안경

9 물리화학적 특성

| | |
|-------------------------|--|
| · 기본 물리 및 화학적 특성에 대한 정보 | |
| · 일반정보 | |
| · 외형 | |
| · 물리적 상태: | 용해 |
| · 색: | 밝은 |
| · 냄새: | 알코올 종류의 |
| · 후각역치 | 알맞지않다. |
| · pH 의경우 20 °C: | 2.5 |
| · 상태변화 | |
| · 녹는점/어는점: | 맞지않는 |
| · 초기 끓는점과 끓는점 범위: | -21 °C |
| · 인화점: | 17 °C |
| · 인화성(고체, 기체): | 해당사항 없음. |
| · 점화온도: | 300 °C |
| · 분해 온도: | 알맞지않다. |
| · 자기점화: | 이제품은자연발화성이없다. |
| · 폭발위험: | 이제품은폭발위험성이없지만, 폭발가능성이있는증기화합물/공기화합물의형성가능성이있다. |
| · 인화 또는 폭발 범위의 상한/하한 | |
| · 아래로: | 3.5 Vol % |
| · 위로: | 73.0 Vol % |
| · 증기압 의경우 20 °C: | 59 hPa |
| · 밀도 의경우 20 °C: | 0.9501 g/cm ³ |
| · 비중: | 알맞지않다. |
| · 증기밀도: | 알맞지않다. |
| · 증발 속도: | 알맞지않다. |
| · 용해도: | |
| · 물: | 완전히혼합할수있는 |
| · n 옥탄올/물 분배계수: | 알맞지않다. |
| · 점도: | |
| · 역학성: | 알맞지않다. |
| · 동점성: | 알맞지않다. |
| · 용매내용물 | |
| · 유기용매: | 31.0 % |
| · 물: | 69.0 % |
| · VOC (EU) | 31.00 % |

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지하수나, 하천으로또는 하수도망에도달하지않게한다.
 지하수로경미한양이유입되었을경우엔이미식수오염상태이다
 하천에서는역시물고기나플랑크톤게는독성이있다.
 물속의유기체에아주독이되는것

- 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 | UN1987 |
| · UN 적정 선적명 · ADR · IMDG · IATA | 1987 ALCOHOLS, N.O.S. (ETHANOL (ETHYL ALCOHOL), ACETIC ACID, GLACIAL), ENVIRONMENTALLY HAZARDOUS ALCOHOLS, N.O.S. (ETHANOL (ETHYL ALCOHOL), ACETIC ACID, GLACIAL), MARINE POLLUTANT ALCOHOLS, N.O.S. (ETHANOL, ACETIC ACID, GLACIAL) |
| · 교통 위험 클래스 · ADR, IMDG | 3 발화성용액 3 |
| · 등급 · 위험물 라벨 | 3 발화성용액 3 |
| · IATA | 3 발화성용액 3 |
| · 용기등급 · ADR, IMDG, IATA | III |

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| | |
|--|---|
| <ul style="list-style-type: none"> · 환경적 유해물질: · 해양오염물질: · 특수 마킹 (ADR): | <p>심벌 (물고기와 나무)</p> <p>심벌 (물고기와 나무)</p> |
| <ul style="list-style-type: none"> · 이용자 특별 예방조치 · 위험 코드: · EMS-번호: · Segregation groups · Stowage Category | <p>경고: 발화성용액</p> <p>33</p> <p>F-E,S-D</p> <p>Acids</p> <p>B</p> |
| <ul style="list-style-type: none"> · MARPOL73/78(선박으로부터의 해양오염방지협약) 부속서2 및 IBC Code(국제선적화물코드)에 따른 벌크(bulk) 운송 | <p>해당사항 없음.</p> |
| · 운 송/추가 정보: | |
| <ul style="list-style-type: none"> · ADR · 한정 수량 (LQ) · Excepted quantities (EQ) | <p>5L</p> <p>Code: E1</p> <p>Maximum net quantity per inner packaging: 30 ml</p> <p>Maximum net quantity per outer packaging: 1000 ml</p> |
| <ul style="list-style-type: none"> · 운송 구분 · 터널 제한 코드 | <p>3</p> <p>D/E</p> |
| <ul style="list-style-type: none"> · IMDG · Limited quantities (LQ) · Excepted quantities (EQ) | <p>1L</p> <p>Code: E2</p> <p>Maximum net quantity per inner packaging: 30 ml</p> <p>Maximum net quantity per outer packaging: 500 ml</p> |
| <ul style="list-style-type: none"> · UN "모범 규제": | <p>UN 1987 ALCOHOLS, N.O.S. (ETHANOL (ETHYL ALCOHOL), ACETIC ACID, GLACIAL), 3, III, ENVIRONMENTALLY HAZARDOUS</p> |

