

Safety Data Sheet

acc. to OSHA HCS

Printing date 03/12/2019

Reviewed on 03/12/2019

1 Identification

- **Product identifier**
- **Trade name:** COLLODION, 5% SOLUTION, USP
- **Article number:** 12600, 12600-30
- **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: info@emsdiasum.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. 1 H224 Extremely flammable liquid and vapor.



GHS08 Health hazard

Carc. 1A H350 May cause cancer.



GHS07

Acute Tox. 4 H302 Harmful if swallowed.

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).
- **Hazard pictograms**



GHS02



GHS07



GHS08

- **Signal word** Danger
- **Hazard-determining components of labeling:**
 diethyl ether
 Ethyl Alcohol, denatured
- **Hazard statements**
 Extremely flammable liquid and vapor.

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Trade name: COLLODION, 5% SOLUTION, USP

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Harmful if swallowed.

May cause cancer.

May cause drowsiness or dizziness.

· 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.

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

Wash thoroughly after handling.

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

Use only outdoors or in a well-ventilated area.

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

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

Rinse mouth.

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

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

IF exposed or concerned: Get medical advice/attention.

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

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

Store in a well-ventilated place. Keep cool.

Store locked up.

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

· Classification system:

· NFPA ratings (scale 0 - 4)



Health = 2

Fire = 3

Reactivity = 3

· HMIS-ratings (scale 0 - 4)



Health = 2

Fire = 3

Reactivity = 3

· 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:

60-29-7	diethyl ether	>50-≤100%
64-17-5	Ethyl Alcohol, denatured	>25-≤50%

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4 First-aid measures

- **Description of first aid measures**

- **General information:**

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

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

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

- **After eye contact:** Rinse opened eye for several minutes under running water.

- **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, sand, extinguishing powder. Do not use water.

- **For safety reasons unsuitable extinguishing agents:** Water with full jet

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

- **Advice for firefighters**

- **Protective equipment:** No special measures required.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**

Wear protective equipment. Keep unprotected persons away.

- **Environmental precautions:** 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.

Do not flush with water or aqueous cleansing agents

- **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:**

60-29-7	diethyl ether	500 ppm
64-17-5	Ethyl Alcohol, denatured	1,800 ppm

- **PAC-2:**

60-29-7	diethyl ether	3200* ppm
64-17-5	Ethyl Alcohol, denatured	3300* ppm

- **PAC-3:**

60-29-7	diethyl ether	19000*** ppm
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64-17-5 Ethyl Alcohol, denatured

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15000* ppm

7 Handling and storage

- **Handling:**
- **Precautions for safe handling**
*Ensure good ventilation/exhaustion at the workplace.
 Open and handle receptacle with care.
 Prevent formation of aerosols.*
- **Information about protection against explosions and fires:**
*Keep ignition sources away - Do not smoke.
 Protect from heat.
 Protect against electrostatic charges.*
- **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.
 Do not gas tight seal receptacle.
 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:**

60-29-7 diethyl ether

PEL	<i>Long-term value: 1200 mg/m³, 400 ppm</i>
TLV	<i>Short-term value: 1520 mg/m³, 500 ppm Long-term value: 1210 mg/m³, 400 ppm</i>

64-17-5 Ethyl Alcohol, denatured

PEL	<i>Long-term value: 1900 mg/m³, 1000 ppm</i>
REL	<i>Long-term value: 1900 mg/m³, 1000 ppm</i>
TLV	<i>Short-term value: 1880 mg/m³, 1000 ppm</i>

- **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.
 Wash hands before breaks and at the end of work.*

- **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:**

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:	Liquid
Color:	Colorless
Odor:	Characteristic
Odor threshold:	Not determined.

· **pH-value:** Not determined.

· **Change in condition**

Melting point/Melting range:	Undetermined.
Boiling point/Boiling range:	35 °C (95 °F)

· **Flash point:** -52 °C (-61.6 °F)

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

· **Ignition temperature:** 170 °C (338 °F)

· **Decomposition temperature:** Not determined.

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

· **Danger of explosion:** May form explosive peroxides.

· **Explosion limits:**

Lower:	1.7 Vol %
Upper:	36 Vol %

· **Vapor pressure at 20 °C (68 °F):** 587 hPa (440.3 mm Hg)

· **Density:** Not determined.

· **Relative density** Not determined.

· **Vapor density** Not determined.

· **Evaporation rate** Not determined.

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- | | |
|---|--|
| · Solubility in / Miscibility with Water: | Not miscible or difficult to mix. |
| · Partition coefficient (n-octanol/water): | Not determined. |
| · Viscosity: | |
| Dynamic: | Not determined. |
| Kinematic: | Not determined. |
| · Solvent content: | |
| Organic solvents: | 95.0 % |
| VOC content: | 95.00 % |
| | 950.0 g/l / 7.93 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:**

60-29-7 diethyl ether

Oral	LD50	1,215 mg/kg (rat)
Inhalative	LC50/4 h	73,000 mg/l (rat)

- **Primary irritant effect:**
- **on the skin:** No irritant effect.
- **on the eye:** No irritating effect.
- **Sensitization:** No sensitizing effects known.
- **Additional toxicological information:**
The product shows the following dangers according to internally approved calculation methods for preparations:
Harmful

- **Carcinogenic categories**

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

64-17-5	Ethyl Alcohol, denatured	1
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- **NTP (National Toxicology Program)**

None of the ingredients is listed.

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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.
- **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.
- **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.

14 Transport information

- | | |
|-------------------------------------|--|
| · UN-Number | UN1993 |
| · DOT, ADR, IMDG, IATA | |
| · UN proper shipping name | Flammable liquids, n.o.s. (Diethyl ether, Ethanol) |
| · DOT | 1993 FLAMMABLE LIQUID, N.O.S. (DIETHYL ETHER (ETHYL ETHER), ETHANOL (ETHYL ALCOHOL)) |
| · ADR | FLAMMABLE LIQUID, N.O.S. (DIETHYL ETHER (ETHYL ETHER), ETHANOL (ETHYL ALCOHOL)) |
| · IMDG | FLAMMABLE LIQUID, N.O.S. (DIETHYL ETHER (ETHYL ETHER), ETHANOL (ETHYL ALCOHOL)) |
| · IATA | FLAMMABLE LIQUID, N.O.S. (DIETHYL ETHER (ETHYL ETHER), ETHANOL) |
| · Transport hazard class(es) | |
| · DOT | |
| · Class | 3 Flammable liquids |



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· Label	3
· ADR, IMDG, IATA	
	
· Class	3 Flammable liquids
· Label	3
· Packing group	
· DOT, ADR, IMDG, IATA	I
· Environmental hazards:	Not applicable.
· Special precautions for user	Warning: Flammable liquids
· Danger code (Kemler):	33
· EMS Number:	F-E, <u>S-E</u>
· Stowage Category	E
· Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	
	Not applicable.
· Transport/Additional information:	
· DOT	
· Quantity limitations	On passenger aircraft/rail: 1 L On cargo aircraft only: 30 L
· ADR	
· Excepted quantities (EQ)	Code: E3 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 300 ml
· IMDG	
· Limited quantities (LQ)	0
· Excepted quantities (EQ)	Code: E3 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 300 ml
· UN "Model Regulation":	UN 1993 FLAMMABLE LIQUID, N.O.S. (DIETHYL ETHER (ETHYL ETHER), ETHANOL (ETHYL ALCOHOL)), 3, 1

15 Regulatory information

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

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

None of the ingredients is listed.

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

None of the ingredients is listed.

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

All ingredients are listed.

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· **Proposition 65**

· **Chemicals known to cause cancer:**

None of the ingredients is listed.

· **Chemicals known to cause reproductive toxicity for females:**

None of the ingredients is listed.

· **Chemicals known to cause reproductive toxicity for males:**

None of the ingredients is listed.

· **Chemicals known to cause developmental toxicity:**

64-17-5 Ethyl Alcohol, denatured

· **Carcinogenic categories**

· **EPA (Environmental Protection Agency)**

None of the ingredients is listed.

· **TLV (Threshold Limit Value established by ACGIH)**

64-17-5 Ethyl Alcohol, denatured

A3

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

None of the ingredients is listed.

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

· **Hazard pictograms**



GHS02

GHS07

GHS08

· **Signal word** *Danger*

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

diethyl ether

Ethyl Alcohol, denatured

· **Hazard statements**

Extremely flammable liquid and vapor.

Harmful if swallowed.

May cause cancer.

