

Safety Data Sheet

acc. to OSHA HCS

Printing date 09/11/2018

Reviewed on 09/11/2018

1 Identification

- **Product identifier**
- **Trade name:** CARNOY'S FIXATIVE
- **Article number:** 64130-05
- **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 H311 Toxic in contact with skin.

Acute Tox. 3 H331 Toxic if inhaled.



GHS08 Health hazard

Carc. 1A H350 May cause cancer.

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

STOT RE 1 H372 Causes damage to organs through prolonged or repeated exposure.



GHS07

Skin Irrit. 2 H315 Causes skin irritation.

Eye Irrit. 2A H319 Causes serious eye irritation.

STOT SE 3 H336 May cause drowsiness or dizziness.

- **Label elements**

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

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· **Hazard pictograms**

GHS02 GHS06 GHS07 GHS08

· **Signal word** *Danger*· **Hazard-determining components of labeling:***CHLOROFORM, REAGENT ACS**Ethyl Alcohol, denatured**Acetic Acid Glacial*· **Hazard statements***Highly flammable liquid and vapor.**Toxic in contact with skin or if inhaled.**Causes skin irritation.**Causes serious eye irritation.**May cause cancer.**Suspected of damaging fertility or the unborn child.**May cause drowsiness or dizziness.**Causes damage to organs through prolonged or repeated exposure.*· **Precautionary statements***Obtain special instructions before use.**Do not handle until all safety precautions have been read and understood.**Keep away from heat/sparks/open flames/hot surfaces. - No smoking.**Ground/bond container and receiving equipment.**Use explosion-proof electrical/ventilating/lighting/equipment.**Use only non-sparking tools.**Take precautionary measures against static discharge.**Do not breathe dust/fume/gas/mist/vapors/spray.**Wash thoroughly after handling.**Do not eat, drink or smoke when using this product.**Use only outdoors or in a well-ventilated area.**Wear protective gloves/protective clothing/eye protection/face protection.**If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.**IF INHALED: Remove person to fresh air and keep comfortable for breathing.**If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.**Continue rinsing.**IF exposed or concerned: Get medical advice/attention.**Specific treatment (see on this label).**Call a poison center/doctor if you feel unwell.**Get medical advice/attention if you feel unwell.**Take off immediately all contaminated clothing and wash it before reuse.**If skin irritation occurs: Get medical advice/attention.**If eye irritation persists: Get medical advice/attention.**In case of fire: Use for extinction: CO₂, powder or water spray.**Store in a well-ventilated place. Keep container tightly closed.**Store in a well-ventilated place. Keep cool.**Store locked up.**Dispose of contents/container in accordance with local/regional/national/international regulations.*

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- **Classification system:**
- **NFPA ratings (scale 0 - 4)**



- **HMIS-ratings (scale 0 - 4)**



- **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	>50-≤100%
67-66-3	CHLOROFORM, REAGENT ACS	>25-≤50%
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.
Remove breathing apparatus only after contaminated clothing have been completely removed.
In case of irregular breathing or respiratory arrest provide artificial respiration.
- **After inhalation:**
Supply fresh air or oxygen; call for 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:** Immediately call a doctor.
- **Information for doctor:**
- **Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

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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:** Mouth respiratory protective device.

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
67-66-3	CHLOROFORM, REAGENT ACS	2 ppm
64-19-7	Acetic Acid Glacial	5 ppm

- **PAC-2:**

64-17-5	Ethyl Alcohol, denatured	3300* ppm
67-66-3	CHLOROFORM, REAGENT ACS	64 ppm
64-19-7	Acetic Acid Glacial	35 ppm

- **PAC-3:**

64-17-5	Ethyl Alcohol, denatured	15000* ppm
67-66-3	CHLOROFORM, REAGENT ACS	3,200 ppm
64-19-7	Acetic Acid Glacial	250 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.

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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:** Store in a cool location.

· **Information about storage in one common storage facility:** Not required.

· **Further information about storage conditions:**

Keep receptacle tightly sealed.

Store in cool, dry conditions in well sealed receptacles.

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/m³, 1000 ppm

REL Long-term value: 1900 mg/m³, 1000 ppm

TLV Short-term value: 1880 mg/m³, 1000 ppm

67-66-3 CHLOROFORM, REAGENT ACS

PEL Ceiling limit value: 240 mg/m³, 50 ppm

REL Short-term value: 9.78* mg/m³, 2* ppm
*60-min; See Pocket Guide App. A

TLV Long-term value: 49 mg/m³, 10 ppm

64-19-7 Acetic Acid Glacial

PEL Long-term value: 25 mg/m³, 10 ppm

REL Short-term value: 37 mg/m³, 15 ppm
Long-term value: 25 mg/m³, 10 ppm

TLV Short-term value: 37 mg/m³, 15 ppm
Long-term value: 25 mg/m³, 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.

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· **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:**



Tightly sealed goggles

9 Physical and chemical properties

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

· **General Information**

· **Appearance:**

Form:	Fluid
Color:	Colorless
Odor:	Phenol-like
Odor threshold:	Not determined.

· **pH-value:** Not determined.

· **Change in condition**

Melting point/Melting range:	Undetermined.
Boiling point/Boiling range:	62 °C (143.6 °F)

· **Flash point:** 0 °C (32 °F)

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

· **Ignition temperature:** 425 °C (797 °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:	19 Vol %

· **Vapor pressure at 20 °C (68 °F):** 210 hPa (157.5 mm Hg)

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· Density at 20 °C (68 °F):	1.02296 g/cm ³ (8.5366 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:	70.0 %
VOC content:	70.00 %
	716.1 g/l / 5.98 lb/gal
· Solids content:	0.0 %
· 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:**

67-66-3 CHLOROFORM, REAGENT ACS

Oral	LD50	908 mg/kg (rat)
Dermal	LD50	75 mg/kg (rat)

- **Primary irritant effect:**
- **on the skin:** Irritant to skin and mucous membranes.
- **on the eye:** Irritating effect.
- **Sensitization:** No sensitizing effects known.
- **Additional toxicological information:**

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

Toxic
Harmful
Irritant

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· **Carcinogenic categories**· **IARC (International Agency for Research on Cancer)**

64-17-5	Ethyl Alcohol, denatured	I
67-66-3	CHLOROFORM, REAGENT ACS	2B

· **NTP (National Toxicology Program)**

67-66-3	CHLOROFORM, REAGENT ACS	R
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· **OSHA-Ca (Occupational Safety Health Administration)**

None of the ingredients is listed.

12 Ecological information

· **Toxicity**

- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability:** No further relevant information available.

· **Behavior in environmental systems:**

- **Bioaccumulative potential:** No further relevant information available.
- **Mobility in soil:** No further relevant information available.

· **Ecotoxicological effects:**· **Remark:** Harmful to fish· **Additional ecological information:**· **General notes:**

Water hazard class 1 (Self-assessment): slightly hazardous for water

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

Harmful to 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

· **UN-Number**· **DOT, ADR, IMDG, IATA** UN1170· **UN proper shipping name**· **DOT** Ethanol solutions· **ADR** 1170 Ethanol solutions· **IMDG** ETHANOL SOLUTION (ETHYL ALCOHOL SOLUTION)

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· IATA	ETHANOL SOLUTION
· Transport hazard class(es)	
· DOT	
 	
· Class	3 Flammable liquids
· Label	3, 6.1
<hr style="border-top: 1px dashed #000;"/>	
· ADR	
 	
· Class	3 Flammable liquids
· Label	3+6.1
<hr style="border-top: 1px dashed #000;"/>	
· IMDG	
 	
· Class	3 Flammable liquids
· Label	3/6.1
<hr style="border-top: 1px dashed #000;"/>	
· IATA	
 	
· Class	3 Flammable liquids
· Label	3 (6.1)
· Packing group	
· DOT, ADR, IMDG, IATA	II
· Environmental hazards:	Not applicable.
· Special precautions for user	Warning: Flammable liquids
· Danger code (Kemler):	336
· EMS Number:	F-E,S-D
· Stowage Category	A
· 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: 1 L On cargo aircraft only: 60 L

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· ADR	
· Excepted quantities (EQ)	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
<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 1170 ETHANOL SOLUTIONS, 3 (6.1), II

15 Regulatory information

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

· Section 355 (extremely hazardous substances):
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67-66-3	CHLOROFORM, REAGENT ACS
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· Section 313 (Specific toxic chemical listings):
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67-66-3	CHLOROFORM, REAGENT ACS
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· TSCA (Toxic Substances Control Act):

All ingredients are listed.

· Proposition 65

· Chemicals known to cause cancer:

67-66-3	CHLOROFORM, REAGENT ACS
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· Chemicals known to cause reproductive toxicity for females:
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None of the ingredients is listed.

· Chemicals known to cause reproductive toxicity for males:
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None of the ingredients is listed.

· Chemicals known to cause developmental toxicity:

64-17-5	Ethyl Alcohol, denatured
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67-66-3	CHLOROFORM, REAGENT ACS
---------	-------------------------

· Carcinogenic categories

· EPA (Environmental Protection Agency)
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67-66-3	CHLOROFORM, REAGENT ACS
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	B2, L, NL
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· TLV (Threshold Limit Value established by ACGIH)

64-17-5	Ethyl Alcohol, denatured		A3
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67-66-3	CHLOROFORM, REAGENT ACS		A3
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· NIOSH-Ca (National Institute for Occupational Safety and Health)

67-66-3	CHLOROFORM, REAGENT ACS
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- **GHS label elements** The product is classified and labeled according to the Globally Harmonized System (GHS).

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· **Hazard pictograms**

GHS02 GHS06 GHS07 GHS08

· **Signal word** *Danger*· **Hazard-determining components of labeling:***CHLOROFORM, REAGENT ACS**Ethyl Alcohol, denatured**Acetic Acid Glacial*· **Hazard statements***Highly flammable liquid and vapor.**Toxic in contact with skin or if inhaled.**Causes skin irritation.**Causes serious eye irritation.**May cause cancer.**Suspected of damaging fertility or the unborn child.**May cause drowsiness or dizziness.**Causes damage to organs through prolonged or repeated exposure.*· **Precautionary statements***Obtain special instructions before use.**Do not handle until all safety precautions have been read and understood.**Keep away from heat/sparks/open flames/hot surfaces. - No smoking.**Ground/bond container and receiving equipment.**Use explosion-proof electrical/ventilating/lighting/equipment.**Use only non-sparking tools.**Take precautionary measures against static discharge.**Do not breathe dust/fume/gas/mist/vapors/spray.**Wash thoroughly after handling.**Do not eat, drink or smoke when using this product.**Use only outdoors or in a well-ventilated area.**Wear protective gloves/protective clothing/eye protection/face protection.**If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.**IF INHALED: Remove person to fresh air and keep comfortable for breathing.**If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.**Continue rinsing.**IF exposed or concerned: Get medical advice/attention.**Specific treatment (see on this label).**Call a poison center/doctor if you feel unwell.**Get medical advice/attention if you feel unwell.**Take off immediately all contaminated clothing and wash it before reuse.**If skin irritation occurs: Get medical advice/attention.**If eye irritation persists: Get medical advice/attention.**In case of fire: Use for extinction: CO₂, powder or water spray.**Store in a well-ventilated place. Keep container tightly closed.**Store in a well-ventilated place. Keep cool.**Store locked up.**Dispose of contents/container in accordance with local/regional/national/international regulations.*· **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

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16 Other information

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

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

· **Abbreviations and acronyms:**

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

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

ACGIH: American Conference of Governmental Industrial Hygienists

EINECS: European Inventory of Existing Commercial Chemical Substances

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

Acute Tox. 3: Acute toxicity – Category 3

Skin Irrit. 2: Skin corrosion/irritation – Category 2

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

Carc. 1A: Carcinogenicity – Category 1A

Repr. 2: Reproductive toxicity – Category 2

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

STOT RE 1: Specific target organ toxicity (repeated exposure) – Category 1

Safety Data Sheet

according to WHS Regulations

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Revision: 11.09.2018

1 Identification

- **Product identifier**
- **Trade name:** CARNOY'S FIXATIVE
- **Article number:** 64130-05
- **Relevant identified uses of the substance or mixture and uses advised against**
No further relevant information available.
- **Application of the substance / the mixture** Laboratory chemicals
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
Electron Microscopy Sciences
1560 Industry Road
USA-Hatfield, PA 19440
Tel: 215-412-8400 Fax: 215-412-8450
email: sgkcck@aol.com
www.emsdiasum.com
- ProSciTech Pty Ltd
11 Carlton Street, Kirwan QLD 4817 Australia
Telephone Number: (07) 4773 9444 - 8:30am - 5:00pm, Monday to Friday (excluding Public Holidays)
Emergency Contact: (07) 4773 9444 - 8:30am - 5:00pm, Monday to Friday (excluding Public Holidays)
Website: ems.proscitech.com
- Emgrid Australia Pty. Ltd.
P.O. Box 118
The Patch VIC 3792
Australia
Tel: 03 9752 1785
Fax: 03 9752 1784
Website: www.emgrid.com.au
- **Further information obtainable from:** Product safety department
- **Emergency telephone number:**
ChemTrec 1-800-424-9300 Contract CCN7661
1-703-527-3887

2 Hazard(s) Identification

- **Classification of the substance or mixture**



GHS02 flame

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



GHS06 skull and crossbones

Acute Tox. 3 H311 Toxic in contact with skin.

Acute Tox. 3 H331 Toxic if inhaled.



GHS08 health hazard

Carc. 1A H350 May cause cancer.

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

STOT RE 1 H372 Causes damage to organs through prolonged or repeated exposure.

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GHS07

Skin Irrit. 2 H315 Causes skin irritation.
Eye Irrit. 2A H319 Causes serious eye irritation.
STOT SE 3 H336 May cause drowsiness or dizziness.

· **Label elements**

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

· **Hazard pictograms**



GHS02 GHS06 GHS07 GHS08

· **Signal word** *Danger*

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

CHLOROFORM, REAGENT ACS

Ethyl Alcohol, denatured

Acetic Acid Glacial

· **Hazard statements**

Highly flammable liquid and vapour.

Toxic in contact with skin.

Toxic if inhaled.

Causes skin irritation.

Causes serious eye irritation.

May cause cancer.

Suspected of damaging fertility or the unborn child.

May cause drowsiness or dizziness.

Causes damage to organs through prolonged or repeated exposure.

· **Precautionary statements**

Obtain special instructions before use.

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

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

Ground/bond container and receiving equipment.

Use explosion-proof electrical/ventilating/lighting equipment.

Use only non-sparking tools.

Take precautionary measures against static discharge.

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

Wash thoroughly after handling.

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

Use only outdoors or in a well-ventilated area.

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

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

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

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

Continue rinsing.

IF exposed or concerned: Get medical advice/attention.

Specific treatment (see on this label).

Call a POISON CENTER/doctor if you feel unwell.

Get medical advice/attention if you feel unwell.

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Take off immediately all contaminated clothing and wash it before reuse.

If skin irritation occurs: Get medical advice/attention.