15 법적 규제현황

- 산업안전보건법에 의한 규제:

| | |
|---------------------|---------------------|
| · 제조 등 금지물질: | |
| 어떠한내용물도 목록화되어있지않다 | |
| · 허가대상물질: | |
| 어떠한내용물도 목록화되어있지않다 | |
| · 관리대상유해물질: | |
| 50-00-0 | formaldehyde |
| 64-19-7 | Acetic Acid Glacial |
| 67-56-1 | Methyl Alcohol |

- 해당 순물질 또는 혼합물에 대한 안전, 보건 및 환경 규제/법률

| | | |
|---|--------------------------|----------|
| · Korean Existing Chemical Inventory | | |
| 64-17-5 | Ethyl Alcohol, denatured | KE-13217 |
| 50-00-0 | formaldehyde | KE-17074 |
| 64-19-7 | Acetic Acid Glacial | KE-00013 |
| 67-56-1 | Methyl Alcohol | KE-23193 |

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| | |
|---|----------|
| 7732-18-5 Deionized Water, Reagent Grade A.C.S. | KE-35400 |
|---|----------|

· 화학물질관리법

| | |
|-----------------|----------------|
| · 사고대비물질 | |
| 50-00-0 | formaldehyde |
| 67-56-1 | Methyl Alcohol |

· 금지물질

어떠한내용물도목록화되어있지않다

· 제한물질

| | |
|---------|--------------|
| 50-00-0 | formaldehyde |
|---------|--------------|

· 유독물질

| | |
|---------|----------------|
| 50-00-0 | formaldehyde |
| 67-56-1 | Methyl Alcohol |

· 허가물질

| | |
|---------|----------------|
| 50-00-0 | formaldehyde |
| 67-56-1 | Methyl Alcohol |

· GHS 라벨 요소

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

· 그림문자



GHS02 GHS05 GHS06 GHS08 GHS09

· 신호어 위험

· 상표상에명확히위험성이표시된성분:

formaldehyde

· 유해.위험 문구

- 고인화성 액체 및 증기
- 금속을 부식시킬 수 있음
- 삼키면 유독함
- 흡입하면 유해함
- 피부에 자극을 일으킴
- 눈에 심한 자극을 일으킴
- 흡입시 알레르기성 반응, 천식 또는 호흡 곤란을 일으킬 수 있음
- 알레르기성 피부 반응을 일으킬 수 있음
- 유전적인 결함을 일으킬 것으로 의심됨
- 압을 일으킬 수 있음
- 태아 또는 생식능력에 손상을 일으킬 것으로 의심됨
- 신체 중에 손상을 일으킬 수 있음
- 장기적인 영향에 의해 수생생물에게 매우 유독함

· 예방조치 문구

- 삼켰을 시: 즉시 독성물질센터/병원 연락 필요.
- 피부(또는 머리카락)에 묻으면 오염된 모든 의복은 벗으시오. 피부를 물로 씻으시오/샤워하시오.
- 눈에 묻으면 몇 분간 물로 조심해서 씻으시오. 가능하면콘택트렌즈를 제거하시오. 계속 씻으시오.
- (라벨 참조) 처치를 하시오.
- 잠금장치가 있는 저장장소에 저장하시오.
- 현지/지역/국가/국제 규정에 따라서 내용물/용기 노출

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· **국내규정:**

· **사용제한에 대한 정보:**

노동자들은이러한예방준비하에암을유발시키는성분을함유한위험물을버리지말아야한다. 개별적인경우에관청은예외를허가할수있다.