May cause drowsiness or dizziness.

· **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.

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

Wash thoroughly after handling.

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

Use only outdoors or in a well-ventilated area.

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

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

Rinse mouth.

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

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Trade name: COLLODION, 5% SOLUTION, USP

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

IF exposed or concerned: Get medical advice/attention.

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

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

Store in a well-ventilated place. Keep cool.

Store locked up.

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

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

16 Other information

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

· **Date of preparation / last revision** 03/12/2019 / -

· **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. 1: Flammable liquids – Category 1

Acute Tox. 4: Acute toxicity – Category 4

Carc. 1A: Carcinogenicity – Category 1A

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

Safety Data Sheet

according to WHS Regulations

Printing date 12.03.2019

Revision: 12.03.2019

1 Identification

· **Product identifier**

· **Trade name:** COLLODION, 5% SOLUTION, USP

· **Article number:** 12600, 12600-30

· **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: info@emsdiasum.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. 1 H224 Extremely flammable liquid and vapour.



GHS08 health hazard

Carc. 1A H350 May cause cancer.



GHS07

Acute Tox. 4 H302 Harmful if swallowed.

STOT SE 3 H336 May cause drowsiness or dizziness.

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Trade name: COLLODION, 5% SOLUTION, USP

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



GHS02 GHS07 GHS08

- **Signal word** *Danger*
- **Hazard-determining components of labelling:**
diethyl ether
Ethyl Alcohol, denatured
- **Hazard statements**
Extremely flammable liquid and vapour.
Harmful if swallowed.
May cause cancer.
May cause drowsiness or dizziness.
- **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.
Avoid breathing dust/fume/gas/mist/vapours/spray.
Wash thoroughly after handling.
Do not eat, drink or smoke when using this product.
Use only outdoors or in a well-ventilated area.
Wear protective gloves/protective clothing/eye protection/face protection.
IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.
Rinse mouth.
IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
IF exposed or concerned: Get medical advice/attention.
In case of fire: Use for extinction: CO2, powder or water spray.
Store in a well-ventilated place. Keep container tightly closed.
Store in a well-ventilated place. Keep cool.
Store locked up.
Dispose of contents/container in accordance with local/regional/national/international regulations.
- **Additional information:**
May form explosive peroxides.
- **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.*

(Contd. on page 3)

AU

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according to WHS Regulations

Printing date 12.03.2019

Revision: 12.03.2019

Trade name: **COLLODION, 5% SOLUTION, USP**

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· Dangerous components:

60-29-7	diethyl ether	>50-≤100%
64-17-5	Ethyl Alcohol, denatured	>25-≤50%

· **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:**

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

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

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

· **After eye contact:** Rinse opened eye for several minutes under running water.

· **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, sand, extinguishing powder. Do not use water.

· **For safety reasons unsuitable extinguishing agents:** Water with full jet

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

· **Advice for firefighters**

· **Protective equipment:** No special measures required.

6 Accidental Release Measures

· **Personal precautions, protective equipment and emergency procedures**

Wear protective equipment. Keep unprotected persons away.

· **Environmental precautions:** 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.

Do not flush with water or aqueous cleansing agents

· **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.

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Prevent formation of aerosols.

· **Information about fire - and explosion protection:**

Keep ignition sources away - Do not smoke.

Protect from heat.

Protect against electrostatic charges.

· **Conditions for safe storage, including any incompatibilities**

· **Storage:**

· **Requirements to be met by storerooms and receptacles:** Store in a cool location.

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

· **Further information about storage conditions:**

Keep container tightly sealed.

Do not seal receptacle gas tight.

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:**

60-29-7 diethyl ether

NES	Short-term value: 1520 mg/m ³ , 500 ppm Long-term value: 1210 mg/m ³ , 400 ppm
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WES	Short-term value: 1520 mg/m ³ , 500 ppm Long-term value: 1210 mg/m ³ , 400 ppm
-----	---

64-17-5 Ethyl Alcohol, denatured

NES	Long-term value: 1880 mg/m ³ , 1000 ppm
-----	--

WES	Long-term value: 1880 mg/m ³ , 1000 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.

Wash hands before breaks and at the end of work.

· **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:**

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.

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· Eye protection:



Tightly sealed goggles

9 Physical and Chemical Properties

· Information on basic physical and chemical properties

· General Information

· Appearance:

Form:	Liquid
Colour:	Colourless
· Odour:	Characteristic
· Odour threshold:	Not determined.

· pH-value: Not determined.

· Change in condition

Melting point/freezing point:	Undetermined.
Initial boiling point and boiling range:	35 °C

· Flash point: -52 °C

· Flammability (solid, gas): Not applicable.

· Ignition temperature: 170 °C

· Decomposition temperature: Not determined.

· Auto-ignition temperature: Product is not selfigniting.

· Explosive properties: May form explosive peroxides.

· Explosion limits:

Lower:	1.7 Vol %
Upper:	36 Vol %

· Vapour pressure at 20 °C: 587 hPa

· Density: Not determined.

· Relative density: Not determined.

· Vapour density: Not determined.

· Evaporation rate: Not determined.

· Solubility in / Miscibility with water:

Not miscible or difficult to mix.

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

· Viscosity:

Dynamic:	Not determined.
Kinematic:	Not determined.

· Solvent content:

Organic solvents:	95.0 %
VOC (EC)	95.00 %

Solids content: 0.0 %

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

10 Stability and Reactivity

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

11 Toxicological Information

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

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

60-29-7 diethyl ether

Oral	LD50	1,215 mg/kg (rat)
Inhalative	LC50/4 h	73,000 mg/l (rat)

- **Primary irritant effect:**
- **Skin corrosion/irritation** No irritant effect.
- **Serious eye damage/irritation** No 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:
Harmful
- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**
Carc. 1A

12 Ecological Information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behaviour in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:**
Water hazard class 1 (German Regulation) (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.
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

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Trade name: COLLODION, 5% SOLUTION, USP

(Contd. of page 6)

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.

14 Transport information

<ul style="list-style-type: none"> · UN-Number · ADG, IMDG, IATA 	UN1993
<ul style="list-style-type: none"> · UN proper shipping name · ADG · IMDG · IATA 	1993 FLAMMABLE LIQUID, N.O.S. (DIETHYL ETHER (ETHYL ETHER), ETHANOL (ETHYL ALCOHOL)) FLAMMABLE LIQUID, N.O.S. (DIETHYL ETHER (ETHYL ETHER), ETHANOL (ETHYL ALCOHOL)) FLAMMABLE LIQUID, N.O.S. (DIETHYL ETHER (ETHYL ETHER), ETHANOL)
<ul style="list-style-type: none"> · Transport hazard class(es) · ADG, IMDG, IATA 	<div style="text-align: center;">  </div>
<ul style="list-style-type: none"> · Class · Label 	3 Flammable liquids. 3
<ul style="list-style-type: none"> · Packing group · ADG, IMDG, IATA 	I
<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: · Stowage Category 	Warning: Flammable liquids. 33 F-E, <u>S-E</u> E
<ul style="list-style-type: none"> · Transport in bulk according to Annex II of Marpol and the IBC Code 	Not applicable.
<ul style="list-style-type: none"> · Transport/Additional information: 	
<ul style="list-style-type: none"> · ADG · Limited quantities (LQ) · Excepted quantities (EQ) · Transport category · Tunnel restriction code 	0 Code: E3 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 300 ml 1 D/E

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· IMDG	
· Limited quantities (LQ)	0
· Excepted quantities (EQ)	Code: E3 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 300 ml
· UN "Model Regulation":	UN 1993 FLAMMABLE LIQUID, N.O.S. (DIETHYL ETHER (ETHYL ETHER), ETHANOL (ETHYL ALCOHOL)), 3, I

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**

60-29-7 diethyl ether

S2, S4, S5, S6

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

· **Hazard pictograms**



GHS02

GHS07

GHS08

· **Signal word** Danger

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

diethyl ether

Ethyl Alcohol, denatured

· **Hazard statements**

Extremely flammable liquid and vapour.

Harmful if swallowed.

May cause cancer.

May cause drowsiness or dizziness.

· **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.

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

Wash thoroughly after handling.

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

Use only outdoors or in a well-ventilated area.

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

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

Rinse mouth.