If eye irritation persists: Get medical advice/attention.

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

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

Store in a well-ventilated place. Keep cool.

Store locked up.

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

- **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	>50-≤100%
67-66-3	CHLOROFORM, REAGENT ACS	>25-≤50%
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.
 - Remove breathing equipment only after contaminated clothing have been completely removed.
 - In case of irregular breathing or respiratory arrest provide artificial respiration.
- **After inhalation:**
 - Supply fresh air or oxygen; call for 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:** Call for a doctor 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.

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- **Advice for firefighters**
- **Protective equipment:** Mouth respiratory protective device.

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.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** Store in a cool location.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:**
Keep container tightly sealed.
Store in cool, dry conditions in well sealed receptacles.
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

NES | Long-term value: 1880 mg/m³, 1000 ppm

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WES	Long-term value: 1880 mg/m ³ , 1000 ppm
67-66-3 CHLOROFORM, REAGENT ACS	
NES	Long-term value: 10 mg/m ³ , 2 ppm Sk
WES	Long-term value: 10 mg/m ³ , 2 ppm Sk
64-19-7 Acetic Acid Glacial	
NES	Short-term value: 37 mg/m ³ , 15 ppm Long-term value: 25 mg/m ³ , 10 ppm
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.

· **Penetration time of glove material**

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

· **Eye protection:**



Tightly sealed goggles

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9 Physical and Chemical Properties

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

· **General Information**

· **Appearance:**

· Form:	Fluid
· Colour:	Colourless
· Odour:	Phenol-like
· Odour threshold:	Not determined.

· **pH-value:** Not determined.

· **Change in condition**

· Melting point/freezing point:	Undetermined.
· Initial boiling point and boiling range:	62 °C

· **Flash point:** 0 °C

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

· **Ignition temperature:** 425 °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:	19 Vol %

· **Vapour pressure at 20 °C:** 210 hPa

· **Density at 20 °C:** 1.02296 g/cm³

· **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:	70.0 %
· VOC (EC)	70.00 %

· **Solids content:** 0.0 %

· **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.

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- **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:**

67-66-3 CHLOROFORM, REAGENT ACS

Oral	LD50	908 mg/kg (rat)
Dermal	LD50	75 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** No sensitising effects known.
- **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
- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**
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:** Harmful to fish
- **Additional ecological information:**
- **General notes:**
Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
Harmful to aquatic organisms
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

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13 Disposal considerations

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

14 Transport information

<ul style="list-style-type: none"> · UN-Number · ADG, IMDG, IATA 	UN1170
<ul style="list-style-type: none"> · UN proper shipping name · ADG · IMDG · IATA 	1170 ETHANOL SOLUTION (ETHYL ALCOHOL SOLUTION) ETHANOL SOLUTION (ETHYL ALCOHOL SOLUTION) ETHANOL SOLUTION
<ul style="list-style-type: none"> · Transport hazard class(es) · ADG 	<div style="display: flex; align-items: center; gap: 10px;"> </div>
<ul style="list-style-type: none"> · Class · Label 	3 Flammable liquids. 3+6.1
<ul style="list-style-type: none"> · IMDG 	<div style="display: flex; align-items: center; gap: 10px;"> </div>
<ul style="list-style-type: none"> · Class · Label 	3 Flammable liquids. 3/6.1
<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 Flammable liquids. 3 (6.1)
<ul style="list-style-type: none"> · Packing group · ADG, IMDG, IATA 	II
<ul style="list-style-type: none"> · Environmental hazards: 	Not applicable.
<ul style="list-style-type: none"> · Special precautions for user · Danger code (Kemler): · EMS Number: 	Warning: Flammable liquids. 336 F-E,S-D

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· Stowage Category	A
· Transport in bulk according to Annex II of Marpol and the IBC Code	Not applicable.
· Transport/Additional information:	
· ADG	
· Limited quantities (LQ)	1L
· Excepted quantities (EQ)	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· Transport category	2
· Tunnel restriction code	D/E
· IMDG	
· Limited quantities (LQ)	1L
· Excepted quantities (EQ)	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· UN "Model Regulation":	UN 1170 ETHANOL SOLUTION (ETHYL ALCOHOL SOLUTION), 3 (6.1), II

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**

67-66-3	CHLOROFORM, REAGENT ACS	S2, S4, S6
64-19-7	Acetic Acid Glacial	S2, S5, S6

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

· **Hazard pictograms**



GHS02 GHS06 GHS07 GHS08

· **Signal word** Danger

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

CHLOROFORM, REAGENT ACS

Ethyl Alcohol, denatured

Acetic Acid Glacial

· **Hazard statements**

Highly flammable liquid and vapour.

Toxic in contact with skin.

Toxic if inhaled.

Causes skin irritation.

Causes serious eye irritation.

May cause cancer.

Suspected of damaging fertility or the unborn child.

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*May cause drowsiness or dizziness.**Causes damage to organs through prolonged or repeated exposure.***· Precautionary statements***Obtain special instructions before use.**Do not handle until all safety precautions have been read and understood.**Keep away from heat/sparks/open flames/hot surfaces. No smoking.**Ground/bond container and receiving equipment.**Use explosion-proof electrical/ventilating/lighting equipment.**Use only non-sparking tools.**Take precautionary measures against static discharge.**Do not breathe dust/fume/gas/mist/vapours/spray.**Wash thoroughly after handling.**Do not eat, drink or smoke when using this product.**Use only outdoors or in a well-ventilated area.**Wear protective gloves/protective clothing/eye protection/face protection.**IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.**IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.**IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.**Continue rinsing.**IF exposed or concerned: Get medical advice/attention.**Specific treatment (see on this label).**Call a POISON CENTER/doctor if you feel unwell.**Get medical advice/attention if you feel unwell.**Take off immediately all contaminated clothing and wash it before reuse.**If skin irritation occurs: Get medical advice/attention.**If eye irritation persists: Get medical advice/attention.**In case of fire: Use for extinction: CO₂, powder or water spray.**Store in a well-ventilated place. Keep container tightly closed.**Store in a well-ventilated place. Keep cool.**Store locked up.**Dispose of contents/container in accordance with local/regional/national/international regulations.***· Directive 2012/18/EU****· Named dangerous substances - ANNEX I** None of the ingredients is listed.**· Seveso category**

H2 ACUTE TOXIC

P5c FLAMMABLE LIQUIDS

· Qualifying quantity (tonnes) for the application of lower-tier requirements 50 t**· Qualifying quantity (tonnes) for the application of upper-tier requirements** 200 t**· Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.**16 Other information**

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

· Abbreviations and acronyms:*ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)**IMDG: International Maritime Code for Dangerous Goods**IATA: International Air Transport Association**EINECS: European Inventory of Existing Commercial Chemical Substances**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*

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PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
Flam. Liq. 2: Flammable liquids – Category 2
Acute Tox. 3: Acute toxicity – Category 3
Skin Irrit. 2: Skin corrosion/irritation – Category 2
Eye Irrit. 2A: Serious eye damage/eye irritation – Category 2A
Carc. 1A: Carcinogenicity – Category 1A
Repr. 2: Reproductive toxicity – Category 2
STOT SE 3: Specific target organ toxicity (single exposure) – Category 3
STOT RE 1: Specific target organ toxicity (repeated exposure) – Category 1

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1 Identification

- **Product identifier**
- **Trade name:** CARNOY'S FIXATIVE
- **Article number:** 64130-05
- **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 (Dermal) – Category 3

H311 Toxic in contact with skin.

Acute Toxicity (Inhalation) - Category 3

H331 Toxic if inhaled.



GHS08 Health hazard

Carcinogenicity - Category 1A

H350 May cause cancer.

Reproductive Toxicity - Category 2

H361 Suspected of damaging fertility or the unborn child.

Specific Target Organ Toxicity - Repeated Exposure - Category 1

H372 Causes damage to organs through prolonged or repeated exposure.



GHS07

Skin Irritation - Category 2

H315 Causes skin irritation.

Eye Irritation - Category 2A

H319 Causes serious eye irritation.

Specific Target Organ Toxicity - Single Exposure - Category 3

H336 May cause drowsiness or dizziness.

- **Label elements**

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

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· **Hazard pictograms**

GHS02 GHS06 GHS07 GHS08

· **Signal word** *Danger*· **Hazard-determining components of labeling:***CHLOROFORM, REAGENT ACS**Ethyl Alcohol, denatured**Acetic Acid Glacial*· **Hazard statements***Highly flammable liquid and vapour.**Toxic in contact with skin or if inhaled.**Causes skin irritation.**Causes serious eye irritation.**May cause cancer.**Suspected of damaging fertility or the unborn child.**May cause drowsiness or dizziness.**Causes damage to organs through prolonged or repeated exposure.*· **Precautionary statements***Obtain special instructions before use.**Do not handle until all safety precautions have been read and understood.**Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.**Ground and bond container and receiving equipment.**Use explosion-proof [electrical/ventilating/lighting] equipment.**Use non-sparking tools.**Take actions to prevent static discharges.**Do not breathe dust/fume/gas/mist/vapours/spray.**Wash thoroughly after handling.**Do not eat, drink or smoke when using this product.**Use only outdoors or in a well-ventilated area.**Wear protective gloves/protective clothing/eye protection/face protection.**IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].**IF INHALED: Remove person to fresh air and keep comfortable for breathing.**IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.**Continue rinsing.**IF exposed or concerned: Get medical advice/attention.**Call a poison center/doctor if you feel unwell.**Get medical advice/attention if you feel unwell.**Take off contaminated clothing and wash it before reuse.**Specific measures (see on this label).**If skin irritation occurs: Get medical advice/attention.**If eye irritation persists: Get medical advice/attention.**Wash contaminated clothing before reuse.**In case of fire: Use for extinction: CO₂, powder or water spray.**Store in a well-ventilated place. Keep container tightly closed.**Store in a well-ventilated place. Keep cool.**Store locked up.**Dispose of contents/container in accordance with local/regional/national/international regulations.*

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- **Classification system:**
- **NFPA ratings (scale 0 - 4)**



- **HMIS-ratings (scale 0 - 4)**



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	30-60% w/w *
67-66-3	CHLOROFORM, REAGENT ACS	10-30% w/w *
64-19-7	Acetic Acid Glacial	5-10% w/w *

* Actual concentration ranges are withheld as a trade secret.

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.
Remove breathing apparatus only after contaminated clothing have been completely removed.
In case of irregular breathing or respiratory arrest provide artificial respiration.
- **After inhalation:**
Supply fresh air or oxygen; call for 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:** Immediately call a doctor.
- **Information for doctor:**
- **Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

5 Fire-fighting measures

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

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- **Advice for firefighters**
- **Protective equipment:** Mouth respiratory protective device.

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.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** Store in a cool location.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:**
Keep receptacle tightly sealed.
Store in cool, dry conditions in well sealed receptacles.
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
----	----------------------------

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EV	Long-term value: 1,900 mg/m ³ , 1,000 ppm
67-66-3 CHLOROFORM, REAGENT ACS	
EL	Long-term value: 2 ppm IARC 2B; R
EV	Long-term value: 49 mg/m ³ , 10 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.

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:**



Tightly sealed goggles

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Trade name: CARNOY'S FIXATIVE

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9 Physical and chemical properties

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

- **General Information**

- **Appearance:**

Form:	Fluid
Color:	Colorless
Odor:	Phenol-like
Odor threshold:	Not determined.

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

- **Change in condition**

Melting point/Melting range:	Undetermined.
Boiling point/Boiling range:	62 °C

- **Flash point:** 0 °C

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

- **Ignition temperature:** 425 °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:	19 Vol %

- **Vapor pressure at 20 °C:** 210 hPa

- **Density at 20 °C:** 1.02296 g/cm³

- **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: 70.0 %

- Solids content: 0.0 %

- **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.

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- **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:**

67-66-3 CHLOROFORM, REAGENT ACS

Oral	LD50	908 mg/kg (rat)
Dermal	LD50	75 mg/kg (rat)

- **Primary irritant effect:**

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

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

- **Sensitization:** No sensitizing effects known.

- **Additional toxicological information:**

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

Toxic

Harmful

Irritant

- **Carcinogenic categories**

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

64-17-5	Ethyl Alcohol, denatured	I
67-66-3	CHLOROFORM, REAGENT ACS	2B

- **NTP (National Toxicology Program)**

67-66-3	CHLOROFORM, REAGENT ACS	R
---------	-------------------------	---

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:** Harmful to fish

- **Additional ecological information:**

- **General notes:**

Water hazard class 1 (Self-assessment): slightly hazardous for water

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

Harmful to aquatic organisms

- **Results of PBT and vPvB assessment**

- **PBT:** Not applicable.

- **vPvB:** Not applicable.

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

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13 Disposal considerations

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

14 Transport information

- | | |
|---|---|
| · UN-Number | UN1170 |
| · DOT, TDG, IMDG, IATA | UN1170 |
| · UN proper shipping name | Ethanol solutions |
| · DOT | 1170 Ethanol solutions |
| · TDG | ETHANOL SOLUTION (ETHYL ALCOHOL SOLUTION) |
| · IMDG | ETHANOL SOLUTION |
| · IATA | ETHANOL SOLUTION |
| · Transport hazard class(es) | |
| · DOT | |
|   | |
| · Class | 3 Flammable liquids |
| · Label | 3, 6.1 |
| · TDG (Transport dangerous goods): | |
|   | |
| · Class | 3 Flammable liquids |
| · Label | 3+6.1 |
| · IMDG | |
|   | |
| · Class | 3 Flammable liquids |
| · Label | 3/6.1 |
| · IATA | |
|   | |
| · Class | 3 Flammable liquids |

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Trade name: CARNOY'S FIXATIVE

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· Label	3 (6.1)
· Packing group	II
· DOT, TDG, IMDG, IATA	II
· Environmental hazards:	Not applicable.
· Special precautions for user	Warning: Flammable liquids
· Danger code (Kemler):	336
· EMS Number:	F-E,S-D
· Stowage Category	A
· 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: 1 L On cargo aircraft only: 60 L
· TDG	
· Excepted quantities (EQ)	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· IMDG	
· Limited quantities (LQ)	1L
· Excepted quantities (EQ)	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· UN "Model Regulation":	UN 1170 ETHANOL SOLUTIONS, 3 (6.1), II

15 Regulatory information

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

· Section 355 (extremely hazardous substances):

67-66-3 CHLOROFORM, REAGENT ACS

· Section 313 (Specific toxic chemical listings):

67-66-3 CHLOROFORM, REAGENT ACS

· 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

67-66-3 CHLOROFORM, REAGENT ACS

· 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).