· **화학물질 안전성 평가:** 화학물질 안전성 평가가 수행되지 않음

16 그 밖의 참고사항

이보고는우리지식에대한오늘날의상태에대하여평가하고있다, 하지만이보고서는생산특성에관한보증은기술하지않았으며계약적인법률관계에기반을두고있지도않다

· **최초 작성일자:** 2017.04.14

· **개정 횟수 및 최종 개정일자:** 1 / 2017.04.14

· **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

ELINCS: European List of Notified Chemical Substances

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

VOC: Volatile Organic Compounds (USA, EU)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

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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:** DAVIDSON'S FIXATIVE, MODIFIED
- **Número del artículo:** 64133-50, 64133-50-SP
- **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.



GHS06 calavera y tibias cruzadas

Acute Tox. 3 H301 Tóxico en caso de ingestión.



GHS08 peligro para la salud

Resp. Sens. 1B H334 Puede provocar síntomas de alergia o asma o dificultades respiratorias en caso de inhalación.

Muta. 2 H341 Se sospecha que provoca defectos genéticos.

Carc. 1B H350 Puede provocar cáncer.

Repr. 2 H361 Se sospecha que perjudica la fertilidad o daña al feto.

STOT SE 2 H371 Puede provocar daños en los órganos.

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GHS05 corrosión

Met. Corr.1 H290 Puede ser corrosivo para los metales.



GHS09 medio ambiente

Aquatic Chronic 1 H410 Muy tóxico para los organismos acuáticos, con efectos nocivos duraderos.



GHS07

Acute Tox. 4 H332 Nocivo en caso de inhalación.
 Skin Irrit. 2 H315 Provoca irritación cutánea.
 Eye Irrit. 2 H319 Provoca irritación ocular grave.
 Skin Sens. 1 H317 Puede provocar una reacción alérgica en la piel.

· 2.2 Elementos de la etiqueta

· Etiquetado con arreglo al Reglamento (CE) n° 1272/2008

El producto se ha clasificado y etiquetado de conformidad con el reglamento CLP.

· Pictogramas de peligro



GHS02



GHS05



GHS06



GHS08



GHS09

· Palabra de advertencia Peligro

· Componentes peligrosos a indicar en el etiquetaje:

formaldehído

· Indicaciones de peligro

H225 Líquido y vapores muy inflamables.
 H290 Puede ser corrosivo para los metales.
 H301 Tóxico en caso de ingestión.
 H332 Nocivo en caso de inhalación.
 H315 Provoca irritación cutánea.
 H319 Provoca irritación ocular grave.
 H334 Puede provocar síntomas de alergia o asma o dificultades respiratorias en caso de inhalación.
 H317 Puede provocar una reacción alérgica en la piel.
 H341 Se sospecha que provoca defectos genéticos.
 H350 Puede provocar cáncer.
 H361 Se sospecha que perjudica la fertilidad o daña al feto.
 H371 Puede provocar daños en los órganos.
 H410 Muy tóxico para los organismos acuáticos, con efectos nocivos duraderos.

· Consejos de prudencia

P301+P310 EN CASO DE INGESTIÓN: Llamar inmediatamente a un CENTRO DE TOXICOLOGÍA/ médico.
 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.

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- P321 Se necesita un tratamiento específico (ver en esta etiqueta).
 P405 Guardar bajo llave.
 P501 Eliminar el contenido o el recipiente conforme a la reglamentación local/regional/nacional/internacional.

- **2.3 Otros peligros**
- **Resultados de la valoración PBT y mPmB**
- **PBT:** No aplicable.
- **mPmB:** No aplicable.

SECCIÓN 3: Composición/información sobre los componentes

- **3.2 Caracterización química: Mezclas**
- **Descripción:** Mezcla formada por las sustancias especificadas a continuación con adiciones no peligrosas.