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

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Trade name: COLLODION, 5% SOLUTION, USP

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

IF exposed or concerned: 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 P5a** FLAMMABLE LIQUIDS
- **Qualifying quantity (tonnes) for the application of lower-tier requirements** 10 t
- **Qualifying quantity (tonnes) for the application of upper-tier requirements** 50 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

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

Flam. Liq. 1: Flammable liquids – Category 1

Acute Tox. 4: Acute toxicity – Category 4

Carc. 1A: Carcinogenicity – Category 1A

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

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Safety Data Sheet

acc. to OSHA HCS

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Reviewed on 03/12/2019

1 Identification

- **Product identifier**
- **Trade name:** COLLODION, 5% SOLUTION, USP
- **Article number:** 12600, 12600-30
- **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: info@emsdiasum.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 1

H224 Extremely flammable liquid and vapour.



GHS08 Health hazard

Carcinogenicity - Category 1A

H350 May cause cancer.



GHS07

Acute Toxicity (Oral) - Category 4

H302 Harmful if swallowed.

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).

- **Hazard pictograms**



GHS02



GHS07



GHS08

- **Signal word** Danger

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

diethyl ether

Ethyl Alcohol, denatured

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Trade name: COLLODION, 5% SOLUTION, USP

(Contd. of page 1)

· **Hazard statements**

Extremely flammable liquid and vapour.

Harmful if swallowed.

May cause cancer.

May cause drowsiness or dizziness.

· **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.

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

Wash thoroughly after handling.

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

Use only outdoors or in a well-ventilated area.

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

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

Rinse mouth.

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

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

IF exposed or concerned: Get medical advice/attention.

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

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

Store in a well-ventilated place. Keep cool.

Store locked up.

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

· **Classification system:**

· **NFPA ratings (scale 0 - 4)**



Health = 2

Fire = 3

Reactivity = 3

· **HMIS-ratings (scale 0 - 4)**



Health = 2

Fire = 3

Reactivity = 3

3 Composition/information on ingredients

· **Chemical characterization: Mixtures**

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

· **Dangerous components:**

60-29-7	diethyl ether	45-70% w/w *
64-17-5	Ethyl Alcohol, denatured	10-30% w/w *

* Actual concentration ranges are withheld as a trade secret.

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4 First-aid measures

- **Description of first aid measures**

- **General information:**

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

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

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

- **After eye contact:** Rinse opened eye for several minutes under running water.

- **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, sand, extinguishing powder. Do not use water.

- **For safety reasons unsuitable extinguishing agents:** Water with full jet

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

- **Advice for firefighters**

- **Protective equipment:** No special measures required.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**

Wear protective equipment. Keep unprotected persons away.

- **Environmental precautions:** 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.

Do not flush with water or aqueous cleansing agents

- **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.

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Trade name: COLLODION, 5% SOLUTION, USP

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

60-29-7 diethyl ether

EL	Short-term value: 500 ppm Long-term value: 400 ppm
EV	Short-term value: 1,515 mg/m ³ , 500 ppm Long-term value: 1,210 mg/m ³ , 400 ppm

64-17-5 Ethyl Alcohol, denatured

EL	Short-term value: 1000 ppm
EV	Long-term value: 1,900 mg/m ³ , 1,000 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.
 - Wash hands before breaks and at the end of work.
- **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:**
 - 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.

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Trade name: COLLODION, 5% SOLUTION, USP

(Contd. of page 4)

· Eye protection:



Tightly sealed goggles

9 Physical and chemical properties

· Information on basic physical and chemical properties

· General Information

· Appearance:

Form:	Liquid
Color:	Colorless
Odor:	Characteristic
Odor threshold:	Not determined.

· pH-value: Not determined.

· Change in condition

Melting point/Melting range:	Undetermined.
Boiling point/Boiling range:	35 °C

· Flash point: -52 °C

· Flammability (solid, gaseous): Not flammable.

· Ignition temperature: 170 °C

· Decomposition temperature: Not determined.

· Auto igniting: Product is not selfigniting.

· Danger of explosion: May form explosive peroxides.

· Explosion limits:

Lower:	1.7 Vol %
Upper:	36 Vol %

· Vapor pressure at 20 °C: 587 hPa

· Density: Not determined.

· Relative density: Not determined.

· Vapor density: Not determined.

· Evaporation rate: Not determined.

· Solubility in / Miscibility with

Water: Not miscible or difficult to mix.

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

· Viscosity:

Dynamic:	Not determined.
Kinematic:	Not determined.

· Solvent content:

Organic solvents: 95.0 %

Solids content: 0.0 %

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· **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:**

60-29-7 diethyl ether

Oral	LD50	1,215 mg/kg (rat)
Inhalative	LC50/4 h	73,000 mg/l (rat)

· **Primary irritant effect:**

· **on the skin:** No irritant effect.

· **on the eye:** No irritating effect.

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

· **Additional toxicological information:**

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

· **Carcinogenic categories**

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

64-17-5	Ethyl Alcohol, denatured	1
---------	--------------------------	---

· **NTP (National Toxicology Program)**

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.

· **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.

· **Results of PBT and vPvB assessment**

· **PBT:** Not applicable.

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- **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.

14 Transport information

- | | |
|---|---|
| <ul style="list-style-type: none"> · UN-Number · DOT, TDG, IMDG, IATA | <p style="margin-left: 20px;">UN1993</p> |
| <ul style="list-style-type: none"> · UN proper shipping name · DOT · TDG · IMDG · IATA | <p style="margin-left: 20px;">Flammable liquids, n.o.s. (Diethyl ether, Ethanol)
1993 FLAMMABLE LIQUID, N.O.S. (DIETHYL ETHER (ETHYL ETHER), ETHANOL (ETHYL ALCOHOL))
FLAMMABLE LIQUID, N.O.S. (DIETHYL ETHER (ETHYL ETHER), ETHANOL (ETHYL ALCOHOL))
FLAMMABLE LIQUID, N.O.S. (DIETHYL ETHER (ETHYL ETHER), ETHANOL)</p> |
| <ul style="list-style-type: none"> · Transport hazard class(es) · DOT | <p style="margin-left: 20px;">3 Flammable liquids</p> |
| <div style="text-align: center;">  </div> <ul style="list-style-type: none"> · Class · Label · TDG, IMDG, IATA | <p style="margin-left: 20px;">3</p> |
| <div style="text-align: center;">  </div> <ul style="list-style-type: none"> · Class · Label | <p style="margin-left: 20px;">3 Flammable liquids
3</p> |
| <ul style="list-style-type: none"> · Packing group · DOT, TDG, IMDG, IATA | <p style="margin-left: 20px;">I</p> |
| <ul style="list-style-type: none"> · Environmental hazards: | <p style="margin-left: 20px;">Not applicable.</p> |
| <ul style="list-style-type: none"> · Special precautions for user · Danger code (Kemler): · EMS Number: · Stowage Category | <p style="margin-left: 20px;">Warning: Flammable liquids
33
F-E,<u>S-E</u>
E</p> |

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Trade name: COLLODION, 5% SOLUTION, USP

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· 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: 30 L
· TDG	
· Excepted quantities (EQ)	Code: E3 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 300 ml
· IMDG	
· Limited quantities (LQ)	0
· Excepted quantities (EQ)	Code: E3 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 300 ml
· UN "Model Regulation":	UN 1993 FLAMMABLE LIQUID, N.O.S. (DIETHYL ETHER (ETHYL ETHER), ETHANOL (ETHYL ALCOHOL)), 3, I

15 Regulatory information

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

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

None of the ingredients is listed.

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

None of the ingredients is listed.

· **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

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

60-29-7 diethyl ether

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

· **Hazard pictograms**



GHS02

GHS07

GHS08

- **Signal word** Danger

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Trade name: COLLODION, 5% SOLUTION, USP

(Contd. of page 8)

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

diethyl ether

Ethyl Alcohol, denatured

· **Hazard statements**

Extremely flammable liquid and vapour.

Harmful if swallowed.

May cause cancer.

May cause drowsiness or dizziness.

· **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.

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

Wash thoroughly after handling.

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

Use only outdoors or in a well-ventilated area.

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

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

Rinse mouth.

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

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

IF exposed or concerned: Get medical advice/attention.

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

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

Store in a well-ventilated place. Keep cool.

Store locked up.

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

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

16 Other information

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

· **Date of the latest revision of the safety data sheet** 03/12/2019 / -

· **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

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

- **1.1 Product identifier**
- **Trade name:** COLLODION, 5% SOLUTION, USP
- **Article number:** 12600, 12600-30
- **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: info@emsdiasum.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. 1 H224 Extremely flammable liquid and vapour.