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Trade name: CARNOY'S FIXATIVE

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· **Hazard pictograms**

GHS02 GHS06 GHS07 GHS08

· **Signal word** *Danger*· **Hazard-determining components of labeling:***CHLOROFORM, REAGENT ACS**Ethyl Alcohol, denatured**Acetic Acid Glacial*· **Hazard statements***Highly flammable liquid and vapour.**Toxic in contact with skin or if inhaled.**Causes skin irritation.**Causes serious eye irritation.**May cause cancer.**Suspected of damaging fertility or the unborn child.**May cause drowsiness or dizziness.**Causes damage to organs through prolonged or repeated exposure.*· **Precautionary statements***Obtain special instructions before use.**Do not handle until all safety precautions have been read and understood.**Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.**Ground and bond container and receiving equipment.**Use explosion-proof [electrical/ventilating/lighting] equipment.**Use non-sparking tools.**Take actions to prevent static discharges.**Do not breathe dust/fume/gas/mist/vapours/spray.**Wash thoroughly after handling.**Do not eat, drink or smoke when using this product.**Use only outdoors or in a well-ventilated area.**Wear protective gloves/protective clothing/eye protection/face protection.**IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].**IF INHALED: Remove person to fresh air and keep comfortable for breathing.**IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.**Continue rinsing.**IF exposed or concerned: Get medical advice/attention.**Call a poison center/doctor if you feel unwell.**Get medical advice/attention if you feel unwell.**Take off contaminated clothing and wash it before reuse.**Specific measures (see on this label).**If skin irritation occurs: Get medical advice/attention.**If eye irritation persists: Get medical advice/attention.**Wash contaminated clothing before reuse.**In case of fire: Use for extinction: CO₂, powder or water spray.**Store in a well-ventilated place. Keep container tightly closed.**Store in a well-ventilated place. Keep cool.**Store locked up.**Dispose of contents/container in accordance with local/regional/national/international regulations.*

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· Chemical safety assessment: A Chemical Safety Assessment has not been carried out.**16 Other information**

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

· Date of the latest revision of the safety data sheet 09/11/2018 / -**· Abbreviations and acronyms:***IMDG: International Maritime Code for Dangerous Goods**DOT: US Department of Transportation**IATA: International Air Transport Association**EINECS: European Inventory of Existing Commercial Chemical Substances**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)**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 11.09.2018

Revision: 11.09.2018

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

- **1.1 Product identifier**
- **Trade name:** CARNOY'S FIXATIVE
- **Article number:** 64130-05
- **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 H311 Toxic in contact with skin.

Acute Tox. 3 H331 Toxic if inhaled.



GHS08 health hazard

Carc. 2 H351 Suspected of causing cancer.

Repr. 2 H361d Suspected of damaging the unborn child.

STOT RE 1 H372 Causes damage to organs through prolonged or repeated exposure.



GHS07

Skin Irrit. 2 H315 Causes skin irritation.

Eye Irrit. 2 H319 Causes serious eye irritation.

STOT SE 3 H336 May cause drowsiness or dizziness.

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Trade name: CARNOY'S FIXATIVE

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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 GHS06 GHS08

Signal word Danger

Hazard-determining components of labelling:

CHLOROFORM, REAGENT ACS

Acetic Acid Glacial

Hazard statements

- H225 Highly flammable liquid and vapour.
 H311+H331 Toxic in contact with skin or if inhaled.
 H315 Causes skin irritation.
 H319 Causes serious eye irritation.
 H351 Suspected of causing cancer.
 H361d Suspected of damaging the unborn child.
 H336 May cause drowsiness or dizziness.
 H372 Causes damage to organs through prolonged or repeated exposure.

Precautionary statements

- P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
 P241 Use explosion-proof electrical/ventilating/lighting equipment.
 P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
 P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 P405 Store locked up.
 P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

2.3 Other hazards

Results of PBT and vPvB assessment

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

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	>50-≤100%
CAS: 67-66-3 EINECS: 200-663-8	CHLOROFORM, REAGENT ACS Acute Tox. 2, H310; Acute Tox. 3, H331; Carc. 2, H351; Repr. 2, H361d; STOT RE 1, H372; Acute Tox. 4, H302; Skin Irrit. 2, H315; Eye Irrit. 2, H319; STOT SE 3, H336	>25-≤50%

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Trade name: CARNOY'S FIXATIVE

CAS: 64-19-7

Acetic Acid Glacial

(Contd. of page 2)

EINECS: 200-580-7

>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.

Remove breathing equipment only after contaminated clothing have been completely removed.

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

· After inhalation:

Supply fresh air or oxygen; call for 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: Call for a doctor 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: Mouth respiratory protective device.

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.

· 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.

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Trade name: CARNOY'S FIXATIVE

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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:** Store in a cool location.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:**
 Keep container tightly sealed.
 Store in cool, dry conditions in well sealed receptacles.
 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
67-66-3 CHLOROFORM, REAGENT ACS	
WEL	Long-term value: 9.9 mg/m ³ , 2 ppm
Sk	

- **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.

- **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

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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:**



Tightly sealed goggles

SECTION 9: Physical and chemical properties

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

- **General Information**

- **Appearance:**

Form:	Fluid
Colour:	Colourless
Odour:	Phenol-like
Odour threshold:	Not determined.

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

- **Change in condition**

Melting point/freezing point:	Undetermined.
Initial boiling point and boiling range:	62 °C

- **Flash point:** 0 °C

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

- **Ignition temperature:** 425 °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:	19 Vol %

- **Vapour pressure at 20 °C:** 210 hPa

- **Density at 20 °C:** 1.02296 g/cm³

- **Relative density** Not determined.

- **Vapour density** Not determined.

- **Evaporation rate** Not determined.

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Trade name: CARNOY'S FIXATIVE

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· 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:	70.0 %
VOC (EC)	70.00 %
· Solids content:	0.0 %
· 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 in contact with skin or if inhaled.

· LD/LC50 values relevant for classification:

67-66-3 CHLOROFORM, REAGENT ACS

Oral	LD50	908 mg/kg (rat)
------	------	-----------------

Dermal	LD50	75 mg/kg (rat)
--------	------	----------------

· Primary irritant effect:

· Skin corrosion/irritation

Causes skin irritation.

· Serious eye damage/irritation

Causes serious eye irritation.

· Respiratory or skin sensitisation

Based on available data, the classification criteria are not met.

· CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)

· Germ cell mutagenicity

Based on available data, the classification criteria are not met.

· Carcinogenicity

Suspected of causing cancer.

· Reproductive toxicity

Suspected of damaging the unborn child.

· STOT-single exposure

May cause drowsiness or dizziness.

· STOT-repeated exposure

Causes damage to organs through prolonged or repeated exposure.

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· **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:** Harmful to fish
- **Additional ecological information:**
- **General notes:**
Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
Harmful to 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** UN1170
- **14.2 UN proper shipping name**
- **ADR** 1170 ETHANOL SOLUTION (ETHYL ALCOHOL SOLUTION)
- **IMDG** ETHANOL SOLUTION (ETHYL ALCOHOL SOLUTION)
- **IATA** ETHANOL SOLUTION
- **14.3 Transport hazard class(es)**
- **ADR**
- 
- **Class** 3 Flammable liquids.

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· Label	3+6.1
· IMDG	
· Class	3 Flammable liquids.
· Label	3/6.1
· IATA	
· Class	3 Flammable liquids.
· Label	3 (6.1)
· 14.4 Packing group	II
· ADR, IMDG, IATA	II
· 14.5 Environmental hazards:	Not applicable.
· 14.6 Special precautions for user	Warning: Flammable liquids.
· Danger code (Kemler):	336
· EMS Number:	F-E,S-D
· Stowage Category	A
· 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code	Not applicable.
· Transport/Additional information:	
· ADR	
· Limited quantities (LQ)	1L
· Excepted quantities (EQ)	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· Transport category	2
· Tunnel restriction code	D/E
· IMDG	
· Limited quantities (LQ)	1L
· Excepted quantities (EQ)	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· UN "Model Regulation":	UN 1170 ETHANOL SOLUTION (ETHYL ALCOHOL SOLUTION), 3 (6.1), II

SECTION 15: Regulatory information

- **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **Directive 2012/18/EU**
- **Named dangerous substances - ANNEX I** None of the ingredients is listed.

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- **Seveso category**
H2 ACUTE TOXIC
P5c FLAMMABLE LIQUIDS
- **Qualifying quantity (tonnes) for the application of lower-tier requirements** 50 t
- **Qualifying quantity (tonnes) for the application of upper-tier requirements** 200 t
- **REGULATION (EC) No 1907/2006 ANNEX XVII** Conditions of restriction: 3, 32

- **Regulation (EU) No 649/2012**

67-66-3 CHLOROFORM, REAGENT ACS

Annex I Part I

- **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.
- H302 Harmful if swallowed.
- H310 Fatal in contact with skin.
- H312 Harmful in contact with skin.
- H314 Causes severe skin burns and eye damage.
- H315 Causes skin irritation.
- H319 Causes serious eye irritation.
- H331 Toxic if inhaled.
- H336 May cause drowsiness or dizziness.
- H351 Suspected of causing cancer.
- H361d Suspected of damaging the unborn child.
- H372 Causes damage to organs through prolonged or repeated exposure.

- **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
 Flam. Liq. 2: Flammable liquids – Category 2
 Flam. Liq. 3: Flammable liquids – Category 3
 Acute Tox. 4: Acute toxicity – Category 4
 Acute Tox. 2: Acute toxicity – Category 2
 Acute Tox. 3: Acute toxicity – Category 3
 Skin Corr. 1A: Skin corrosion/irritation – Category 1A
 Skin Irrit. 2: Skin corrosion/irritation – Category 2
 Eye Irrit. 2: Serious eye damage/eye irritation – Category 2
 Carc. 2: Carcinogenicity – Category 2
 Repr. 2: Reproductive toxicity – Category 2
 STOT SE 3: Specific target organ toxicity (single exposure) – Category 3
 STOT RE 1: Specific target organ toxicity (repeated exposure) – Category 1

Veiligheidsinformatieblad

volgens 1907/2006/EG, Artikel 31

datum van de druk: 11.09.2018

Herziening van: 11.09.2018

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

- **1.1 Productidentificatie**
- **Handelsnaam:** CARNOY'S FIXATIVE
- **Artikelnummer:** 64130-05
- **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 H311 Giftig bij contact met de huid.

Acute Tox. 3 H331 Giftig bij inademing.



GHS08 gezondheidsgevaar

Carc. 2 H351 Verdacht van het veroorzaken van kanker.

Repr. 2 H361d Wordt ervan verdacht het ongeboren kind te schaden.

STOT RE 1 H372 Veroorzaakt schade aan organen bij langdurige of herhaalde blootstelling.

(Vervolg op blz. 2)

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(Vervolg van blz. 1)



GHS07

Skin Irrit. 2 H315 Veroorzaakt huidirritatie.
 Eye Irrit. 2 H319 Veroorzaakt ernstige oogirritatie.
 STOT SE 3 H336 Kan slaperigheid of duizeligheid veroorzaken.

· 2.2 Etiketteringselementen

· Etikettering overeenkomstig Verordening (EG) nr. 1272/2008

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

· Gevarenpictogrammen



GHS02 GHS06 GHS08

· Signaalwoord Gevaar

· Gevaaraanduidende componenten voor de etikettering:

trichloormethaan
 azijnzuur

· Gevarenaanduidingen

H225 Licht ontvlambare vloeistof en damp.
 H311+H331 Giftig bij contact met de huid en bij inademing.
 H315 Veroorzaakt huidirritatie.
 H319 Veroorzaakt ernstige oogirritatie.
 H351 Verdacht van het veroorzaken van kanker.
 H361d Wordt ervan verdacht het ongeboren kind te schaden.
 H336 Kan slaperigheid of duizeligheid veroorzaken.
 H372 Veroorzaakt schade aan organen bij langdurige of herhaalde blootstelling.

· Veiligheidsaanbevelingen

P210 Verwijderd houden van warmte, hete oppervlakken, vonken, open vuur en andere ontstekingsbronnen. Niet roken.
 P241 Explosieveilige elektrische/ventilatie-/verlichtings- apparatuur gebruiken.
 P303+P361+P353 BIJ CONTACT MET DE HUID (of het haar): verontreinigde kleding onmiddellijk uittrekken. Huid met water afspoelen/afdouchen.
 P305+P351+P338 BIJ CONTACT MET DE OGEN: voorzichtig afspoelen met water gedurende een aantal minuten; contactlenzen verwijderen, indien mogelijk; blijven spoelen.
 P405 Achter slot bewaren.
 P501 De inhoud en de verpakking verwerken volgens de plaatselijke/regionale/nationale/internationale voorschriften.

· 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 ongevaarlijke bijmengingen.

(Vervolg op blz. 3)

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· Gevaarlijke inhoudstoffen:		
CAS: 64-17-5 EINECS: 200-578-6	ethanol Flam. Liq. 2, H225	>50-≤100%
CAS: 67-66-3 EINECS: 200-663-8	trichloormethaan Acute Tox. 2, H310; Acute Tox. 3, H331; Carc. 2, H351; Repr. 2, H361d; STOT RE 1, H372; Acute Tox. 4, H302; Skin Irrit. 2, H315; Eye Irrit. 2, H319; STOT SE 3, H336	>25-≤50%
CAS: 64-19-7 EINECS: 200-580-7	azijnzuur Flam. Liq. 3, H226; Skin Corr. 1A, H314; Acute Tox. 4, H312	>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.

Ademhalingstoestel pas afnemen nadat de verontreinigde kleding verwijderd is.

Bij onregelmatige ademhaling of ademstilstand kunstmatige ademhaling toepassen.

· **Na het inademen:**

Verse lucht of zuurstof toedienen; deskundige medische hulp invoeren.

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:** Onmiddellijk arts 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.· **5.2 Speciale gevaren die door de stof of het mengsel worden veroorzaakt**

Geen verdere relevante informatie verkrijgbaar.

· **5.3 Advies voor brandweerlieden**· **Speciale beschermende kleding:** Ademhalingstoestel aantrekken.

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.

(Vervolg op blz. 4)

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*Met veel water verdunnen.**Niet in de riolering/het oppervlaktewater/het grondwater laten terecht komen.***· 6.3 InsluTINGS- 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:** *Op een koele plaats bewaren.***· Informatie m.b.t. gezamenlijke opslag:** *Niet noodzakelijk.***· Verdere inlichtingen over eisen m.b.t. de opslag:***Tanks ondoordringbaar gesloten houden.**Koel en droog bewaren in goed gesloten vaten.**Tegen hitte en directe zonnestrallen 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.***· 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/m³, 990 ppm**Lange termijn waarde: 260 mg/m³, 35 ppm***67-66-3 trichloormethaan**WGW | *Korte termijn waarde: 25 mg/m³, 5 ppm**Lange termijn waarde: 5 mg/m³, 1 ppm***64-19-7 azijnzuur**WGW | *Lange termijn waarde: 25 mg/m³, 10 ppm***· Aanvullende gegevens:** *Als basis dienden lijsten die bij opstelling geldig waren.*

(Vervolg op blz. 5)

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- **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:**



Nauw aansluitende veiligheidsbril

RUBRIEK 9: Fysische en chemische eigenschappen

- **9.1 Informatie over fysische en chemische basiseigenschappen**
- **Algemene gegevens**
- **Voorkomen:**

Vorm:	Vloeibaar
Kleur:	Kleurloos
- **Geur:** Fenolachtig
- **Geurdrempelwaarde:** Niet bepaald.
- **pH-waarde:** Niet bepaald.
- **Toestandsverandering**

Smelt-/vriespunt:	Niet bepaald.
Beginkookpunt en kooktraject:	62 °C
- **Vlampunt:** 0 °C
- **Ontvlambaarheid (vast, gas):** Niet bruikbaar.