· **Componentes peligrosos:**

| | | |
|-----------------------------------|--|---------|
| CAS: 64-17-5 EINECS: 200-578-6 | etanol Flam. Liq. 2, H225 | 10-25% |
| CAS: 50-00-0 EINECS: 200-001-8 | formaldehído Acute Tox. 3, H301; Acute Tox. 3, H311; Acute Tox. 3, H331; Muta. 2, H341; Carc. 1B, H350; Skin Corr. 1B, H314; Skin Sens. 1, H317 | 10-25% |
| CAS: 64-19-7 EINECS: 200-580-7 | ácido acético Flam. Liq. 3, H226; Skin Corr. 1A, H314 | 2,5-10% |

- **Indicaciones adicionales:** El texto de los posibles riesgos aquí indicados se puede consultar en el capítulo 16.

SECCIÓN 4: Primeros auxilios

- **4.1 Descripción de los primeros auxilios**
- **Instrucciones generales:**
 Quitarse de inmediato toda prenda contaminada con el producto.
 Los síntomas de intoxicación pueden presentarse después de muchas horas, por lo que se requiere una supervisión médica durante un mínimo de 48 horas después del accidente.
 En caso de respiración irregular o apnea (paro respiratorio), hágase la respiración artificial.
- **En caso de inhalación del producto:**
 Suministrar suficiente aire fresco y, para mayor seguridad, consultar el médico.
 Las personas desmayadas deben tenderse y transportarse de lado con la suficiente estabilidad.
- **En caso de contacto con la piel:** Lavar inmediatamente con agua y jabón y enjuagar bien.
- **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:** No provocar el vómito y solicitar asistencia médica inmediata.
- **4.2 Principales síntomas y efectos, agudos y retardados** No existen más datos relevantes disponibles.
- **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.

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- **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:**
Al penetrar en las aguas o en el alcantarillado, avisar a las autoridades pertinentes.
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).
Desechar el material contaminado como vertido según ítem 13.
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**
Asegurar suficiente ventilación /aspiración en el puesto de trabajo.
Abrir y manejar el recipiente con cuidado.
Evitar la formación de aerosoles.
- **Prevención de incendios y explosiones:**
Mantener alejadas las fuentes de encendido. No fumar.
Proteger del calor.
Tomar medidas contra las cargas electrostáticas.
Tener preparados los aparatos respiratorios.
- **7.2 Condiciones de almacenamiento seguro, incluidas posibles incompatibilidades**
- **Almacenamiento:**
- **Exigencias con respecto al almacén y los recipientes:** No se requieren medidas especiales.
- **Normas en caso de un almacenamiento conjunto:** No es necesario.
- **Indicaciones adicionales sobre las condiciones de almacenamiento:**
Mantener el recipiente cerrado herméticamente.
Proteger del calor y de la luz directa del sol.
- **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.
- **8.1 Parámetros de control**

· **Componentes con valores límite admisibles que deben controlarse en el puesto de trabajo:**

64-17-5 etanol

| | |
|-----|--|
| LEP | Valor de corta duración: 1910 mg/m ³ , 1000 ppm |
| s | |

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| | |
|------------------------------|---|
| 50-00-0 formaldehído | |
| LEP | Valor de corta duración: 0,37 mg/m ³ , 0,3 ppm Sen, s |
| 64-19-7 ácido acético | |
| LEP | Valor de corta duración: 37 mg/m ³ , 15 ppm Valor de larga duración: 25 mg/m ³ , 10 ppm VLI |

· **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.

Guardar la ropa protectora por separado.

Evitar el contacto con los ojos y la piel.

· **Protección respiratoria:**

Si la exposición va a ser breve o de poca intensidad, colocarse una máscara respiratoria. Para una exposición más intensa o de mayor duración, usar un aparato de respiración autónomo.

· **Protección de manos:**



Guantes de protección

El material del guante deberá ser impermeable y resistente al producto / sustancia / preparado.

Ante la ausencia de tests específicos, no se puede recomendar ningún material específico para guantes de protección contra el producto / preparado / mezcla de sustancias 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. Teniendo en cuenta que el producto está fabricado a partir de diferentes materiales, su calidad no puede ser evaluada de antemano, de modo que los guantes deberán ser controlados antes de su utilización.