GHS07

Acute Tox. 4 H302 Harmful if swallowed.

STOT SE 3 H336 May cause drowsiness or dizziness.

- **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



GHS07

- **Signal word** *Danger*
- **Hazard-determining components of labelling:**
diethyl ether
- **Hazard statements**
H224 Extremely flammable liquid and vapour.
H302 Harmful if swallowed.
H336 May cause drowsiness or dizziness.

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Trade name: **COLLODION, 5% SOLUTION, USP**

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- **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.*
- P261 *Avoid breathing dust/fume/gas/mist/vapours/spray.*
- P303+P361+P353 *IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.*
- P405 *Store locked up.*
- P501 *Dispose of contents/container in accordance with local/regional/national/international regulations.*

- **Additional information:**

EUH019 *May form explosive peroxides.*

- **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: 60-29-7	diethyl ether	>50-≤100%
EINECS: 200-467-2	 <i>Flam. Liq. 1, H224;  <i>Acute Tox. 4, H302; STOT SE 3, H336</i></i>	
CAS: 64-17-5	Ethyl Alcohol, denatured	>25-≤50%
EINECS: 200-578-6	 <i>Flam. Liq. 2, H225</i>	

- **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:**

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

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

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

- **After eye contact:** *Rinse opened eye for several minutes under running water.*

- **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, sand, extinguishing powder. Do not use water.*

- **For safety reasons unsuitable extinguishing agents:** *Water with full jet*

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

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

SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**
Wear protective equipment. Keep unprotected persons away.
- **6.2 Environmental precautions:** 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.
Do not flush with water or aqueous cleansing agents
- **6.4 Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

SECTION 7: Handling and storage

- **7.1 Precautions for safe handling**
Ensure good ventilation/exhaustion at the workplace.
Open and handle receptacle with care.
Prevent formation of aerosols.
- **Information about fire - and explosion protection:**
Keep ignition sources away - Do not smoke.
Protect from heat.
Protect against electrostatic charges.
- **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.
Do not seal receptacle gas tight.
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:**

60-29-7 diethyl ether

WEL	Short-term value: 620 mg/m ³ , 200 ppm
	Long-term value: 310 mg/m ³ , 100 ppm

64-17-5 Ethyl Alcohol, denatured

WEL	Long-term value: 1920 mg/m ³ , 1000 ppm
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- **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.
Wash hands before breaks and at the end of work.
- **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:**
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:	Liquid
Colour:	Colourless
Odour:	Characteristic
Odour threshold:	Not determined.
- **pH-value:** Not determined.
- **Change in condition**

Melting point/freezing point:	Undetermined.
Initial boiling point and boiling range:	35 °C
- **Flash point:** -52 °C
- **Flammability (solid, gas):** Not applicable.
- **Ignition temperature:** 170 °C
- **Decomposition temperature:** Not determined.
- **Auto-ignition temperature:** Product is not selfigniting.
- **Explosive properties:** May form explosive peroxides.

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· Explosion limits:	
Lower:	1.7 Vol %
Upper:	36 Vol %
· Vapour pressure at 20 °C:	587 hPa
· Density:	Not determined.
· Relative density	Not determined.
· Vapour density	Not determined.
· Evaporation rate	Not determined.
· Solubility in / Miscibility with water:	Not miscible or difficult to mix.
· Partition coefficient: n-octanol/water:	Not determined.
· Viscosity:	
Dynamic:	Not determined.
Kinematic:	Not determined.
· Solvent content:	
Organic solvents:	95.0 %
VOC (EC)	95.00 %
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**
Harmful if swallowed.

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

60-29-7 diethyl ether

Oral	LD50	1,215 mg/kg (rat)
Inhalative	LC50/4 h	73,000 mg/l (rat)

- **Primary irritant effect:**
- **Skin corrosion/irritation** Based on available data, the classification criteria are not met.
- **Serious eye damage/irritation** Based on available data, the classification criteria are not met.
- **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.
- **CMR effects (carcinogenity, mutagenicity and toxicity for reproduction)**
- **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
- **Carcinogenicity** Based on available data, the classification criteria are not met.

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- **Reproductive toxicity** Based on available data, the classification criteria are not met.
- **STOT-single exposure**
May cause drowsiness or dizziness.
- **STOT-repeated exposure** Based on available data, the classification criteria are not met.
- **Aspiration hazard** Based on available data, the classification criteria are not met.


SECTION 12: Ecological information

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

SECTION 14: Transport information

- | | |
|---|--|
| · 14.1 UN-Number | UN1993 |
| · ADR, IMDG, IATA | |
| · 14.2 UN proper shipping name | |
| · ADR | 1993 FLAMMABLE LIQUID, N.O.S. (DIETHYL ETHER (ETHYL ETHER), ETHANOL (ETHYL ALCOHOL)) |
| · IMDG | FLAMMABLE LIQUID, N.O.S. (DIETHYL ETHER (ETHYL ETHER), ETHANOL (ETHYL ALCOHOL)) |
| · IATA | FLAMMABLE LIQUID, N.O.S. (DIETHYL ETHER (ETHYL ETHER), ETHANOL) |
| · 14.3 Transport hazard class(es) | |
| · ADR, IMDG, IATA | |
|  | |
| · Class | 3 Flammable liquids. |

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· Label	3
· 14.4 Packing group · ADR, IMDG, IATA	1
· 14.5 Environmental hazards:	Not applicable.
· 14.6 Special precautions for user · Danger code (Kemler): · EMS Number: · Stowage Category	Warning: Flammable liquids. 33 F-E,S-E E
· 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code	Not applicable.
· Transport/Additional information:	
· ADR · Limited quantities (LQ) · Excepted quantities (EQ)	0 Code: E3 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 300 ml
· Transport category · Tunnel restriction code	1 D/E
· IMDG · Limited quantities (LQ) · Excepted quantities (EQ)	0 Code: E3 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 300 ml
· UN "Model Regulation":	UN 1993 FLAMMABLE LIQUID, N.O.S. (DIETHYL ETHER (ETHYL ETHER), ETHANOL (ETHYL ALCOHOL)), 3, 1

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.
- Seveso category P5a FLAMMABLE LIQUIDS
- Qualifying quantity (tonnes) for the application of lower-tier requirements 10 t
- Qualifying quantity (tonnes) for the application of upper-tier requirements 50 t
- REGULATION (EC) No 1907/2006 ANNEX XVII Conditions of restriction: 3
- **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**
- H224 Extremely flammable liquid and vapour.
- H225 Highly flammable liquid and vapour.
- H302 Harmful if swallowed.
- H336 May cause drowsiness or dizziness.

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· 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. 1: Flammable liquids – Category 1

Flam. Liq. 2: Flammable liquids – Category 2

Acute Tox. 4: Acute toxicity – Category 4

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

GB

Veiligheidsinformatieblad

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

- **1.1 Productidentificatie**
- **Handelsnaam:** COLLODION, 5% SOLUTION, USP
- **Artikelnummer:** 12600, 12600-30
- **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: info@emsdiasum.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. 1 H224 Zeer licht ontvlambare vloeistof en damp.



GHS07

Acute Tox. 4 H302 Schadelijk bij inslikken.

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



GHS07

(Vervolg op blz. 2)

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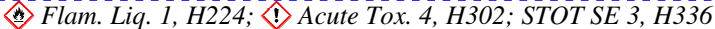

(Vervolg van blz. 1)

- **Signaalwoord** Gevaar
- **Gevaaraanduidende componenten voor de etikettering:**
diethylether
- **Gevenaanduidingen**
H224 Zeer licht ontvlambare vloeistof en damp.
H302 Schadelijk bij inslikken.
H336 Kan slaperigheid of duizeligheid veroorzaken.
- **Veiligheidsaanbevelingen**
P210 Verwijderd houden van warmte, hete oppervlakken, vonken, open vuur en andere ontstekingsbronnen. Niet roken.
P241 Explosie veilige elektrische/ventilatie-/verlichtings- apparatuur gebruiken.
P261 Inademing van stof/rook/gas/nevel/damp/spuitnevel vermijden.
P303+P361+P353 BIJ CONTACT MET DE HUID (of het haar): verontreinigde kleding onmiddellijk uittrekken. Huid met water afspoelen/afdouchen.
P405 Achter slot bewaren.
P501 De inhoud en de verpakking verwerken volgens de plaatselijke/regionale/nationale/internationale voorschriften.
- **Aanvullende gegevens:**
EUH019 Kan ontplofbare peroxiden vormen.
- **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.