(Vervolg op blz. 6)

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· Ontstekingstemperatuur:	425 °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:	19 Vol %
· Dampspanning bij 20 °C:	210 hPa
· Dichtheid bij 20 °C:	1,02296 g/cm ³
· 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:	70,0 %
VOC (EG)	70,00 %
Gehalte aan vaste bestanddelen:	0,0 %
· 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.
- **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 contact met de huid en bij inademing.

Indelingsrelevantie LD/LC50-waarden:

67-66-3 trichloormethaan

Oraal	LD50	908 mg/kg (rat)
Dermaal	LD50	75 mg/kg (rat)

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- **Primaire aandoening:**
- **Huidcorrosie/-irritatie**
Veroorzaakt huidirritatie.
- **Ernstig oogletsel/oogirritatie**
Veroorzaakt ernstige oogirritatie.
- **Sensibilisatie van de luchtwegen/de huid**
Gebaseerd op beschikbare gegevens; aan de indelingscriteria is niet voldaan.
- **CMR-effecten (kankerverwekkendheid, mutageniteit en giftigheid voor de voortplanting)**
- **Mutageniteit in geslachtscellen** Gebaseerd op beschikbare gegevens; aan de indelingscriteria is niet voldaan.
- **Kankerverwekkendheid**
Verdacht van het veroorzaken van kanker.
- **Giftigheid voor de voortplanting**
Wordt ervan verdacht het ongeboren kind te schaden.
- **STOT bij eenmalige blootstelling**
Kan slaperigheid of duizeligheid veroorzaken.
- **STOT bij herhaalde blootstelling**
Veroorzaakt schade aan organen bij langdurige of herhaalde blootstelling.
- **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:** Schadelijk voor vissen.
- **Verdere ecologische informatie:**
- **Algemene informatie:**
Waterbezwaarlijkheid (NL): B(4) Weinig schadelijk voor in water levende organismen
Gevaar voor water klasse 1 (D) (Zelfclassificatie): gevaar voor water klein
Niet onverdund of in grote hoeveelheden lozen in grondwater, in oppervlaktewater of in de riolering.
schadelijk voor in het water levende organismen
- **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.

-NL-

(Vervolg op blz. 8)

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RUBRIEK 14: Informatie met betrekking tot het vervoer

· 14.1 VN-nummer · ADR, IMDG, IATA	UN1170
· 14.2 Juiste ladingnaam overeenkomstig de modelreglementen van de VN · ADR · IMDG · IATA	1170 ETHANOL, OPLOSSING (ETHYLALCOHOL, OPLOSSING) ETHANOL SOLUTION (ETHYL ALCOHOL SOLUTION) ETHANOL SOLUTION
· 14.3 Transportgevarenklasse(n) · ADR	
 	
· klasse · Etiket	3 Brandbare vloeistoffen 3+6.1
· IMDG	
 	
· Class · Label	3 Brandbare vloeistoffen 3/6.1
· IATA	
 	
· Class · Label	3 Brandbare vloeistoffen 3 (6.1)
· 14.4 Verpakkingsgroep: · ADR, IMDG, IATA	II
· 14.5 Milieugevaren:	Niet bruikbaar.
· 14.6 Bijzondere voorzorgen voor de gebruiker · Kemler-getal: · EMS-nummer: · Stowage Category	Waarschuwing: Brandbare vloeistoffen 336 F-E,S-D A
· 14.7 Vervoer in bulk overeenkomstig bijlage II bij Marpol en de IBC-code	Niet bruikbaar.
· Transport/verdere gegevens:	
· ADR · Beperkte hoeveelheden (LQ) · Uitgezonderde hoeveelheden (EQ) · Vervoerscategorie	1L Code: E2 Grootste netto hoeveelheid per binnenverpakking: 30 ml Grootste netto hoeveelheid per buitenverpakking: 500 ml 2

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· 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 1170 ETHANOL, OPLOSSING (ETHYLALCOHOL, OPLOSSING), 3 (6.1), II

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	
· 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
67-66-3	trichloormethaan	2
· 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 geen der bestanddelen staat op de lijst.		
· Seveso-categorie		
H2 ACUUT TOXISCH		
P5c ONTVLAMBARE VLOEISTOFFEN		
· Drempelwaarde (ton) voor toepassing van voorschriften voor lagedrempelinrichtingen 50 t		
· Drempelwaarde (ton) voor toepassing van voorschriften voor hogedrempelinrichtingen 200 t		
· Verordening (EG) nr. 1907/2006 BIJLAGE XVII Beperkingsvoorwaarden: 3, 32		
· Verordening (EU) Nr. 649/2012		
67-66-3	trichloormethaan	Annex I Part I
· Nationale voorschriften:		
· Gevaarklasse v. water: Waterbezwaarlijkheid (NL): B(4) Weinig schadelijk voor in water levende organismen		
· 15.2 Chemischeveiligheidsbeoordeling: Een chemische veiligheidsbeoordeling is niet uitgevoerd.		

RUBRIEK 16: Overige informatie

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

- **Relevante zinnen**
- H225 Licht ontvlambare vloeistof en damp.
- H226 Ontvlambare vloeistof en damp.
- H302 Schadelijk bij inslikken.

(Vervolg op blz. 10)

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- H310 Dodelijk bij contact met de huid.
- H312 Schadelijk bij contact met de huid.
- H314 Veroorzaakt ernstige brandwonden en oogletsel.
- H315 Veroorzaakt huidirritatie.
- H319 Veroorzaakt ernstige oogirritatie.
- H331 Giftig bij inademing.
- H336 Kan slaperigheid of duizeligheid veroorzaken.
- H351 Verdacht van het veroorzaken van kanker.
- H361d Wordt ervan verdacht het ongeboren kind te schaden.
- H372 Veroorzaakt schade aan organen bij langdurige of herhaalde blootstelling.

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

Acute Tox. 4: Acute toxiciteit – Categorie 4

Acute Tox. 2: Acute toxiciteit – Categorie 2

Acute Tox. 3: Acute toxiciteit – Categorie 3

Skin Corr. 1A: Huidcorrosie/-irritatie – Categorie 1A

Skin Irrit. 2: Huidcorrosie/-irritatie – Categorie 2

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

Carc. 2: Kankerverwekkendheid – Categorie 2

Repr. 2: Voortplantingstoxiciteit – Categorie 2

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

STOT RE 1: Specifieke doelorgaantoxiciteit bij herhaalde blootstelling – Categorie 1

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

- **1.1 Identificateur de produit**
- **Nom du produit:** CARNOY'S FIXATIVE
- **Code du produit:** 64130-05
- **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 H311 Toxique par contact cutané.

Acute Tox. 3 H331 Toxique par inhalation.



GHS08 danger pour la santé

Carc. 2 H351 Susceptible de provoquer le cancer.

Repr. 2 H361d Susceptible de nuire au fœtus.

STOT RE 1 H372 Risque avéré d'effets graves pour les organes à la suite d'expositions répétées ou d'une exposition prolongée.



GHS07

Skin Irrit. 2 H315 Provoque une irritation cutanée.

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

STOT SE 3 H336 Peut provoquer somnolence ou vertiges.

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- 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 GHS06 GHS08

- **Mention d'avertissement** Danger
- **Composants dangereux déterminants pour l'étiquetage:**
trichlorométhane
acide acétique
- **Mentions de danger**
H225 Liquide et vapeurs très inflammables.
H311+H331 Toxique par contact cutané ou par inhalation.
H315 Provoque une irritation cutanée.
H319 Provoque une sévère irritation des yeux.
H351 Susceptible de provoquer le cancer.
H361d Susceptible de nuire au fœtus.
H336 Peut provoquer somnolence ou vertiges.
H372 Risque avéré d'effets graves pour les organes à la suite d'expositions répétées ou d'une exposition prolongée.
- **Conseils de prudence**
P210 Tenir à l'écart de la chaleur, des surfaces chaudes, des étincelles, des flammes nues et de toute autre source d'inflammation. Ne pas fumer.
P241 Utiliser du matériel électrique/de ventilation/d'éclairage antidéflagrant.
P303+P361+P353 EN CAS DE CONTACT AVEC LA PEAU (ou les cheveux): Enlever immédiatement tous les vêtements contaminés. Rincer la peau à l'eau/Se doucher.
P305+P351+P338 EN CAS DE CONTACT AVEC LES YEUX: rincer avec précaution à l'eau pendant plusieurs minutes. Enlever les lentilles de contact si la victime en porte et si elles peuvent être facilement enlevées. Continuer à rincer.
P405 Garder sous clef.
P501 Éliminer le contenu/réceptacle conformément à la réglementation locale/régionale/nationale/internationale.
- 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	>50-≤100%
CAS: 67-66-3 EINECS: 200-663-8	trichlorométhane Acute Tox. 2, H310; Acute Tox. 3, H331; Carc. 2, H351; Repr. 2, H361d; STOT RE 1, H372; Acute Tox. 4, H302; Skin Irrit. 2, H315; Eye Irrit. 2, H319; STOT SE 3, H336	>25-≤50%

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Nom du produit: CARNOY'S FIXATIVE

CAS: 64-19-7

acide acétique

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EINECS: 200-580-7

Flam. Liq. 3, H226; Skin Corr. 1A, H314; Acute Tox. 4, H312

>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.

Ne retirer la protection respiratoire qu'après avoir retiré les vêtements contaminés.

Respiration artificielle dans le cas d'une respiration irrégulière ou d'un arrêt respiratoire.

· Après inhalation:

Donner de l'air frais ou de l'oxygène; demander d'urgence une assistance médicale.

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: Consulter immédiatement un médecin.

· 4.2 Principaux symptômes et effets, aigus et différés Pas d'autres informations importantes disponibles.

· 4.3 Indication des éventuels soins médicaux immédiats et traitements particuliers nécessaires

Pas d'autres informations importantes disponibles.

RUBRIQUE 5: Mesures de lutte contre l'incendie

· 5.1 Moyens d'extinction

· Moyens d'extinction:

CO₂, poudre d'extinction ou eau pulvérisée. Combattre les foyers importants avec de l'eau pulvérisée ou de la mousse résistant à l'alcool.

· 5.2 Dangers particuliers résultant de la substance ou du mélange

Pas d'autres informations importantes disponibles.

· 5.3 Conseils aux pompiers

· Equipement spécial de sécurité: Porter un appareil de protection respiratoire.

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.

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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:** Stocker dans un endroit frais.
- **Indications concernant le stockage commun:** Pas nécessaire.
- **Autres indications sur les conditions de stockage:**
Tenir les emballages hermétiquement fermés.
Stocker au frais et au sec dans des fûts bien fermés.
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.

- **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
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67-66-3 trichlorométhane

VME	Valeur momentanée: 250 mg/m ³ , 50 ppm Valeur à long terme: 10 mg/m ³ , 2 ppm C2, (11), risque de pénétration percutanée
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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.

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- **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 hermétiques

RUBRIQUE 9: Propriétés physiques et chimiques

- **9.1 Informations sur les propriétés physiques et chimiques essentielles**

- **Indications générales**

- **Aspect:**

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

- **valeur du pH:** Non déterminé.

- **Changement d'état**

Point de fusion/point de congélation:	Non déterminé.
Point initial d'ébullition et intervalle d'ébullition:	62 °C

- **Point d'éclair** 0 °C

- **Inflammabilité (solide, gaz):** Non applicable.

- **Température d'inflammation:** 425 °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 %
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Supérieure:	19 Vol %
· Pression de vapeur à 20 °C:	210 hPa
· Densité à 20 °C:	1,02296 g/cm ³
· Densité relative	Non déterminé.
· Densité de vapeur:	Non déterminé.
· Taux d'évaporation:	Non déterminé.
· Solubilité dans/miscibilité avec l'eau:	Entièrement miscible
· Coefficient de partage: n-octanol/eau:	Non déterminé.
· Viscosité:	
Dynamique:	Non déterminé.
Cinématique:	Non déterminé.
· Teneur en solvants:	
Solvants organiques:	70,0 %
VOC (CE)	70,00 %
· Teneur en substances solides:	0,0 %
· 9.2 Autres informations	Pas d'autres informations importantes disponibles.

RUBRIQUE 10: Stabilité et réactivité

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

RUBRIQUE 11: Informations toxicologiques

- **11.1 Informations sur les effets toxicologiques**
- **Toxicité aiguë**
Toxique par contact cutané ou par inhalation.

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

67-66-3 trichlorométhane

Oral	LD50	908 mg/kg (rat)
Dermique	LD50	75 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**
Compte tenu des données disponibles, les critères de classification ne sont pas remplis.
- **Effets CMR (cancérogène, mutagène et toxique pour la reproduction)**
- **Mutagenicité sur les cellules germinales**
Compte tenu des données disponibles, les critères de classification ne sont pas remplis.

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- **Cancérogénicité**
Susceptible de provoquer le cancer.
- **Toxicité pour la reproduction**
Susceptible de nuire au fœtus.
- **Toxicité spécifique pour certains organes cibles - exposition unique**
Peut provoquer somnolence ou vertiges.
- **Toxicité spécifique pour certains organes cibles - exposition répétée**
Risque avéré d'effets graves pour les organes à la suite d'expositions répétées ou d'une exposition prolongée.
- **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:** Nocif pour les poissons.
- **Autres indications écologiques:**
- **Indications générales:**
Catégorie de pollution des eaux 1 (D) (Classification propre): peu polluant
Ne pas laisser le produit, non dilué ou en grande quantité, pénétrer la nappe phréatique, les eaux ou les canalisations.
Nocif pour les organismes aquatiques.
- **12.5 Résultats des évaluations PBT et VPVB**
- **PBT:** Non applicable.
- **vPvB:** Non applicable.
- **12.6 Autres effets néfastes** Pas d'autres informations importantes disponibles.

RUBRIQUE 13: Considérations relatives à l'élimination

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

RUBRIQUE 14: Informations relatives au transport

- | | |
|--|---|
| · 14.1 Numéro ONU | |
| · ADR, IMDG, IATA | UN1170 |
| · 14.2 Désignation officielle de transport de l'ONU | |
| · ADR | 1170 ÉTHANOL EN SOLUTION (ALCOOL ÉTHYLIQUE EN SOLUTION) |
| · IMDG | ETHANOL SOLUTION (ETHYL ALCOHOL SOLUTION) |
| · IATA | ETHANOL SOLUTION |

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

· **ADR**



· **Classe** 3 Liquides inflammables.
 · **Étiquette** 3+6.1

· **IMDG**



· **Class** 3 Liquides inflammables.
 · **Label** 3/6.1

· **IATA**



· **Class** 3 Liquides inflammables.
 · **Label** 3 (6.1)

· **14.4 Groupe d'emballage**

· **ADR, IMDG, IATA** II

· **14.5 Dangers pour l'environnement:** Non applicable.