· **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



Gafas de protección herméticas

SECCIÓN 9: Propiedades físicas y químicas

· **9.1 Información sobre propiedades físicas y químicas básicas**

· **Datos generales**

· **Aspecto:**

Forma:

Solución

Color:

Claro

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| | |
|--|---|
| · Olor: | Similar al del alcohol |
| · Umbral olfativo: | No determinado. |
| · valor pH a 20 °C: | 2,5 |
| · Cambio de estado | |
| Punto de fusión/punto de congelación: | Indeterminado. |
| Punto inicial de ebullición e intervalo de ebullición: | -21 °C |
| · Punto de inflamación: | 17 °C |
| · Inflamabilidad (sólido, gas): | No aplicable. |
| · Temperatura de ignición: | 300 °C |
| · Temperatura de descomposición: | No determinado. |
| · Temperatura de auto-inflamación: | El producto no es autoinflamable. |
| · Propiedades explosivas: | El producto no es explosivo; sin embargo, pueden formarse mezclas explosivas de vapor / aire. |
| · Límites de explosión: | |
| Inferior: | 3,5 Vol % |
| Superior: | 73,0 Vol % |
| · Presión de vapor a 20 °C: | 59 hPa |
| · Densidad a 20 °C: | 0,9501 g/cm ³ |
| · Densidad relativa | No determinado. |
| · Densidad de vapor | No determinado. |
| · Tasa de evaporación: | No determinado. |
| · Solubilidad en / miscibilidad con agua: | Completamente mezclable. |
| · Coeficiente de reparto: n-octanol/agua: | No determinado. |
| · Viscosidad: | |
| Dinámica: | No determinado. |
| Cinemática: | No determinado. |
| · Concentración del disolvente: | |
| Disolventes orgánicos: | 31,0 % |
| Agua: | 69,0 % |
| VOC (CE) | 31,00 % |
| · 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.

ES

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SECCIÓN 11: Información toxicológica

· 11.1 Información sobre los efectos toxicológicos

· Toxicidad aguda

Tóxico en caso de ingestión.

Nocivo en caso de inhalación.

· Valores LD/LC50 (dosis letal /dosis letal = 50%) relevantes para la clasificación:

50-00-0 formaldehído

| | | |
|------|------|------------------|
| Oral | LD50 | >200 mg/kg (rat) |
|------|------|------------------|

· Efecto estimulante primario:

· Corrosión o irritación cutáneas

Provoca irritación cutánea.

· Lesiones o irritación ocular graves

Provoca irritación ocular grave.

· Sensibilización respiratoria o cutánea

Puede provocar síntomas de alergia o asma o dificultades respiratorias en caso de inhalación.

Puede provocar una reacción alérgica en la piel.

· Efectos CMR (carcinogenicidad, mutagenicidad y toxicidad para la reproducción)

· Mutagenicidad en células germinales

Se sospecha que provoca defectos genéticos.

· Carcinogenicidad

Puede provocar cáncer.

· Toxicidad para la reproducción

Se sospecha que perjudica la fertilidad o daña al feto.

· Toxicidad específica en determinados órganos (STOT) – exposición única

Puede provocar daños en los órganos.

· 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.

· Efectos ecotóxicos:

· Observación: Muy tóxico para peces.

· Indicaciones medioambientales adicionales:

· Indicaciones generales:

Nivel de riesgo para el agua 2 (autoclasiificación): peligroso para el agua

No dejar que se infiltre en aguas subterráneas, aguas superficiales o en alcantarillados.

Una cantidad mínima vertida en el subsuelo ya representa un peligro para el agua potable.

Vertido en aguas superficiales, también es tóxico para los peces y el plancton.

muy tóxico para organismos acuáticos

· 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.