- **Gevaarlijke inhoudstoffen:**

CAS: 60-29-7	diethylether	>50-≤100%
EINECS: 200-467-2		
CAS: 64-17-5	ethanol	>25-≤50%
EINECS: 200-578-6		

- **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:**
Het is mogelijk dat vergiftigingssymptomen pas na vele uren optreden. Om deze reden is medische controle gedurende minstens 48 uur na een ongeval noodzakelijk.
- **Na het inademen:** Frisse lucht toedienen; bij klachten arts ontbieden.
- **Na huidcontact:** Over het algemeen is het produkt niet prikkelend voor de huid
- **Na oogcontact:** Ogen bij geopend ooglid meerdere minuten met stromend water spoelen
- **Na inslikken:** Onmiddellijk arts raadplegen.
- **4.2 Belangrijkste acute en uitgestelde symptomen en effecten** Geen verdere relevante informatie verkrijgbaar.

(Vervolg op blz. 3)

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

RUBRIEK 5: Brandbestrijdingsmaatregelen

- **5.1 Blusmiddelen**
- **Geschikte blusmiddelen:** CO₂, zand, bluspoeder. Geen water gebruiken.
- **Blusmiddelen die uit veiligheidsoogpunt niet geschikt zijn:** Krachtige waterstraal
- **5.2 Speciale gevaren die door de stof of het mengsel worden veroorzaakt**
Geen verdere relevante informatie verkrijgbaar.
- **5.3 Advies voor brandweertieners**
- **Speciale beschermende kleding:** Geen bijzondere maatregelen nodig.

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

- **6.1 Persoonlijke voorzorgsmaatregelen, beschermde uitrusting en noodprocedures**
Beschermende kleding aantrekken. Niet beschermde personen op afstand houden.
- **6.2 Milieuvoorzorgsmaatregelen:** Niet in de riolering/het oppervlaktewater/het grondwater laten terechtkomen.
- **6.3 Insluitings- 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.
Niet met water of waterachtige reinigingsmiddelen wegspoelen.
- **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.
- **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.
Tanks niet gasdicht afsluiten.
Koel en droog bewaren in goed gesloten vaten.
Tegen hitte en directe zonnestralen beschermen.
- **7.3 Specifiek eindgebruik** Geen verdere relevante informatie verkrijgbaar.

NL

(Vervolg op blz. 4)

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(Vervolg van blz. 3)

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:**

60-29-7 diethylether

WGW	Korte termijn waarde: 616 mg/m ³ , 200 ppm
	Lange termijn waarde: 308 mg/m ³ , 100 ppm

64-17-5 ethanol

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

· **Aanvullende gegevens:** Als basis dienden lijsten die bij opstelling geldig waren.

· 8.2 Maatregelen ter beheersing van blootstelling

· **Persoonlijke beschermingsvoorzieningen:**

· **Algemene beschermings- en gezondheidsmaatregelen:**

Verwijderd houden van eet- en drinkwaren.

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

· **Ademhalingsbescherming:**

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

· **Handbescherming:**

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

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

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

· **Handschoenmateriaal**

De keuze van een geschikte handschoen is niet alleen afhankelijk van het materiaal, maar ook van andere kwaliteitskenmerken en verschilt van fabrikant tot fabrikant. 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:	Vloeistof
Kleur:	Kleurloos
· Geur:	Karakteristiek
· Geurdrempelwaarde:	Niet bepaald.

· **pH-waarde:** Niet bepaald.

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· Toestandsverandering	
Smelt-/vriespunt:	Niet bepaald.
Beginkookpunt en kooktraject:	35 °C
· Vlampunt:	-52 °C
· Ontvlambaarheid (vast, gas):	Niet bruikbaar.
· Ontstekingstemperatuur:	170 °C
· Ontledingstemperatuur:	Niet bepaald.
· Zelfontbrandingstemperatuur:	Het produkt ontbrandt niet uit zichzelf.
· Ontploffingseigenschappen:	Kan ontplofbare peroxiden vormen.
· Ontploffingsgrenzen:	
Onderste:	1,7 Vol %
Bovenste:	36 Vol %
· Dampspanning bij 20 °C:	587 hPa
· Dichtheid:	Niet bepaald.
· Relatieve dichtheid	Niet bepaald.
· Dampdichtheid	Niet bepaald.
· Verdampingsnelheid	Niet bepaald.
· Oplosbaarheid in/mengbaarheid met Water:	Niet resp. gering mengbaar.
· Verdelingscoëfficiënt: n-octanol/water:	Niet bepaald.
· Viscositeit	
Dynamisch:	Niet bepaald.
Kinematisch:	Niet bepaald.
· Oplosmiddelgehalte:	
Organisch oplosmiddel:	95,0 %
VOC (EG)	95,00 %
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.

NL

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RUBRIEK 11: Toxicologische informatie

· 11.1 Informatie over toxicologische effecten

- **Acute toxiciteit**
Schadelijk bij inslikken.

· Indelingsrelevantie LD/LC50-waarden:

60-29-7 diethylether

Oraal	LD50	1.215 mg/kg (rat)
Inhalatief	LC50/4 h	73.000 mg/l (rat)

- **Primaire aandoening:**
- **Huidcorrosie/-irritatie** Gebaseerd op beschikbare gegevens; aan de indelingscriteria is niet voldaan.
- **Ernstig oogletsel/oogirritatie** Gebaseerd op beschikbare gegevens; aan de indelingscriteria is niet voldaan.
- **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** Gebaseerd op beschikbare gegevens; aan de indelingscriteria is niet voldaan.
- **Giftigheid voor de voortplanting** Gebaseerd op beschikbare gegevens; aan de indelingscriteria is niet voldaan.
- **STOT bij eenmalige blootstelling**
Kan slaperigheid of duizeligheid veroorzaken.
- **STOT bij herhaalde blootstelling** Gebaseerd op beschikbare gegevens; aan de indelingscriteria is niet voldaan.
- **Gevaar bij inademing** Gebaseerd op beschikbare gegevens; aan de indelingscriteria is niet voldaan.

RUBRIEK 12: Ecologische informatie

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

RUBRIEK 13: Instructies voor verwijdering

- **13.1 Afvalverwerkingsmethoden**
- **Aanbeveling:** Mag niet tesamen met huisvuil gestort worden of in de riolering terecht komen.
- **Niet gereinigde verpakkingen:**
- **Aanbeveling:** Afvalverwijdering volgens overheidsbepalingen.

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RUBRIEK 14: Informatie met betrekking tot het vervoer

· 14.1 VN-nummer · ADR, IMDG, IATA	UN1993
· 14.2 Juiste ladingnaam overeenkomstig de modelreglementen van de VN · ADR · IMDG · IATA	1993 BRANDBARE VLOEISTOF, N.E.G. (DIETHYLETHER (ETHYLETHER), ETHANOL (ETHYLALCOHOL)) FLAMMABLE LIQUID, N.O.S. (DIETHYL ETHER (ETHYL ETHER), ETHANOL (ETHYL ALCOHOL)) FLAMMABLE LIQUID, N.O.S. (DIETHYL ETHER (ETHYL ETHER), ETHANOL)
· 14.3 Transportgevarenklasse(n) · ADR, IMDG, IATA	
	
· klasse · Etiket	3 Brandbare vloeistoffen 3
· 14.4 Verpakkingsgroep: · ADR, IMDG, IATA	I
· 14.5 Milieugevaren:	Niet bruikbaar.
· 14.6 Bijzondere voorzorgen voor de gebruiker · Kemler-getal: · EMS-nummer: · Stowage Category	Waarschuwing: Brandbare vloeistoffen 33 F-E, <u>S-E</u> E
· 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)	0 Code: E3 Grootste netto hoeveelheid per binnenverpakking: 30 ml Grootste netto hoeveelheid per buitenverpakking: 300 ml
· Vervoerscategorie · Tunnelbeperkingscode	1 D/E
· IMDG · Limited quantities (LQ) · Excepted quantities (EQ)	0 Code: E3 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 300 ml
· VN "Model Regulation":	UN 1993 BRANDBARE VLOEISTOF, N.E.G. (DIETHYLETHER (ETHYLETHER), ETHANOL (ETHYLALCOHOL)), 3, I

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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

· 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 P5a ONTVLAMBARE VLOEISTOFFEN**

· **Drempelwaarde (ton) voor toepassing van voorschriften voor lagedrempelinrichtingen 10 t**

· **Drempelwaarde (ton) voor toepassing van voorschriften voor hogedrempelinrichtingen 50 t**

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

· 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

H224 Zeer licht ontvlambare vloeistof en damp.