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

Attention: Liquides inflammables.

· **Indice Kemler:** 336
 · **No EMS:** F-E,S-D
 · **Stowage Category** A

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

Non applicable.

· **Indications complémentaires de transport:**

· **ADR**

· **Quantités limitées (LQ)** 1L
 · **Quantités exceptées (EQ)** Code: E2
 Quantité maximale nette par emballage intérieur: 30 ml
 Quantité maximale nette par emballage extérieur: 500 ml

· **Catégorie de transport** 2
 · **Code de restriction en tunnels** D/E

· **IMDG**

· **Limited quantities (LQ)** 1L

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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
· "Règlement type" de l'ONU:	UN 1170 ÉTHANOL EN SOLUTION (ALCOOL ÉTHYLIQUE EN SOLUTION), 3 (6.1), II

RUBRIQUE 15: Informations relatives à la réglementation

- **15.1 Réglementations/législation particulières à la substance ou au mélange en matière de sécurité, de santé et d'environnement**
- Directive 2012/18/UE
- **Substances dangereuses désignées - ANNEXE I** Aucun des composants n'est compris.
- **Catégorie SEVESO**
H2 TOXICITÉ AIGUË
P5c LIQUIDES INFLAMMABLES
- **Quantité seuil (tonnes) pour l'application des exigences relatives au seuil bas** 50 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, 32

· **Règlement (CE) N° 649/2012**

67-66-3 trichlorométhane

Annex I Part I

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

RUBRIQUE 16: Autres informations

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

· **Phrases importantes**

- H225 Liquide et vapeurs très inflammables.
- H226 Liquide et vapeurs inflammables.
- H302 Nocif en cas d'ingestion.
- H310 Mortel par contact cutané.
- H312 Nocif par contact cutané.
- H314 Provoque des brûlures de la peau et des lésions oculaires graves.
- H315 Provoque une irritation cutanée.
- H319 Provoque une sévère irritation des yeux.
- H331 Toxique par inhalation.
- H336 Peut provoquer somnolence ou vertiges.
- H351 Susceptible de provoquer le cancer.
- H361d Susceptible de nuire au fœtus.
- H372 Risque avéré d'effets graves pour les organes à la suite d'expositions répétées ou d'une exposition prolongée.

· **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

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*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**Acute Tox. 4: Toxicité aiguë – Catégorie 4**Acute Tox. 2: Toxicité aiguë – Catégorie 2**Acute Tox. 3: Toxicité aiguë – Catégorie 3**Skin Corr. 1A: Corrosion cutanée/irritation cutanée – Catégorie 1A**Skin Irrit. 2: Corrosion cutanée/irritation cutanée – Catégorie 2**Eye Irrit. 2: Lésions oculaires graves/irritation oculaire – Catégorie 2**Carc. 2: Cancérogénicité – Catégorie 2**Repr. 2: Toxicité pour la reproduction – Catégorie 2**STOT SE 3: Toxicité spécifique pour certains organes cibles (exposition unique) – Catégorie 3**STOT RE 1: Toxicité spécifique pour certains organes cibles (exposition répétée) – Catégorie 1*

FR

Sicherheitsdatenblatt gemäß 1907/2006/EG, Artikel 31

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

- **1.1 Produktidentifikator**
- **Handelsname:** CARNOY'S FIXATIVE
- **Artikelnummer:** 64130-05
- **1.2 Relevante identifizierte Verwendungen des Stoffs oder Gemischs und Verwendungen, von denen abgeraten wird**
Keine weiteren relevanten Informationen verfügbar.
- **Verwendung des Stoffes / des Gemisches** Laborchemikalien
- **1.3 Einzelheiten zum Lieferanten, der das Sicherheitsdatenblatt bereitstellt**
- **Hersteller/Lieferant:**
Electron Microscopy Sciences
1560 Industry Road
USA-Hatfield, PA 19440
Tel: 215-412-8400 Fax: 215-412-8450
email: sgkcck@aol.com
www.emsdiasum.com

Science Services GmbH
Unterhachinger Str. 75
81737 München Germany

Tel: +49(0)89 18 93 668-0
safety@scienceservices.de

Deutschland: +49 (0)89 19240, 24h Giftnotruf Munchen, www.toxinfo.org
Osterreich: +43 1406 43 43, Gesundheit Osterreich GmbH, 24 h
- **Auskunftgebender Bereich:** Product safety department
- **1.4 Notrufnummer:**
ChemTrec 1-800-424-9300 Contract CCN7661
1-703-527-3887

ABSCHNITT 2: Mögliche Gefahren

- **2.1 Einstufung des Stoffs oder Gemischs**
- **Einstufung gemäß Verordnung (EG) Nr. 1272/2008**



GHS02 Flamme

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



GHS06 Totenkopf mit gekreuzten Knochen

Acute Tox. 3 H311 Giftig bei Hautkontakt.

Acute Tox. 3 H331 Giftig bei Einatmen.



GHS08 Gesundheitsgefahr

Carc. 2 H351 Kann vermutlich Krebs erzeugen.

Repr. 2 H361d Kann vermutlich das Kind im Mutterleib schädigen.

STOT RE 1 H372 Schädigt die Organe bei längerer oder wiederholter Exposition.

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GHS07

Skin Irrit. 2 H315 Verursacht Hautreizungen.
 Eye Irrit. 2 H319 Verursacht schwere Augenreizung.
 STOT SE 3 H336 Kann Schläfrigkeit und Benommenheit verursachen.

· 2.2 Kennzeichnungselemente

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

Das Produkt ist gemäß CLP-Verordnung eingestuft und gekennzeichnet.

· Gefahrenpiktogramme



GHS02 GHS06 GHS08

· Signalwort Gefahr

· Gefahrbestimmende Komponenten zur Etikettierung:

Trichlormethan

Essigsäure

· Gefahrenhinweise

H225 Flüssigkeit und Dampf leicht entzündbar.
 H311+H331 Giftig bei Hautkontakt oder Einatmen.
 H315 Verursacht Hautreizungen.
 H319 Verursacht schwere Augenreizung.
 H351 Kann vermutlich Krebs erzeugen.
 H361d Kann vermutlich das Kind im Mutterleib schädigen.
 H336 Kann Schläfrigkeit und Benommenheit verursachen.
 H372 Schädigt die Organe bei längerer oder wiederholter Exposition.

· Sicherheitshinweise

P210 Von Hitze, heißen Oberflächen, Funken, offenen Flammen und anderen Zündquellen fernhalten. Nicht rauchen.
 P241 Explosionsgeschützte elektrische Geräte/Lüftungsanlagen/Beleuchtungsanlagen verwenden.
 P303+P361+P353 BEI BERÜHRUNG MIT DER HAUT (oder dem Haar): Alle kontaminierten Kleidungsstücke sofort ausziehen. Haut mit Wasser abwaschen/duschen.
 P305+P351+P338 BEI KONTAKT MIT DEN AUGEN: Einige Minuten lang behutsam mit Wasser spülen. Eventuell vorhandene Kontaktlinsen nach Möglichkeit entfernen. Weiter spülen.
 P405 Unter Verschluss aufbewahren.
 P501 Entsorgung des Inhalts / des Behälters gemäß den örtlichen / regionalen / nationalen / internationalen Vorschriften.

· 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.

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· Gefährliche Inhaltsstoffe:		
CAS: 64-17-5 EINECS: 200-578-6	Ethanol Flam. Liq. 2, H225	>50-≤100%
CAS: 67-66-3 EINECS: 200-663-8	Trichlormethan Acute Tox. 2, H310; Acute Tox. 3, H331; Carc. 2, H351; Repr. 2, H361d; STOT RE 1, H372; Acute Tox. 4, H302; Skin Irrit. 2, H315; Eye Irrit. 2, H319; STOT SE 3, H336	>25-≤50%
CAS: 64-19-7 EINECS: 200-580-7	Essigsäure Flam. Liq. 3, H226; Skin Corr. 1A, H314; Acute Tox. 4, H312	>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.

Atemschutz erst nach Entfernen verunreinigter Kleidungsstücke abnehmen.

Bei unregelmäßiger Atmung oder Atemstillstand künstliche Beatmung.

· **Nach Einatmen:**

Frischlucht- oder Sauerstoffzufuhr; ärztliche Hilfe in Anspruch nehmen.

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:** Sofort Arzt aufsuchen.

· 4.2 Wichtigste akute und verzögert auftretende Symptome und Wirkungen

Keine weiteren relevanten Informationen verfügbar.

· 4.3 Hinweise auf ärztliche Soforthilfe oder Spezialbehandlung

Keine weiteren relevanten Informationen verfügbar.

ABSCHNITT 5: Maßnahmen zur Brandbekämpfung

· 5.1 Löschmittel

· **Geeignete Löschmittel:**

CO₂, Löschpulver oder Wassersprühstrahl. Größeren Brand mit Wassersprühstrahl oder alkoholbeständigem Schaum bekämpfen.

· 5.2 Besondere vom Stoff oder Gemisch ausgehende Gefahren

Keine weiteren relevanten Informationen verfügbar.

· 5.3 Hinweise für die Brandbekämpfung

· **Besondere Schutzausrüstung:** Atemschutzgerät anlegen.

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.

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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:** An einem kühlen Ort lagern.

· **Zusammenlagerungshinweise:** Nicht erforderlich.

· **Weitere Angaben zu den Lagerbedingungen:**

Behälter dicht geschlossen halten.

In gut verschlossenen Gebinden kühl und trocken lagern.

Vor Hitze und direkter Sonnenbestrahlung schützen.

· **Lagerklasse:**

· **Klassifizierung nach Betriebsicherheitsverordnung (BetrSichV):** Entzündbare Flüssigkeiten

· **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: 380 mg/m ³ , 200 ml/m ³ 4(II);DFG, Y
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67-66-3 Trichlormethan

AGW	Langzeitwert: 2,5 mg/m ³ , 0,5 ml/m ³ 2(II);DFG, EU, Y, H, X
-----	---

64-19-7 Essigsäure

AGW	Langzeitwert: 25 mg/m ³ , 10 ml/m ³ 2(I);DFG, EU, Y
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- **Zusätzliche Hinweise:** Als Grundlage dienen die bei der Erstellung gültigen Listen.
- **8.2 Begrenzung und Überwachung der Exposition**
- **Persönliche Schutzausrüstung:**
- **Allgemeine Schutz- und Hygienemaßnahmen:**
 Von Nahrungsmitteln, Getränken und Futtermitteln fernhalten.
 Beschmutzte, getränkte Kleidung sofort ausziehen.
 Vor den Pausen und bei Arbeitsende Hände waschen.
 Getrennte Aufbewahrung der Schutzkleidung.
 Berührung mit den Augen und der Haut vermeiden.
- **Atemschutz:**
 Bei kurzzeitiger oder geringer Belastung Atemfiltergerät; bei intensiver bzw. längerer Exposition umluftunabhängiges 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.
- **Augenschutz:**



Dichtschließende Schutzbrille

ABSCHNITT 9: Physikalische und chemische Eigenschaften

- **9.1 Angaben zu den grundlegenden physikalischen und chemischen Eigenschaften**
- **Allgemeine Angaben**
- **Aussehen:**

Form:	Flüssig
Farbe:	Farblos
- **Geruch:** Phenolartig
- **Geruchsschwelle:** Nicht bestimmt.
- **pH-Wert:** Nicht bestimmt.
- **Zustandsänderung**

Schmelzpunkt/Gefrierpunkt:	Nicht bestimmt.
Siedebeginn und Siedebereich:	62 °C
- **Flammpunkt:** 0 °C

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· Entzündbarkeit (fest, gasförmig):	Nicht anwendbar.
· Zündtemperatur:	425 °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:	19 Vol %
· Dampfdruck bei 20 °C:	210 hPa
· Dichte bei 20 °C:	1,02296 g/cm ³
· 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:	70,0 %
VOC (EU)	70,00 %
Festkörpergehalt:	0,0 %
· 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 Hautkontakt oder Einatmen.

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

67-66-3 Trichlormethan

Oral	LD50	908 mg/kg (rat)
Dermal	LD50	75 mg/kg (rat)

· **Primäre Reizwirkung:**

· **Ätz-/Reizwirkung auf die Haut**

Verursacht Hautreizungen.

· **Schwere Augenschädigung/-reizung**

Verursacht schwere Augenreizung.

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

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

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

· **Karzinogenität**

Kann vermutlich Krebs erzeugen.

· **Reproduktionstoxizität**

Kann vermutlich das Kind im Mutterleib schädigen.

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

Kann Schläfrigkeit und Benommenheit verursachen.

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

Schädigt die Organe bei längerer oder wiederholter Exposition.

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

ABSCHNITT 12: Umweltbezogene Angaben

· **12.1 Toxizität**

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

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

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

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

· **Ökotoxische Wirkungen:**

· **Bemerkung:** Schädlich für Fische.

· **Weitere ökologische Hinweise:**

· **Allgemeine Hinweise:**

Wassergefährdungsklasse 1 (Selbsteinstufung): schwach wassergefährdend

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

schädlich 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.

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

ABSCHNITT 14: Angaben zum Transport

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

UN1170

· **14.2 Ordnungsgemäße UN-Versandbezeichnung**

· **ADR**
· **IMDG**
· **IATA**

1170 ETHANOL, LÖSUNG (ETHYLALKOHOL, LÖSUNG)
ETHANOL SOLUTION (ETHYL ALCOHOL SOLUTION)
ETHANOL SOLUTION

· **14.3 Transportgefahrenklassen**· **ADR**

· **Klasse**
· **Gefahrzettel**

3 Entzündbare flüssige Stoffe
3+6.1

· **IMDG**

· **Class**
· **Label**

3 Entzündbare flüssige Stoffe
3/6.1

· **IATA**

· **Class**
· **Label**

3 Entzündbare flüssige Stoffe
3 (6.1)

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

II

· **14.5 Umweltgefahren:**

Nicht anwendbar.