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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 | UN1987 |
| · 14.2 Designación oficial de transporte de las Naciones Unidas · ADR · IMDG · IATA | 1987 ALCOHOLES, N.E.P. (ETANOL (ALCOHOL ETÍLICO), ÁCIDO ACÉTICO GLACIAL), PELIGROSO PARA EL MEDIO AMBIENTE ALCOHOLS, N.O.S. (ETHANOL (ETHYL ALCOHOL), ACETIC ACID, GLACIAL), MARINE POLLUTANT ALCOHOLS, N.O.S. (ETHANOL, ACETIC ACID, GLACIAL) |
| · 14.3 Clase(s) de peligro para el transporte · ADR, IMDG | |
| | |
| · Clase · Etiqueta | 3 Líquidos inflamables 3 |
| · IATA | |
| | |
| · Class · Label | 3 Líquidos inflamables 3 |
| · 14.4 Grupo de embalaje · ADR, IMDG, IATA | III |
| · 14.5 Peligros para el medio ambiente: · Contaminante marino: · Marcado especial (ADR): | Símbolo (pez y árbol) Símbolo (pez y árbol) |
| · 14.6 Precauciones particulares para los usuarios · Número Kemler: · Número EMS: · Segregation groups · Stowage Category | Atención: Líquidos inflamables 33 F-E,S-D Acids B |

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| | |
|---|---|
| · 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) | 5L |
| · Cantidades exceptuadas (EQ) | Código: E1 Cantidad neta máxima por envase interior: 30 ml Cantidad neta máxima por embalaje exterior: 1000 ml |
| · Categoría de transporte | 3 |
| · 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 1987 ALCOHOLES, N.E.P. (ETANOL (ALCOHOL ETÍLICO), ÁCIDO ACÉTICO GLACIAL), 3, III, PELIGROSO PARA EL MEDIO AMBIENTE |

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 formaldehído, metanol**
- **Categoría Seveso**
E1 Peligroso para el medio ambiente acuático
P5c LÍQUIDOS INFLAMABLES
- **Cantidad umbral (toneladas) a efectos de aplicación de los requisitos de nivel inferior 100 t**
- **Cantidad umbral (toneladas) a efectos de aplicación de los requisitos de nivel superior 200 t**
- **REGLAMENTO (CE) n° 1907/2006 ANEXO XVII Restricciones: 3**
- **Disposiciones nacionales:**
- **Indicaciones sobre las limitaciones de trabajo:**
Los empleados no deben exponerse a las sustancias cancerígenas contenidas en el producto. En casos aislados las autoridades pueden hacer excepciones.
- **15.2 Evaluación de la seguridad química:** Una evaluación de la seguridad química no se ha llevado a cabo.

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.

- **Frases relevantes**
H225 Líquido y vapores muy inflamables.
H226 Líquidos y vapores inflamables.
H301 Tóxico en caso de ingestión.
H311 Tóxico en contacto con la piel.
H314 Provoca quemaduras graves en la piel y lesiones oculares graves.

(se continua en página 10)

Ficha de datos de seguridad

según 1907/2006/CE, Artículo 31

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(se continua en página 9)

H317 Puede provocar una reacción alérgica en la piel.

H331 Tóxico en caso de inhalación.

H341 Se sospecha que provoca defectos genéticos.

H350 Puede provocar cáncer.

· 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

ELINCS: European List of Notified Chemical Substances

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

VOC: Volatile Organic Compounds (USA, EU)

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

Flam. Liq. 3: Líquidos inflamables – Categoría 3

Met. Corr. 1: Corrosivos para los metales – Categoría 1

Acute Tox. 3: Toxicidad aguda – Categoría 3

Acute Tox. 4: Toxicidad aguda – Categoría 4

Skin Corr. 1A: Corrosión o irritación cutáneas – Categoría 1A

Skin Corr. 1B: Corrosión o irritación cutáneas – Categoría 1B

Skin Irrit. 2: Corrosión o irritación cutáneas – Categoría 2

Eye Irrit. 2: Lesiones oculares graves o irritación ocular – Categoría 2

Resp. Sens. 1B: Sensibilización respiratoria – Categoría 1B

Skin Sens. 1: Sensibilización cutánea – Categoría 1

Muta. 2: Mutagenicidad en células germinales – Categoría 2

Carc. 1B: Carcinogenicidad – Categoría 1B

Repr. 2: Toxicidad para la reproducción – Categoría 2

STOT SE 2: Toxicidad específica en determinados órganos (exposición única) – Categoría 2

Aquatic Chronic 1: Peligroso para el medio ambiente acuático - peligro acuático a largo plazo – Categoría 1