H225 Licht ontvlambare vloeistof en damp.

H302 Schadelijk bij inslikken.

H336 Kan slaperigheid of duizeligheid veroorzaken.

· Afkortingen en acroniemen:

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

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

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

VOC: Volatile Organic Compounds (USA, EU)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

Flam. Liq. 1: Ontvlambare vloeistoffen – Categorie 1

Flam. Liq. 2: Ontvlambare vloeistoffen – Categorie 2

Acute Tox. 4: Acute toxiciteit – Categorie 4

STOT SE 3: Specifieke doelorgaan toxiciteit bij eenmalige blootstelling – Categorie 3

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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:** COLLODION, 5% SOLUTION, USP
- **Code du produit:** 12600, 12600-30
- **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: info@emsdiasum.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. 1 H224 Liquide et vapeurs extrêmement inflammables.



GHS07

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

STOT SE 3 H336 Peut provoquer somnolence ou vertiges.

- **2.2 Éléments d'étiquetage**
- **Étiquetage selon le règlement (CE) n° 1272/2008** Le produit est classifié et étiqueté selon le règlement CLP.
- **Pictogrammes de danger**



GHS02



GHS07

- **Mention d'avertissement** Danger
- **Composants dangereux déterminants pour l'étiquetage:**
oxyde de diéthyle
- **Mentions de danger**
H224 Liquide et vapeurs extrêmement inflammables.
H302 Nocif en cas d'ingestion.
H336 Peut provoquer somnolence ou vertiges.

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· 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.
- P261 Éviter de respirer les poussières/fumées/gaz/brouillards/vapeurs/aérosols.
- 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.
- P405 Garder sous clef.
- P501 Éliminer le contenu/réceptacle conformément à la réglementation locale/régionale/nationale/internationale.

· Indications complémentaires:

EUH019 Peut former des peroxydes explosifs.

· 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: 60-29-7	oxyde de diéthyle	>50-≤100%
EINECS: 200-467-2	Flam. Liq. 1, H224; Acute Tox. 4, H302; STOT SE 3, H336	
CAS: 64-17-5	éthanol	>25-≤50%
EINECS: 200-578-6	Flam. Liq. 2, H225	

· **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:

Les symptômes d'intoxication peuvent apparaître après de nombreuses heures seulement; une surveillance médicale est donc nécessaire au moins 48 heures après un accident.

· **Après inhalation:** Donner de l'air frais, consulter un médecin en cas de troubles.

· **Après contact avec la peau:** En règle générale, le produit n'irrite pas la peau.

· Après contact avec les yeux:

Rincer les yeux, sous l'eau courante, pendant plusieurs minutes, en écartant bien les paupières.

· **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, sable, poudre d'extinction. Ne pas utiliser d'eau.

· **Produits extincteurs déconseillés pour des raisons de sécurité:** Jet d'eau à grand débit

· 5.2 Dangers particuliers résultant de la substance ou du mélange

Pas d'autres informations importantes disponibles.

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- **5.3 Conseils aux pompiers**
- **Équipement spécial de sécurité:** Aucune mesure particulière n'est requise.

RUBRIQUE 6: Mesures à prendre en cas de dispersion accidentelle

- **6.1 Précautions individuelles, équipement de protection et procédures d'urgence**
Porter un équipement de sécurité. Eloigner les personnes non protégées.
- **6.2 Précautions pour la protection de l'environnement:**
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.
Ne pas rincer à l'eau ou aux produits nettoyants aqueux.
- **6.4 Référence à d'autres rubriques**
Afin d'obtenir des informations pour une manipulation sûre, consulter le chapitre 7.
Afin d'obtenir des informations sur les équipements de protection personnels, consulter le chapitre 8.
Afin d'obtenir des informations sur l'élimination, consulter le chapitre 13.

RUBRIQUE 7: Manipulation et stockage

- **7.1 Précautions à prendre pour une manipulation sans danger**
Veiller à une bonne ventilation/aspiration du poste de travail.
Ouvrir et manipuler les récipients avec précaution.
Eviter la formation d'aérosols.
- **Préventions des incendies et des explosions:**
Tenir à l'abri des sources d'inflammation - ne pas fumer.
Tenir à l'abri de la chaleur.
Prendre des mesures contre les charges électrostatiques.
- **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.
Ne pas fermer les emballages de telle sorte qu'ils soient hermétiques aux gaz.
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.

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· 8.1 Paramètres de contrôle

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

60-29-7 oxyde de diéthyle

VME	Valeur momentanée: 616 mg/m ³ , 200 ppm
	Valeur à long terme: 308 mg/m ³ , 100 ppm

64-17-5 éthanol

VME	Valeur momentanée: 9500 mg/m ³ , 5000 ppm
	Valeur à long terme: 1900 mg/m ³ , 1000 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.

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

· 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:

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: Caractéristique

· Seuil olfactif: Non déterminé.

· valeur du pH: Non déterminé.

· Changement d'état

Point de fusion/point de congélation: Non déterminé.

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Point initial d'ébullition et intervalle d'ébullition:	35 °C
· Point d'éclair	-52 °C
· Inflammabilité (solide, gaz):	Non applicable.
· Température d'inflammation:	170 °C
· Température de décomposition:	Non déterminé.
· Température d'auto-inflammabilité:	Le produit ne s'enflamme pas spontanément.
· Propriétés explosives:	Peut former des peroxydes explosifs.
· Limites d'explosion:	
Inférieure:	1,7 Vol %
Supérieure:	36 Vol %
· Pression de vapeur à 20 °C:	587 hPa
· Densité:	Non déterminée.
· Densité relative	Non déterminé.
· Densité de vapeur:	Non déterminé.
· Taux d'évaporation:	Non déterminé.
· Solubilité dans/miscibilité avec l'eau:	Pas ou peu miscible
· Coefficient de partage: n-octanol/eau:	Non déterminé.
· Viscosité:	
Dynamique:	Non déterminé.
Cinématique:	Non déterminé.
· Teneur en solvants:	
Solvants organiques:	95,0 %
VOC (CE)	95,00 %
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**
Nocif en cas d'ingestion.

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

60-29-7 oxyde de diéthyle

Oral	LD50	1.215 mg/kg (rat)
Inhalatoire	LC50/4 h	73.000 mg/l (rat)

· **Effet primaire d'irritation:**

· **Corrosion cutanée/irritation cutanée**

Compte tenu des données disponibles, les critères de classification ne sont pas remplis.

· **Lésions oculaires graves/irritation oculaire**

Compte tenu des données disponibles, les critères de classification ne sont pas remplis.

· **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)**

· **Mutagénicité sur les cellules germinales**

Compte tenu des données disponibles, les critères de classification ne sont pas remplis.

· **Cancérogénicité** Compte tenu des données disponibles, les critères de classification ne sont pas remplis.

· **Toxicité pour la reproduction**

Compte tenu des données disponibles, les critères de classification ne sont pas remplis.

· **Toxicité spécifique pour certains organes cibles - exposition unique**

Peut provoquer somnolence ou vertiges.

· **Toxicité spécifique pour certains organes cibles - exposition répétée**

Compte tenu des données disponibles, les critères de classification ne sont pas remplis.

· **Danger par aspiration** Compte tenu des données disponibles, les critères de classification ne sont pas remplis.

RUBRIQUE 12: Informations écologiques

· **12.1 Toxicité**

· **Toxicité aquatique:** Pas d'autres informations importantes disponibles.

· **12.2 Persistance et dégradabilité** Pas d'autres informations importantes disponibles.

· **12.3 Potentiel de bioaccumulation** Pas d'autres informations importantes disponibles.

· **12.4 Mobilité dans le sol** Pas d'autres informations importantes disponibles.

· **Autres indications écologiques:**

· **Indications générales:**

Catégorie de pollution des eaux 1 (D) (Classification propre): peu polluant

Ne pas laisser le produit, non dilué ou en grande quantité, pénétrer la nappe phréatique, les eaux ou les canalisations.

· **12.5 Résultats des évaluations PBT et VPVB**

· **PBT:** Non applicable.

· **vPvB:** Non applicable.

· **12.6 Autres effets néfastes** Pas d'autres informations importantes disponibles.