· **14.6 Besondere Vorsichtsmaßnahmen für den Verwender**

· **Kemler-Zahl:**
· **EMS-Nummer:**
· **Stowage Category**

Achtung: Entzündbare flüssige Stoffe
336
F-E,S-D
A

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

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· **Transport/weitere Angaben:**

· **ADR**

- **Begrenzte Menge (LQ)** 1L
- **Freigestellte Mengen (EQ)** Code: E2
- Höchste Nettomenge je Innenverpackung: 30 ml
- Höchste Nettomenge je Außenverpackung: 500 ml
- **Beförderungskategorie** 2
- **Tunnelbeschränkungscode** D/E

· **IMDG**

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

- **UN "Model Regulation":** UN 1170 ETHANOL, LÖSUNG (ETHYLALKOHOL, LÖSUNG), 3 (6.1), II

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 Keiner der Inhaltsstoffe ist enthalten.**
- **Seveso-Kategorie**
H2 AKUT TOXISCH
P5c ENTZÜNDBARE FLÜSSIGKEITEN
- **Mengenschwelle (in Tonnen) für die Anwendung in Betrieben der unteren Klasse 50 t**
- **Mengenschwelle (in Tonnen) für die Anwendung in Betrieben der oberen Klasse 200 t**
- **VERORDNUNG (EG) Nr. 1907/2006 ANHANG XVII Beschränkungsbedingungen: 3, 32**

· **Verordnung (EU) Nr. 649/2012**

67-66-3 Trichlormethan

Annex I Part I

· **Nationale Vorschriften:**

· **Technische Anleitung Luft:**

Klasse	Anteil in %
I	30,0
II	10,0
NK	60,0

- **Wassergefährdungsklasse: WGK 1 (Selbsteinstufung): schwach wassergefährdend.**
- **Sonstige Vorschriften, Beschränkungen und Verbotsverordnungen**
Das Produkt unterliegt der Anlage 2 der Chemikalienverbotsverordnung (ChemVerbotsV) - Anforderungen in Bezug auf die Abgabe
- **15.2 Stoffsicherheitsbeurteilung: Eine Stoffsicherheitsbeurteilung wurde nicht durchgeführt.**

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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.
- H302 Gesundheitsschädlich bei Verschlucken.
- H310 Lebensgefahr bei Hautkontakt.
- H312 Gesundheitsschädlich bei Hautkontakt.
- H314 Verursacht schwere Verätzungen der Haut und schwere Augenschäden.
- H315 Verursacht Hautreizungen.
- H319 Verursacht schwere Augenreizung.
- H331 Giftig bei Einatmen.
- H336 Kann Schläfrigkeit und Benommenheit verursachen.
- H351 Kann vermutlich Krebs erzeugen.
- H361d Kann vermutlich das Kind im Mutterleib schädigen.
- H372 Schädigt die Organe bei längerer oder wiederholter Exposition.

· 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
- Acute Tox. 4: Akute Toxizität – Kategorie 4
- Acute Tox. 2: Akute Toxizität – Kategorie 2
- Acute Tox. 3: Akute Toxizität – Kategorie 3
- Skin Corr. 1A: Hautreizende/-ätzende Wirkung – Kategorie 1A
- Skin Irrit. 2: Hautreizende/-ätzende Wirkung – Kategorie 2
- Eye Irrit. 2: Schwere Augenschädigung/Augenreizung – Kategorie 2
- Carc. 2: Karzinogenität – Kategorie 2
- Repr. 2: Reproduktionstoxizität – Kategorie 2
- STOT SE 3: Spezifische Zielorgan-Toxizität (einmalige Exposition) – Kategorie 3
- STOT RE 1: Spezifische Zielorgan-Toxizität (wiederholte Exposition) – Kategorie 1

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

· **1.1 Identificatore del prodotto**

· **Denominazione commerciale:** CARNOY'S FIXATIVE

· **Articolo numero:** 64130-05

· **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 H311 Tossico per contatto con la pelle.

Acute Tox. 3 H331 Tossico se inalato.



GHS08 pericolo per la salute

Carc. 2 H351 Sospettato di provocare il cancro.

Repr. 2 H361d Sospettato di nuocere al feto.

STOT RE 1 H372 Provoca danni agli organi in caso di esposizione prolungata o ripetuta.



GHS07

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Skin Irrit. 2 H315 Provoca irritazione cutanea.
Eye Irrit. 2 H319 Provoca grave irritazione oculare.
STOT SE 3 H336 Può provocare sonnolenza o vertigini.

2.2 Elementi dell'etichetta

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

Il prodotto è classificato ed etichettato conformemente al regolamento CLP.

Pittogrammi di pericolo



GHS02 GHS06 GHS08

Avvertenza Pericolo

Componenti pericolosi che ne determinano l'etichettatura:

triclorometano

acido acetico

Indicazioni di pericolo

H225 Liquido e vapori facilmente infiammabili.
H311+H331 Tossico a contatto con la pelle o se inalato.
H315 Provoca irritazione cutanea.
H319 Provoca grave irritazione oculare.
H351 Sospettato di provocare il cancro.
H361d Sospettato di nuocere al feto.
H336 Può provocare sonnolenza o vertigini.
H372 Provoca danni agli organi in caso di esposizione prolungata o ripetuta.

Consigli di prudenza

P210 Tenere lontano da fonti di calore, superfici calde, scintille, fiamme libere o altre fonti di accensione. Non fumare.
P241 Utilizzare impianti elettrici/di ventilazione/d'illuminazione/a prova di esplosione.
P303+P361+P353 IN CASO DI CONTATTO CON LA PELLE (o con i capelli): togliere immediatamente tutti gli indumenti contaminati. Sciacquare la pelle/fare una doccia.
P305+P351+P338 IN CASO DI CONTATTO CON GLI OCCHI: sciacquare accuratamente per parecchi minuti. Togliere le eventuali lenti a contatto se è agevole farlo. Continuare a sciacquare.
P405 Conservare sotto chiave.
P501 Smaltire il prodotto/recipiente in conformità con le disposizioni locali / regionali / nazionali / internazionali.

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.

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· Sostanze pericolose:		
CAS: 64-17-5 EINECS: 200-578-6	etanolo Flam. Liq. 2, H225	>50-≤100%
CAS: 67-66-3 EINECS: 200-663-8	triclorometano Acute Tox. 2, H310; Acute Tox. 3, H331; Carc. 2, H351; Repr. 2, H361d; STOT RE 1, H372; Acute Tox. 4, H302; Skin Irrit. 2, H315; Eye Irrit. 2, H319; STOT SE 3, H336	>25-≤50%
CAS: 64-19-7 EINECS: 200-580-7	acido acetico Flam. Liq. 3, H226; Skin Corr. 1A, H314; Acute Tox. 4, H312	>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.

Levarsi la maschera protettiva solamente dopo aver tolto gli abiti contaminati.

In caso di respirazione irregolare o di blocco respiratorio praticare la respirazione artificiale.

· **Inalazione:**

Portare il soggetto in zona ben areata o somministrare ossigeno; chiedere l'intervento di 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:** 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.

· **5.3 Raccomandazioni per gli addetti all'estinzione degli incendi**

· **Mezzi protettivi specifici:** Indossare il respiratore.

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.

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- **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:** Conservare in ambiente fresco.
- **Indicazioni sullo stoccaggio misto:** Non necessario.
- **Ulteriori indicazioni relative alle condizioni di immagazzinamento:**
Mantenere i recipienti ermeticamente chiusi.
Conservare in luogo fresco e asciutto in fusti ben chiusi.
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	

67-66-3 triclorometano

TWA	Valore a lungo termine: 49 mg/m ³ , 10 ppm
A3	
VL	Valore a lungo termine: 10 mg/m ³ , 2 ppm
Pelle	

64-19-7 acido acetico

TWA	Valore a breve termine: 37 mg/m ³ , 15 ppm
	Valore a lungo termine: 25 mg/m ³ , 10 ppm

- **Ulteriori indicazioni:** Le liste valide alla data di compilazione sono state usate come base.

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- **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 a tenuta

SEZIONE 9: Proprietà fisiche e chimiche

· 9.1 Informazioni sulle proprietà fisiche e chimiche fondamentali

· Indicazioni generali

· Aspetto:

Forma:	Liquido
Colore:	Incolore
Odore:	Simile al fenolo
Soglia olfattiva:	Non definito.

· **valori di pH:** Non definito.

· Cambiamento di stato

Punto di fusione/punto di congelamento:	Non definito.
Punto di ebollizione iniziale e intervallo di ebollizione:	62 °C

· **Punto di infiammabilità:** 0 °C

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· Infiammabilità (solidi, gas):	Non applicabile.
· Temperatura di accensione:	425 °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:	19 Vol %
· Tensione di vapore a 20 °C:	210 hPa
· Densità a 20 °C:	1,02296 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:	70,0 %
VOC (CE)	70,00 %
Contenuto solido:	0,0 %
· 9.2 Altre informazioni	Non sono disponibili altre informazioni.

SEZIONE 10: Stabilità e reattività

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

SEZIONE 11: Informazioni tossicologiche

- **11.1 Informazioni sugli effetti tossicologici**
- **Tossicità acuta**
Tossico a contatto con la pelle o se inalato.

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

67-66-3 triclorometano		
Orale	LD50	908 mg/kg (rat)

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Cutaneo	LD50	75 mg/kg (rat)
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- **Irritabilità primaria:**
- **Corrosione/irritazione cutanea**
Provoca irritazione cutanea.
- **Lesioni oculari gravi/irritazioni oculari gravi**
Provoca grave irritazione oculare.
- **Sensibilizzazione respiratoria o cutanea**
Basandosi sui dati disponibili i criteri di classificazione non sono soddisfatti.
- **Effetti CMR (cancerogenicità, mutagenicità e tossicità per la riproduzione)**
- **Mutagenicità delle cellule germinali**
Basandosi sui dati disponibili i criteri di classificazione non sono soddisfatti.
- **Cancerogenicità**
Sospettato di provocare il cancro.
- **Tossicità per la riproduzione**
Sospettato di nuocere al feto.
- **Tossicità specifica per organi bersaglio (STOT) - esposizione singola**
Può provocare sonnolenza o vertigini.
- **Tossicità specifica per organi bersaglio (STOT) - esposizione ripetuta**
Provoca danni agli organi in caso di esposizione prolungata o ripetuta.
- **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:** Nocivo per i pesci.
- **Ulteriori indicazioni in materia ambientale:**
- **Ulteriori indicazioni:**
Pericolosità per le acque classe 1 (D) (Autoclassificazione): poco pericoloso
Non immettere nelle acque freatiche, nei corsi d'acqua o nelle fognature non diluito o in grandi quantità.
nocivo 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.

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.

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SEZIONE 14: Informazioni sul trasporto

· 14.1 Numero ONU · ADR, IMDG, IATA	UN1170
· 14.2 Nome di spedizione dell'ONU · ADR · IMDG · IATA	1170 ETANOLO IN SOLUZIONE (ALCOL ETILICO IN SOLUZIONE) ETHANOL SOLUTION (ETHYL ALCOHOL SOLUTION) ETHANOL SOLUTION
· 14.3 Classi di pericolo connesso al trasporto · ADR	
	
· Classe · Etichetta	3 Liquidi infiammabili 3+6.1
· IMDG	
	
· Class · Label	3 Liquidi infiammabili 3/6.1
· IATA	
	
· Class · Label	3 Liquidi infiammabili 3 (6.1)
· 14.4 Gruppo di imballaggio · ADR, IMDG, IATA	II
· 14.5 Pericoli per l'ambiente:	Non applicabile.
· 14.6 Precauzioni speciali per gli utilizzatori · Numero Kemler: · Numero EMS: · Stowage Category	Attenzione: Liquidi infiammabili 336 F-E,S-D A
· 14.7 Trasporto di rifiuti secondo l'allegato II di MARPOL ed il codice IBC	Non applicabile.
· Trasporto/ulteriori indicazioni:	
· ADR · Quantità limitate (LQ) · Quantità esenti (EQ) · Categoria di trasporto	1L Codice: E2 Quantità massima netta per imballaggio interno: 30 ml Quantità massima netta per imballaggio esterno: 500 ml 2

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· 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 1170 ETANOLO IN SOLUZIONE (ALCOL ETILICO IN SOLUZIONE), 3 (6.1), II

SEZIONE 15: Informazioni sulla regolamentazione

- **15.1 Disposizioni legislative e regolamentari su salute, sicurezza e ambiente specifiche per la sostanza o la miscela**
- **Direttiva 2012/18/UE**
- **Sostanze pericolose specificate - ALLEGATO I** Nessuno dei componenti è contenuto.
- **Categoria Seveso**
H2 TOSSICITÀ ACUTA
P5c LIQUIDI INFIAMMABILI
- **Quantità limite (tonnellate) ai fini dell'applicazione dei requisiti di soglia inferiore 50 t**
- **Quantità limite (tonnellate) ai fini dell'applicazione dei requisiti di soglia superiore 200 t**
- **REGOLAMENTO (CE) n. 1907/2006 ALLEGATO XVII** Restrizioni: 3, 32

· **Regolamento (UE) N. 649/2012**

67-66-3 triclorometano

Annex I Part I

· **Disposizioni nazionali:**· **Istruzione tecnica aria:**

Classe	quota in %
NC	70,0

· **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.
- H302 Nocivo se ingerito.
- H310 Letale per contatto con la pelle.
- H312 Nocivo per contatto con la pelle.
- H314 Provoca gravi ustioni cutanee e gravi lesioni oculari.
- H315 Provoca irritazione cutanea.
- H319 Provoca grave irritazione oculare.
- H331 Tossico se inalato.
- H336 Può provocare sonnolenza o vertigini.
- H351 Sospettato di provocare il cancro.
- H361d Sospettato di nuocere al feto.
- H372 Provoca danni agli organi in caso di esposizione prolungata o ripetuta.

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· 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

Acute Tox. 4: Tossicità acuta – Categoria 4

Acute Tox. 2: Tossicità acuta – Categoria 2

Acute Tox. 3: Tossicità acuta – Categoria 3

Skin Corr. 1A: Corrosione/irritazione della pelle – Categoria 1A

Skin Irrit. 2: Corrosione/irritazione della pelle – Categoria 2

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

Carc. 2: Cancerogenicità – Categoria 2

Repr. 2: Tossicità per la riproduzione – Categoria 2

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

STOT RE 1: Tossicità specifica per organi bersaglio (esposizione ripetuta) – Categoria 1

IT

물질안전보건자료 GHS에 따라

기압점: 2018.09.11

개정: 2018.09.11

1 화학제품과 회사에 관한 정보

- 제품 식별자
- 제품명: CARNOY'S FIXATIVE
- 상품번호: 64130-05
- 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
- 제조자/수입자/유통업자 정보:
Electron Microscopy Sciences
1560 Industry Road
USA-Hatfield, PA 19440
Tel: 215-412-8400 Fax: 215-412-8450
email: sgkcck@aol.com
www.emsdiasum.com
- Samchang Commercial Co., Ltd.
Yeo Eui Do
PO Box 1110
Seoul, Korea
Tel: 82 2 703 3040
Fax: 82 2 717 3298
-
- Daedok Science, Co. Ltd.
34141 E10 Korea Advanced Institute of Science
Guseong-Dong, Yuseong-gu, Daejeon,
Korea
Phone: 82 42 710 2091
Fax: 82 42 367 0005
Website: www.labsmro.com
- 추가적인 정보 획득 가능: Product safety department
- 비상연락 전화번호:
ChemTrec 1-800-424-9300 Contract CCN7661
1-703-527-3887

2 유해성·위험성

- 순물질 또는 혼합물의 분류



화염

인화성 액체 - 구분 2

H225 고인화성 액체 및 증기



두개골과 대퇴골

급성 독성 - 경피 - 구분 3

H311 피부와 접촉하면 유독함

급성 독성 - 흡입 - 구분 3

H331 흡입하면 유독함



건강에 위험

발암성 - 구분 2

H351 암을 일으킬 것으로 의심됨

(2 쪽에 계속)

물질안전보건자료

GHS에 따라

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(1 쪽부터계속)

생식독성 - 구분 2 H361 태아 또는 생식능력에 손상을 일으킬 것으로 의심됨
 특정표적장기 독성 - 반복 노출 - 구분 1 H372 장기간 또는 반복노출 되면 신체 중에 손상을 일으킴



피부 부식성/피부 자극성 - 구분 2 H315 피부에 자극을 일으킴
 심한 눈 손상성/눈 자극성 - 구분 2 H319 눈에 심한 자극을 일으킴
 특정표적장기 독성 - 1회 노출 - 구분 3 H336 졸음 또는 현기증을 일으킬 수 있음

· 라벨표기 요소
· GHS 라벨 요소

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

· 그림문자



GHS02 GHS06 GHS08

· 신호어 위험

· 상표상에명확히위험성이표시된성분:

클로로포름
 Acetic Acid Glacial

· 유해.위험 문구

고인화성 액체 및 증기
 피부에 접촉하거나 흡입하면 유독함.
 피부에 자극을 일으킴
 눈에 심한 자극을 일으킴
 암을 일으킬 것으로 의심됨
 태아 또는 생식능력에 손상을 일으킬 것으로 의심됨
 졸음 또는 현기증을 일으킬 수 있음
 장기간 또는 반복노출 되면 신체 중에 손상을 일으킴

· 예방조치 문구

열·스파크·화염·고열로부터 멀리하시오 - 금연
 폭발 방지용 전기·환기·조명·장비를 사용하시오.
 피부(또는 머리카락)에 묻으면 오염된 모든 의복은 벗으시오. 피부를 물로 씻으시오/샤워하시오.
 눈에 묻으면 몇 분간 물로 조심해서 씻으시오. 가능하면콘택트렌즈를 제거하시오. 계속 씻으시오.
 잠금장치가 있는 저장장소에 저장하시오.
 현지/지역/국가/국제 규정에 따라서 내용물/용기 노출

· 기타 유해성

· PBT(잔류성, 생물농축성, 독성 물질) 및 vPvB(고 잔류성, 고 생물농축성 물질) 평가 결과
 · PBT(잔류성, 생물농축성, 독성 물질): 해당사항 없음.
 · vPvB(고 잔류성, 고 생물농축성 물질): 해당사항 없음.

3 구성성분의 명칭 및 함유량

· 화학적 특성: 혼합물

· 설명: 무해한 첨가물이 함유된 아래에 열거된 물질로 만들어진 혼합물.

(3 쪽에계속)

물질안전보건자료

GHS에 따라

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(2 쪽부터 계속)

· 위험 요소:		
64-17-5	Ethyl Alcohol, denatured ⚠ 인화성 액체 - 구분 2, H225	>50-≤100%
67-66-3	클로로포름 ⚠ 급성 독성 - 경피 - 구분 2, H310; 급성 독성 - 흡입 - 구분 3, H331; ⚠ 발암성 - 구분 2, H351; 생식독성 - 구분 2, H361; 특정표적장기 독성 - 반복 노출 - 구분 1, H372; ⚠ 급성 독성 - 경구 - 구분 4, H302; 피부 부식성/피부 자극성 - 구분 2, H315; 심한 눈 손상성/눈 자극성 - 구분 2, H319; 특정표적장기 독성 - 1회 노출 - 구분 3, H336	>25-≤50%
64-19-7	Acetic Acid Glacial ⚠ 인화성 액체 - 구분 3, H226; ⚠ 피부 부식성/피부 자극성 - 구분 1, H314; ⚠ 급성 독성 - 경피 - 구분 4, H312	>2.5-≤10%

4 응급조치 요령

· 응급조치요령 내용

· 일반적 정보:

이 제품에 의해 오염된 의상은 즉시 제거한다.
중독 증상은 몇 시간이 지난 뒤에 발생할 수 있다. 따라서 사고가 발생한 후에 적어도 48 시간 동안은 의료진의 관찰을 받아야 한다.
반드시 오염된 의상을 완전히 제거한 후에 호흡보호기를 떼어낸다.
불규칙적인 호흡이나 호흡정지 상태에서는 인공 호흡을 실시한다.

· 흡입했을 때:

신선한 공기나 산소를 공급받고, 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 몇 분 동안 씻어내고 나서, 증상이 지속될 경우에는 의사와 상담한다

· 먹었을 때: 즉시 의사의 도움을 구한다.

· 기타 의사의 주의사항:

· 가장 중요한 급·만성 증상 및 영향 추가적인 정보가 존재하지 않습니다.
· 즉각적인 의료처치 및 특별치료가 필요함을 시사하는 징후 추가적인 정보가 존재하지 않습니다.

5 폭발·화재시 대처방법

· 소화제

· 적절한 소화제:

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

· 본 화학물질이나 혼합물에서 발생하는 특별 유해성 추가적인 정보가 존재하지 않습니다.

· 소방관에 대한 권고사항

· 화재 진압 시 착용할 보호구 및 예방조치: 호흡보호장비 설치.

6 누출 사고 시 대처방법

· 개인적 예방조치, 보호장비 및 응급처치 절차 안전장비 착용하고, 무방비의 사람은 격리시킨다.

· 환경 관련 예방조치:

하천이나 하수로 유입되었을 경우 해당 관청에 보고한다.

많은 물로 희석시킨다.

하수도망/해수면 위의 물/지하수로도 달하지 않게 한다.

· 밀폐 및 정화 방법과 소재:

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

(4 쪽에 계속)

물질안전보건자료 GHS에 따라

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(3 쪽부터계속)

항목 13에 따라 오염된 물질을 쓰레기로 처분한다.
충분한 환기가 되도록 한다.

· 타 섹션 참조

안전 관리에 대한 정보는 제7 장 을 참고하시오.
개인 보호 장비에 대한 정보는 제8 장 을 참고하시오.
쓰레기 처리에 대한 정보는 제13 장 을 참고하시오.

7 취급 및 저장방법

· 취급:

· 안전 취급을 위한 예방조치

작업장에서는통풍이잘되고/습기제거가잘 되게주의한다.
조심스럽게용기를 개봉하거나취급한다.
연무질이형성되는것을피한다.

· 화재 및 폭발 사고 예방대책에 관한 정보:

발 화 요소는 멀리둔 다.금 연.
열로부터보호한다.
정 전기 의 충 전 으로부터 보호한다.
호흡보호장비를항상비치한다.

· 혼합위험성 등 안전 저장 조건

· 보관:

- **안전한 저장 방법:** 차 가운 장 소에 보관한다.
- **하나의 공동 보관 시설에 대한 보관 관련 정보:** 필 요없음
- **보 관 조 건 에 관 한 추 가 적 인 정 보:**
용기를새지않게밀폐한채보관한다.
밀폐된용기속에서늘 하고건 조 하 게보 관 한 다.
열이나직사광선으로부터보호한다.
- **구체적 최종 사용자** 추가적인 정보가 존재하지 않습니다.

8 노출방지 및 개인보호구

· **첨단시설 디자인에 대한 추가정보:** 더 이 상 의 자 료 는 없 음. 항 목 7 을 참 고 하 시 오.

· 통제 변수

· 화학물질의 노출기준, 생물학적 노출기준 등:

64-17-5 Ethyl Alcohol, denatured	
TLV (KR)	장기간의값: 1000 ppm
PEL (US)	장기간의값: 1900 mg/m ³ , 1000 ppm
REL (US)	장기간의값: 1900 mg/m ³ , 1000 ppm
TLV (US)	단기간의값: 1880 mg/m ³ , 1000 ppm
67-66-3 클로로포름	
TLV (KR)	장기간의값: 10 ppm
IOELV (EU)	장기간의값: 10 mg/m ³ , 2 ppm Skin
PEL (US)	최고노출기준: 240 mg/m ³ , 50 ppm
REL (US)	단기간의값: 9.78* mg/m ³ , 2* ppm *60-min; See Pocket Guide App. A
TLV (US)	장기간의값: 49 mg/m ³ , 10 ppm

(5 쪽에계속)

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(4 쪽부터계속)

64-19-7 Acetic Acid Glacial

TLV (KR)	단기간의값: 15 ppm 장기간의값: 10 ppm
IOELV (EU)	단기간의값: 50 mg/m ³ , 20 ppm 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

· **추가정보:** 제 조 할 당 시 에 유 효 한 목 록 을 기 초 로 사 용 했 다.

· **노출 통제**

· **개인 보호구**

· **일반적보호조치및위생조치:**

- 식료품, 음료수와 사료로부터 멀리 떨어져 두어 놓는다.
- 더러워지거나 음료수가 묻은 옷은 즉시 탈의한다.
- 휴식 전 이 나 작업이 끝날 때 마다 손 을 씻 는 다.
- 방호복은 따로 보관한다.
- 눈과 피부와의 접촉을 피한다.

· **호흡기 보호:**

단 시간 또는 경 미 한 오 염 의 경 우 에 는 호 흡 여 과 기 를 사 용 한 다. 심 각 한 또 는 장 기 간 노 출 시 에 는 호 흡 보 호 장 비 를 사 용 한 다.

· **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**

적합한장갑의선정은재질차이뿐아니라품질기준의차이도고려하여이루어져야하고제조업종에따라서도다르게선정되어야한다. 제품은다양한재료로부터의조제로이루어지는것이기때문에, 장갑재질의안정성은사전에예측되어질수있는것이아니고, 반드시사용전에 (그안전성이) 체크되어야한다.

· **장갑재료의투과시간** 정확한관통시간은보호장갑제조자에의하여인지되고, 준수되어야한다.

· **눈 보호:**



확조이는보안경

9 물리화학적 특성

· **기본 물리 및 화학적 특성에 대한 정보**

· **일반정보**

· **외형**

· 물리적 상태:	액체의
· 색:	색소가없는
· 냄새:	석탄산종류의

(6 쪽에계속)

물질안전보건자료

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(5 쪽부터계속)

· 후각역치	알맞지않다.
· pH:	알맞지않다.
· 상태변화 · 녹는점/어는점: · 초기 끓는점과 끓는점 범위:	맞지않는 62 °C
· 인화점:	0 °C
· 인화성(고체, 기체):	해당사항 없음.
· 점화온도:	425 °C
· 분해 온도:	알맞지않다.
· 자기점화:	이제품은자연발화성이없다.
· 폭발위험:	이제품은폭발위험성이없지만, 폭발가능성이있는증기화합물/공기화합물의형성가능성이있다.
· 인화 또는 폭발 범위의 상한/하한 · 아래로: · 위로:	3.5 Vol % 19 Vol %
· 증기압 의경우 20 °C:	210 hPa
· 밀도 의경우 20 °C: · 비중: · 증기밀도: · 증발 속도:	1.02296 g/cm ³ 알맞지않다. 알맞지않다. 알맞지않다.
· 용해도: · 물:	완전히혼합할수있는
· n 옥탄올/물 분배계수:	알맞지않다.
· 점도: · 역학성: · 동점성:	알맞지않다. 알맞지않다.
· 용매내용물 · 유기용매: · VOC (EU)	70.0 % 70.00 %
· 고체의 함량: · 기타 정보	0.0 % 추가적인 정보가 존재하지 않습니다.

10 안정성 및 반응성

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

KR

(7 쪽에계속)

물질안전보건자료

GHS에 따라

기압점: 2018.09.11

개정: 2018.09.11

제품명: CARNOY'S FIXATIVE

(6 쪽부터계속)

11 독성에 관한 정보

- 독성학적 영향에 대한 정보
- 급성 독성:

· LD/LC50-수치에 따른 분류:

67-66-3 클로로포름

구강의	LD50	908 mg/kg (rat)
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피부의	LD50	75 mg/kg (rat)
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- 일차적 자극 효과:

- 피부 부식성 또는 자극성: 피부와점막을 자극한다.

- 심한 눈 손상 또는 자극성: 자극

- 감각화: 민감한영향이없는것으로알려져있다.

- 추가적인 독성에 관한 정보:

이제품은유럽공동체의공동분류원칙의합법적인절차에근거하여최근에발효된원고에서아래위험들의사전 준비에대하여제시하고있다.

독성의

건강에해로운

자극적인

- 다음 종류의 잠재적인 효과에 대한 정보

- CMR-효과 (암 유발, 돌연변이성 그리고 생식 독성)

발암성 - 구분 2, 생식독성 - 구분 2

12 환경에 미치는 영향

- 독성

- 수생독성: 추가적인 정보가 존재하지 않습니다.

- 지속성 및 분해성 추가적인 정보가 존재하지 않습니다.

- 환경 시스템에서의 행동:

- 생물농축 잠재성 추가적인 정보가 존재하지 않습니다.

- 토양내 이동성 추가적인 정보가 존재하지 않습니다.

- 생태독성:

- 의견: 어류에 해로움

- 추가적인 생태학 정보:

- 일반 특징:

수질오염등급 1 (자체등급분류): 약하게수질오염이된

희석시키지않은채대량으로지하수나, 하천으로그리고하수도망에도달하지않게한다.

물속의유기체에해가되는것

- 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.

(8 쪽에계속)

물질안전보건자료 GHS에 따라

기압점: 2018.09.11




개정: 2018.09.11

제품명: CARNOY'S FIXATIVE

· **추천 세정제:** 경우에따라서세제가첨가된물

(7 쪽부터계속)

14 운송에 필요한 정보

· 유엔 번호 · ADR, IMDG, IATA	UN1170
· UN 적정 선적명 · ADR · IMDG · IATA	1170 ETHANOL SOLUTION (ETHYL ALCOHOL SOLUTION) ETHANOL SOLUTION (ETHYL ALCOHOL SOLUTION) ETHANOL SOLUTION
· 교통 위험 클래스 · ADR <div style="text-align: center;">  </div> · 등급 · 위험물 라벨	3 발화성용액 3+6.1
· IMDG <div style="text-align: center;">  </div> · Class · Label	3 발화성용액 3/6.1
· IATA <div style="text-align: center;">  </div> · Class · Label	3 발화성용액 3 (6.1)
· 용기등급 · ADR, IMDG, IATA	II
· 환경적 유해물질:	해당사항 없음.
· 이용자 특별 예방조치 · 위험 코드: · EMS-번호: · Stowage Category	경고: 발화성용액 336 F-E,S-D A
· MARPOL73/78(선박으로부터의 해양오염방지협약) 부속서2 및 IBC Code(국제선적화물코드)에 따른 벌크(bulk) 운송	해당사항 없음.