RUBRIQUE 13: Considérations relatives à l'élimination

· **13.1 Méthodes de traitement des déchets**

· **Recommandation:** Ne doit pas être évacué avec les ordures ménagères. Ne pas laisser pénétrer dans les égouts.

· **Emballages non nettoyés:**

· **Recommandation:** Evacuation conformément aux prescriptions légales.

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RUBRIQUE 14: Informations relatives au transport

· 14.1 Numéro ONU · ADR, IMDG, IATA	UN1993
· 14.2 Désignation officielle de transport de l'ONU · ADR · IMDG · IATA	1993 LIQUIDE INFLAMMABLE, N.S.A. (ÉTHÉR DIÉTHYLIQUE (ÉTHÉR ÉTHYLIQUE), ÉTHANOL (ALCOOL ÉTHYLIQUE)) FLAMMABLE LIQUID, N.O.S. (DIETHYL ETHER (ETHYL ETHER), ETHANOL (ETHYL ALCOHOL)) FLAMMABLE LIQUID, N.O.S. (DIETHYL ETHER (ETHYL ETHER), ETHANOL)
· 14.3 Classe(s) de danger pour le transport · ADR, IMDG, IATA	
	
· Classe · Étiquette	3 Liquides inflammables. 3
· 14.4 Groupe d'emballage · ADR, IMDG, IATA	I
· 14.5 Dangers pour l'environnement:	Non applicable.
· 14.6 Précautions particulières à prendre par l'utilisateur · Indice Kemler: · No EMS: · Stowage Category	Attention: Liquides inflammables. 33 F-E,S-E E
· 14.7 Transport en vrac conformément à l'annexe II de la convention Marpol et au recueil IBC	Non applicable.
· Indications complémentaires de transport:	
· ADR · Quantités limitées (LQ) · Quantités exceptées (EQ)	0 Code: E3 Quantité maximale nette par emballage intérieur: 30 ml Quantité maximale nette par emballage extérieur: 300 ml
· Catégorie de transport · Code de restriction en tunnels	1 D/E
· IMDG · Limited quantities (LQ) · Excepted quantities (EQ)	0 Code: E3 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 300 ml

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<p>· "Règlement type" de l'ONU:</p>	<p>UN 1993 LIQUIDE INFLAMMABLE, N.S.A. (ÉTHÉR DIÉTHYLIQUE (ÉTHÉR ÉTHYLIQUE), ÉTHANOL (ALCOOL ÉTHYLIQUE)), 3, I</p>
-------------------------------------	--

RUBRIQUE 15: Informations relatives à la réglementation

- **15.1 Réglementations/législation particulières à la substance ou au mélange en matière de sécurité, de santé et d'environnement**
- Directive 2012/18/UE
- **Substances dangereuses désignées - ANNEXE I** Aucun des composants n'est compris.
- **Catégorie SEVESO P5a LIQUIDES INFLAMMABLES**
- **Quantité seuil (tonnes) pour l'application des exigences relatives au seuil bas 10 t**
- **Quantité seuil (tonnes) pour l'application des exigences relatives au seuil haut 50 t**
- **RÈGLEMENT (CE) N° 1907/2006 ANNEXE XVII** Conditions de limitation: 3
- **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**
- H224 Liquide et vapeurs extrêmement inflammables.
- H225 Liquide et vapeurs très inflammables.
- H302 Nocif en cas d'ingestion.
- H336 Peut provoquer somnolence ou vertiges.
- **Acronymes et abréviations:**
- ADR: Accord européen sur le transport des marchandises dangereuses par Route
- IMDG: International Maritime Code for Dangerous Goods
- IATA: International Air Transport Association
- GHS: Globally Harmonised System of Classification and Labelling of Chemicals
- EINECS: European Inventory of Existing Commercial Chemical Substances
- ELINCS: European List of Notified Chemical Substances
- CAS: Chemical Abstracts Service (division of the American Chemical Society)
- VOC: Volatile Organic Compounds (USA, EU)
- LC50: Lethal concentration, 50 percent
- LD50: Lethal dose, 50 percent
- PBT: Persistent, Bioaccumulative and Toxic
- vPvB: very Persistent and very Bioaccumulative
- Flam. Liq. 1: Liquides inflammables – Catégorie 1
- Flam. Liq. 2: Liquides inflammables – Catégorie 2
- Acute Tox. 4: Toxicité aiguë – Catégorie 4
- STOT SE 3: Toxicité spécifique pour certains organes cibles (exposition unique) – Catégorie 3

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

- **1.1 Produktidentifikator**
- **Handelsname:** COLLODION, 5% SOLUTION, USP
- **Artikelnummer:** 12600, 12600-30
- **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: info@emsdiasum.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. 1 H224 Flüssigkeit und Dampf extrem entzündbar.



GHS07

Acute Tox. 4 H302 Gesundheitsschädlich bei Verschlucken.

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.

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· **Gefahrenpiktogramme**

GHS02 GHS07

· **Signalwort Gefahr**· **Gefahrbestimmende Komponenten zur Etikettierung:**

Diethylether

· **Gefahrenhinweise**

H224 Flüssigkeit und Dampf extrem entzündbar.

H302 Gesundheitsschädlich bei Verschlucken.

H336 Kann Schläfrigkeit und Benommenheit verursachen.

· **Sicherheitshinweise**

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

P241 Explosionsgeschützte elektrische Geräte/Lüftungsanlagen/Beleuchtungsanlagen verwenden.

P261 Einatmen von Staub/Rauch/Gas/Nebel/Dampf/Aerosol vermeiden.

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

P405 Unter Verschluss aufbewahren.

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

· **Zusätzliche Angaben:**

EUH019 Kann explosionsfähige Peroxide bilden.

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

ABSCHNITT 3: Zusammensetzung/Angaben zu Bestandteilen

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

CAS: 60-29-7	Diethylether	>50-≤100%
EINECS: 200-467-2	Flam. Liq. 1, H224; Acute Tox. 4, H302; STOT SE 3, H336	
CAS: 64-17-5	Ethanol	>25-≤50%
EINECS: 200-578-6	Flam. Liq. 2, H225	

· **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:**

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

· **Nach Einatmen:** Frischluftzufuhr, bei Beschwerden Arzt aufsuchen.· **Nach Hautkontakt:** Im allgemeinen ist das Produkt nicht hautreizend.· **Nach Augenkontakt:** Augen bei geöffnetem Lidspalt mehrere Minuten mit fließendem Wasser spülen.

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- **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, Sand, Löschpulver. Kein Wasser verwenden.
- **Aus Sicherheitsgründen ungeeignete Löschmittel:** Wasser im Vollstrahl
- **5.2 Besondere vom Stoff oder Gemisch ausgehende Gefahren**
Keine weiteren relevanten Informationen verfügbar.
- **5.3 Hinweise für die Brandbekämpfung**
- **Besondere Schutzausrüstung:** Keine besonderen Maßnahmen erforderlich.

ABSCHNITT 6: Maßnahmen bei unbeabsichtigter Freisetzung

- **6.1 Personenbezogene Vorsichtsmaßnahmen, Schutzausrüstungen und in Notfällen anzuwendende Verfahren**
Schutzausrüstung tragen. Ungeschützte Personen fernhalten.
- **6.2 Umweltschutzmaßnahmen:** 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.
Nicht mit Wasser oder wässrigen Reinigungsmitteln wegspülen.
- **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.
- **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.
Behälter nicht gasdicht verschließen.
In gut verschlossenen Gebinden kühl und trocken lagern.
Vor Hitze und direkter Sonnenbestrahlung schützen.

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- **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:**

60-29-7 Diethylether

AGW	Langzeitwert: 1200 mg/m ³ , 400 ml/m ³ 1(I);DFG, EU
-----	--

64-17-5 Ethanol

AGW	Langzeitwert: 380 mg/m ³ , 200 ml/m ³ 4(II);DFG, Y
-----	---

- **Zusätzliche Hinweise:** Als Grundlage dienen die bei der Erstellung gültigen Listen.
- **8.2 Begrenzung und Überwachung der Exposition**
- **Persönliche Schutzausrüstung:**
- **Allgemeine Schutz- und Hygienemaßnahmen:**
Von Nahrungsmitteln, Getränken und Futtermitteln fernhalten.
Vor den Pausen und bei Arbeitsende Hände waschen.
- **Atemschutz:**
Bei kurzzeitiger oder geringer Belastung Atemfiltergerät; bei intensiver bzw. längerer Exposition unluftunabhängiges Atemschutzgerät verwenden.
- **Handschutz:**
Das Handschuhmaterial muss undurchlässig und beständig gegen das Produkt / den Stoff / die Zubereitung sein.
Aufgrund fehlender Tests kann keine Empfehlung zum Handschuhmaterial für das Produkt / die Zubereitung / das Chemikaliengemisch abgegeben werden.
Auswahl des Handschuhmaterials unter Beachtung der Durchbruchzeiten, Permeationsraten und der Degradation.
- **Handschuhmaterial**
Die Auswahl eines geeigneten Handschuhs ist nicht nur vom Material, sondern auch von weiteren Qualitätsmerkmalen abhängig und von Hersteller zu Hersteller unterschiedlich. 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

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ABSCHNITT 9: Physikalische und chemische Eigenschaften

· 9.1 Angaben zu den grundlegenden physikalischen und chemischen Eigenschaften

· Allgemeine Angaben

· Aussehen:

Form: Flüssigkeit

Farbe: Farblos

· **Geruch:** Charakteristisch

· **Geruchsschwelle:** Nicht bestimmt.