(9 쪽에계속)

물질안전보건자료

GHS에 따라

기압점: 2018.09.11

개정: 2018.09.11

제품명: CARNOY'S FIXATIVE

(8 쪽부터계속)

· 운 송/추가 정보:

· ADR

· 한정 수량 (LQ)

1L

· Excepted quantities (EQ)

Code: E2

Maximum net quantity per inner packaging: 30 ml

Maximum net quantity per outer packaging: 500 ml

· 운송 구분

2

· 터널 제한 코드

D/E

· IMDG

· Limited quantities (LQ)

1L

· Excepted quantities (EQ)

Code: E2

Maximum net quantity per inner packaging: 30 ml

Maximum net quantity per outer packaging: 500 ml

· UN "모범 규제":

UN 1170 ETHANOL SOLUTION (ETHYL ALCOHOL SOLUTION), 3 (6.1), II

15 법적 규제현황

· 산업안전보건법에 의한 규제:

· 제조 등 금지물질:

어떠한내용물도목록화되어있지않다

· 허가대상물질:

어떠한내용물도목록화되어있지않다

· 관리대상유해물질:

67-66-3 클로로포름

64-19-7 Acetic Acid Glacial

· 해당 순물질 또는 혼합물에 대한 안전, 보건 및 환경 규제/법률

· Korean Existing Chemical Inventory

64-17-5 Ethyl Alcohol, denatured

KE-13217

67-66-3 클로로포름

KE-34076

64-19-7 Acetic Acid Glacial

KE-00013

· 화학물질관리법

· 사고대비물질

어떠한내용물도목록화되어있지않다

· 금지물질

어떠한내용물도목록화되어있지않다

· 제한물질

어떠한내용물도목록화되어있지않다

· 유독물질

67-66-3 클로로포름

· 허가물질

67-66-3 클로로포름

· GHS 라벨 요소

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

(10 쪽에 계속)

물질안전보건자료 GHS에 따라

기압점: 2018.09.11

개정: 2018.09.11

제품명: CARNOY'S FIXATIVE

(9 쪽부터계속)

· **그림문자**



GHS02 GHS06 GHS08

· **신호어 위험**

· **상표상에명확히위험성이표시된성분:**

클로로포름
Acetic Acid Glacial

· **유해.위험 문구**

고인화성 액체 및 증기
피부에 접촉하거나 흡입하면 유독함.
피부에 자극을 일으킴
눈에 심한 자극을 일으킴
압을 일으킬 것으로 의심됨
태아 또는 생식능력에 손상을 일으킬 것으로 의심됨
졸음 또는 현기증을 일으킬 수 있음
장기간 또는 반복노출 되면 신체 중에 손상을 일으킴

· **예방조치 문구**

열·스파크·화염·고열로부터 멀리하시오 - 금연
폭발 방지용 전기·환기·조명·장비를 사용하시오.
피부(또는 머리카락)에 묻으면 오염된 모든 의복은 벗으시오. 피부를 물로 씻으시오/샤워하시오.
눈에 묻으면 몇 분간 물로 조심해서 씻으시오. 가능하면콘택트렌즈를 제거하시오. 계속 씻으시오.
잠금장치가 있는 저장장소에 저장하시오.
현지/지역/국가/국제 규정에 따라서 내용물/용기 노출

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

16 그 밖의 참고사항

이보고는우리지식에대한오늘날의상태에대하여평가하고있다, 하지만이보고서는생산특성에관한보증은 기술하지않았으며계약적인법률관계에기반을두고있지도않다

· **최초 작성일자:** 2018.09.11

· **개정 횟수 및 최종 개정일자:** 1 / 2018.09.11

· **약어와 두문자어:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
EINECS: European Inventory of Existing Commercial Chemical Substances
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

Ficha de datos de seguridad

según 1907/2006/CE, Artículo 31

fecha de impresión 11.09.2018

Revisión: 11.09.2018

SECCIÓN 1: Identificación de la sustancia o la mezcla y de la sociedad o la empresa

· 1.1 Identificador del producto

· **Nombre comercial:** CARNOY'S FIXATIVE

· **Número del artículo:** 64130-05

· 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 H311 Tóxico en contacto con la piel.

Acute Tox. 3 H331 Tóxico en caso de inhalación.



GHS08 peligro para la salud

Carc. 2 H351 Se sospecha que provoca cáncer.

Repr. 2 H361d Se sospecha que daña al feto.

STOT RE 1 H372 Provoca daños en los órganos tras exposiciones prolongadas o repetidas.

(se continua en página 2)

Ficha de datos de seguridad

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Nombre comercial: CARNOY'S FIXATIVE

(se continua en página 1)



GHS07

Skin Irrit. 2 H315 Provoca irritación cutánea.
 Eye Irrit. 2 H319 Provoca irritación ocular grave.
 STOT SE 3 H336 Puede provocar somnolencia o vértigo.

· 2.2 Elementos de la etiqueta

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

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

· Pictogramas de peligro



GHS02 GHS06 GHS08

· Palabra de advertencia Peligro

· Componentes peligrosos a indicar en el etiquetaje:

triclorometano
 ácido acético

· Indicaciones de peligro

H225 Líquido y vapores muy inflamables.
 H311+H331 Tóxico en contacto con la piel o si se inhala.
 H315 Provoca irritación cutánea.
 H319 Provoca irritación ocular grave.
 H351 Se sospecha que provoca cáncer.
 H361d Se sospecha que daña al feto.
 H336 Puede provocar somnolencia o vértigo.
 H372 Provoca daños en los órganos tras exposiciones prolongadas o repetidas.

· Consejos de prudencia

P210 Mantener alejado del calor, de superficies calientes, de chispas, de llamas abiertas y de cualquier otra fuente de ignición. No fumar.
 P241 Utilizar un material eléctrico, de ventilación o de iluminación/antideflagrante.
 P303+P361+P353 EN CASO DE CONTACTO CON LA PIEL (o el pelo): Quitar inmediatamente todas las prendas contaminadas. Aclararse la piel con agua/ducharse.
 P305+P351+P338 EN CASO DE CONTACTO CON LOS OJOS: Aclarar cuidadosamente con agua durante varios minutos. Quitar las lentes de contacto, si lleva y resulta fácil. Seguir aclarando.
 P405 Guardar bajo llave.
 P501 Eliminar el contenido o el recipiente conforme a la reglamentación local/regional/nacional/internacional.

· 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.

(se continua en página 3)

Ficha de datos de seguridad

según 1907/2006/CE, Artículo 31

fecha de impresión 11.09.2018

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Nombre comercial: CARNOY'S FIXATIVE

(se continua en página 2)

· Componentes peligrosos:		
CAS: 64-17-5 EINECS: 200-578-6	etanol Flam. Liq. 2, H225	>50-≤100%
CAS: 67-66-3 EINECS: 200-663-8	triclorometano Acute Tox. 2, H310; Acute Tox. 3, H331; Carc. 2, H351; Repr. 2, H361d; STOT RE 1, H372; Acute Tox. 4, H302; Skin Irrit. 2, H315; Eye Irrit. 2, H319; STOT SE 3, H336	>25-≤50%
CAS: 64-19-7 EINECS: 200-580-7	ácido acético Flam. Liq. 3, H226; Skin Corr. 1A, H314; Acute Tox. 4, H312	>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.

Antes de quitarse la protección respiratoria, quítese la ropa contaminada.

En caso de respiración irregular o apnea (paro respiratorio), hágase la respiración artificial.

· En caso de inhalación del producto:

Suministrar aire fresco u oxígeno; solicitar ayuda médica.

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:

Limpia los ojos abiertos durante varios minutos con agua corriente. En caso de trastornos persistentes consultar un médico.

· En caso de ingestión: Consultar inmediatamente un médico.

· 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.

· 5.3 Recomendaciones para el personal de lucha contra incendios

· Equipo especial de protección: Colocarse la protección respiratoria.

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.

(se continua en página 4)

Ficha de datos de seguridad

según 1907/2006/CE, Artículo 31

fecha de impresión 11.09.2018

Revisión: 11.09.2018

Nombre comercial: CARNOY'S FIXATIVE

(se continua en página 3)

- **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 item 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:** Almacenar en un lugar fresco.
- **Normas en caso de un almacenamiento conjunto:** No es necesario.
- **Indicaciones adicionales sobre las condiciones de almacenamiento:**
Mantener el recipiente cerrado herméticamente.
Almacenarlo en envases bien cerrados en un lugar fresco y seco.
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	

67-66-3 triclorometano

LEP	Valor de larga duración: 10 mg/m ³ , 2 ppm
r, via dérmica, VLI	

64-19-7 ácido acético

LEP	Valor de corta duración: 50 mg/m ³ , 20 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.

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· 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 herméticas

SECCIÓN 9: Propiedades físicas y químicas

· 9.1 Información sobre propiedades físicas y químicas básicas

· Datos generales

· Aspecto:

Forma:

Líquido

Color:

Incoloro

· Olor:

Similar al fenol

· Umbral olfativo:

No determinado.

· valor pH:

No determinado.

· Cambio de estado

Punto de fusión/punto de congelación:

Indeterminado.

Punto inicial de ebullición e intervalo de ebullición: 62 °C

· Punto de inflamación:

0 °C

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· Inflamabilidad (sólido, gas):	No aplicable.
· Temperatura de ignición:	425 °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:	19 Vol %
· Presión de vapor a 20 °C:	210 hPa
· Densidad a 20 °C:	1,02296 g/cm ³
· Densidad relativa	No determinado.
· Densidad de vapor	No determinado.
· Tasa de evaporación:	No determinado.
· Solubilidad en / miscibilidad con agua:	Completamente mezclable.
· Coefficiente de reparto: n-octanol/agua:	No determinado.
· Viscosidad:	
Dinámica:	No determinado.
Cinemática:	No determinado.
· Concentración del disolvente:	
Disolventes orgánicos:	70,0 %
VOC (CE)	70,00 %
Contenido de cuerpos sólidos:	0,0 %
· 9.2 Otros datos	No existen más datos relevantes disponibles.

SECCIÓN 10: Estabilidad y reactividad

- **10.1 Reactividad** No existen más datos relevantes disponibles.
- **10.2 Estabilidad química**
- **Descomposición térmica / condiciones que deben evitarse:** No se descompone al emplearse adecuadamente.
- **10.3 Posibilidad de reacciones peligrosas** No se conocen reacciones peligrosas.
- **10.4 Condiciones que deben evitarse** No existen más datos relevantes disponibles.
- **10.5 Materiales incompatibles:** No existen más datos relevantes disponibles.
- **10.6 Productos de descomposición peligrosos:** No se conocen productos de descomposición peligrosos.

SECCIÓN 11: Información toxicológica

- **11.1 Información sobre los efectos toxicológicos**
- **Toxicidad aguda**
Tóxico en contacto con la piel o si se inhala.

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

67-66-3 triclorometano

Oral	LD50	908 mg/kg (rat)
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Dermal LD50 75 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**
A la vista de los datos disponibles, no se cumplen los criterios de clasificación.
- **Efectos CMR (carcinogenicidad, mutagenicidad y toxicidad para la reproducción)**
- **Mutagenicidad en células germinales**
A la vista de los datos disponibles, no se cumplen los criterios de clasificación.
- **Carcinogenicidad**
Se sospecha que provoca cáncer.
- **Toxicidad para la reproducción**
Se sospecha que daña al feto.
- **Toxicidad específica en determinados órganos (STOT) – exposición única**
Puede provocar somnolencia o vértigo.
- **Toxicidad específica en determinados órganos (STOT) – exposición repetida**
Provoca daños en los órganos tras exposiciones prolongadas o repetidas.
- **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:** Nocivo para los peces.
- **Indicaciones medioambientales adicionales:**
- **Indicaciones generales:**
Nivel de riesgo para el agua 1 (autoclasiación): escasamente peligroso para el agua
En estado no diluido o no neutralizado, no dejar que se infiltre en aguas subterráneas, aguas superficiales o en alcantarillados.
nocivo 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.

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.

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SECCIÓN 14: Información relativa al transporte

· 14.1 Número ONU
· ADR, IMDG, IATA

UN1170

· 14.2 Designación oficial de transporte de las Naciones Unidas

· ADR

1170 ETANOL EN SOLUCIÓN (ALCOHOL ETÍLICO EN SOLUCIÓN)

· IMDG

ETHANOL SOLUTION (ETHYL ALCOHOL SOLUTION)

· IATA

ETHANOL SOLUTION

· 14.3 Clase(s) de peligro para el transporte

· ADR



· Clase

3 Líquidos inflamables

· Etiqueta

3+6.1

· IMDG



· Class

3 Líquidos inflamables

· Label

3/6.1

· IATA



· Class

3 Líquidos inflamables

· Label

3 (6.1)

· 14.4 Grupo de embalaje

· ADR, IMDG, IATA

II

· 14.5 Peligros para el medio ambiente:

No aplicable.

· 14.6 Precauciones particulares para los usuarios

Atención: Líquidos inflamables

· Número Kemler:

336

· Número EMS:

F-E,S-D

· Stowage Category

A

· 14.7 Transporte a granel con arreglo al anexo II del Convenio MARPOL y el Código IBC

No aplicable.

· Transporte/datos adicionales:

· ADR

· Cantidades limitadas (LQ)

1L

· Cantidades exceptuadas (EQ)

Código: E2

Cantidad neta máxima por envase interior: 30 ml

Cantidad neta máxima por embalaje exterior: 500 ml

· Categoría de transporte

2

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· 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 1170 ETANOL EN SOLUCIÓN (ALCOHOL ETÍLICO EN SOLUCIÓN), 3 (6.1), II

SECCIÓN 15: Información reglamentaria

- **15.1 Reglamentación y legislación en materia de seguridad, salud y medio ambiente específicas para la sustancia o la mezcla**
- **Directiva 2012/18/UE**
- **Sustancias peligrosas nominadas - ANEXO I** ninguno de los componentes está incluido en una lista
- **Categoría Seveso**
H2 TOXICIDAD AGUDA
P5c LÍQUIDOS INFLAMABLES
- **Cantidad umbral (toneladas) a efectos de aplicación de los requisitos de nivel inferior 50 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, 32**

· **Reglamento (UE) No 649/2012**

67-66-3 triclorometano

Annex I Part I

- **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.
- H302 Nocivo en caso de ingestión.
- H310 Mortal en contacto con la piel.
- H312 Nocivo en contacto con la piel.
- H314 Provoca quemaduras graves en la piel y lesiones oculares graves.
- H315 Provoca irritación cutánea.
- H319 Provoca irritación ocular grave.
- H331 Tóxico en caso de inhalación.
- H336 Puede provocar somnolencia o vértigo.
- H351 Se sospecha que provoca cáncer.
- H361d Se sospecha que daña al feto.
- H372 Provoca daños en los órganos tras exposiciones prolongadas o repetidas.

· 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

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*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**Acute Tox. 4: Toxicidad aguda – Categoría 4**Acute Tox. 2: Toxicidad aguda – Categoría 2**Acute Tox. 3: Toxicidad aguda – Categoría 3**Skin Corr. 1A: Corrosión o irritación cutáneas – Categoría 1A**Skin Irrit. 2: Corrosión o irritación cutáneas – Categoría 2**Eye Irrit. 2: Lesiones oculares graves o irritación ocular – Categoría 2**Carc. 2: Carcinogenicidad – Categoría 2**Repr. 2: Toxicidad para la reproducción – Categoría 2**STOT SE 3: Toxicidad específica en determinados órganos (exposición única) – Categoría 3**STOT RE 1: Toxicidad específica en determinados órganos (exposiciones repetidas) – Categoría 1*

ES