· **pH-Wert:** Nicht bestimmt.

· Zustandsänderung

Schmelzpunkt/Gefrierpunkt: Nicht bestimmt.

Siedebeginn und Siedebereich: 35 °C

· **Flammpunkt:** -52 °C

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

· **Zündtemperatur:** 170 °C

· **Zersetzungstemperatur:** Nicht bestimmt.

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

· **Explosive Eigenschaften:** Kann explosionsfähige Peroxide bilden.

· Explosionsgrenzen:

Untere: 1,7 Vol %

Obere: 36 Vol %

· **Dampfdruck bei 20 °C:** 587 hPa

· **Dichte:** Nicht bestimmt.

· **Relative Dichte:** Nicht bestimmt.

· **Dampfdichte:** Nicht bestimmt.

· **Verdampfungsgeschwindigkeit:** Nicht bestimmt.

· Löslichkeit in / Mischbarkeit mit

Wasser: Nicht bzw. wenig mischbar.

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

· Viskosität:

Dynamisch: Nicht bestimmt.

Kinematisch: Nicht bestimmt.

· Lösemittelgehalt:

Organische Lösemittel: 95,0 %

VOC (EU) 95,00 %

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.

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- **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

Gesundheitsschädlich bei Verschlucken.

· Einstufungsrelevante LD/LC50-Werte:

60-29-7 Diethylether

Oral	LD50	1.215 mg/kg (rat)
Inhalativ	LC50/4 h	73.000 mg/l (rat)

- **Primäre Reizwirkung:**
- **Ätz-/Reizwirkung auf die Haut** Aufgrund der verfügbaren Daten sind die Einstufungskriterien nicht erfüllt.
- **Schwere Augenschädigung/-reizung** Aufgrund der verfügbaren Daten sind die Einstufungskriterien nicht erfüllt.
- **Sensibilisierung der Atemwege/Haut** Aufgrund der verfügbaren Daten sind die Einstufungskriterien nicht erfüllt.
- **CMR-Wirkungen (krebserzeugende, erbgutverändernde und fortpflanzungsgefährdende Wirkung)**
- **Keimzell-Mutagenität** Aufgrund der verfügbaren Daten sind die Einstufungskriterien nicht erfüllt.
- **Karzinogenität** Aufgrund der verfügbaren Daten sind die Einstufungskriterien nicht erfüllt.
- **Reproduktionstoxizität** Aufgrund der verfügbaren Daten sind die Einstufungskriterien nicht erfüllt.
- **Spezifische Zielorgan-Toxizität bei einmaliger Exposition**
Kann Schläfrigkeit und Benommenheit verursachen.
- **Spezifische Zielorgan-Toxizität bei wiederholter Exposition**
Aufgrund der verfügbaren Daten sind die Einstufungskriterien nicht erfüllt.
- **Aspirationsgefahr** Aufgrund der verfügbaren Daten sind die Einstufungskriterien nicht erfüllt.

ABSCHNITT 12: Umweltbezogene Angaben

- **12.1 Toxizität**
- **Aquatische Toxizität:** Keine weiteren relevanten Informationen verfügbar.
- **12.2 Persistenz und Abbaubarkeit** Keine weiteren relevanten Informationen verfügbar.
- **12.3 Bioakkumulationspotenzial** Keine weiteren relevanten Informationen verfügbar.
- **12.4 Mobilität im Boden** Keine weiteren relevanten Informationen verfügbar.
- **Weitere ökologische Hinweise:**
- **Allgemeine Hinweise:**
Wassergefährdungsklasse 1 (Selbsteinstufung): schwach wassergefährdend
Nicht unverdünnt bzw. in größeren Mengen in das Grundwasser, in Gewässer oder in die Kanalisation gelangen lassen.
- **12.5 Ergebnisse der PBT- und vPvB-Beurteilung**
- **PBT:** Nicht anwendbar.
- **vPvB:** Nicht anwendbar.
- **12.6 Andere schädliche Wirkungen** Keine weiteren relevanten Informationen verfügbar.

ABSCHNITT 13: Hinweise zur Entsorgung

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

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

ABSCHNITT 14: Angaben zum Transport

· 14.1 UN-Nummer
· ADR, IMDG, IATA UN1993
· 14.2 Ordnungsgemäße UN-Versandbezeichnung
· ADR 1993 ENTZÜNDBARER FLÜSSIGER STOFF, N.A.G.
(DIETHYLETHER (ETHYLETHER), ETHANOL
(ETHYLALKOHOL))
· IMDG FLAMMABLE LIQUID, N.O.S. (DIETHYL ETHER (ETHYL
ETHER), ETHANOL (ETHYL ALCOHOL))
· IATA FLAMMABLE LIQUID, N.O.S. (DIETHYL ETHER (ETHYL
ETHER), ETHANOL)
· 14.3 Transportgefahrenklassen
· ADR, IMDG, IATA

· Klasse 3 Entzündbare flüssige Stoffe
· Gefahrzettel 3
· 14.4 Verpackungsgruppe
· ADR, IMDG, IATA I
· 14.5 Umweltgefahren: Nicht anwendbar.
· 14.6 Besondere Vorsichtsmaßnahmen für den Verwender
· Kemler-Zahl: Achtung: Entzündbare flüssige Stoffe
· EMS-Nummer: 33
· Stowage Category F-E,S-E
E
· 14.7 Massengutbeförderung gemäß Anhang II des MARPOL-Übereinkommens und gemäß IBC-Code Nicht anwendbar.
· Transport/weitere Angaben:
· ADR
· Begrenzte Menge (LQ) 0
· Freigestellte Mengen (EQ) Code: E3
Höchste Nettomenge je Innenverpackung: 30 ml
Höchste Nettomenge je Außenverpackung: 300 ml
· Beförderungskategorie 1
· Tunnelbeschränkungscode D/E

· IMDG
· Limited quantities (LQ) 0

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· Excepted quantities (EQ)	Code: E3 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 300 ml
· UN "Model Regulation":	UN 1993 ENTZÜNDBARER FLÜSSIGER STOFF, N.A.G. (DIETHYLETHER (ETHYLETHER), ETHANOL (ETHYLALKOHOL)), 3, I

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 P5a ENTZÜNDBARE FLÜSSIGKEITEN**
 - **Mengenschwelle (in Tonnen) für die Anwendung in Betrieben der unteren Klasse 10 t**
 - **Mengenschwelle (in Tonnen) für die Anwendung in Betrieben der oberen Klasse 50 t**
 - **VERORDNUNG (EG) Nr. 1907/2006 ANHANG XVII** Beschränkungsbedingungen: 3
 - **Nationale Vorschriften:**
 - **Technische Anleitung Luft:**
- | Klasse | Anteil in % |
|--------|-------------|
| NK | 95,0 |
- **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.

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**
H224 Flüssigkeit und Dampf extrem entzündbar.
H225 Flüssigkeit und Dampf leicht entzündbar.
H302 Gesundheitsschädlich bei Verschlucken.
H336 Kann Schläfrigkeit und Benommenheit verursachen.
- **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

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Flam. Liq. 1: Entzündbare Flüssigkeiten – Kategorie 1
Flam. Liq. 2: Entzündbare Flüssigkeiten – Kategorie 2
Acute Tox. 4: Akute Toxizität – Kategorie 4
STOT SE 3: Spezifische Zielorgan-Toxizität (einmalige Exposition) – Kategorie 3

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DE

Scheda di dati di sicurezza
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SEZIONE 1: Identificazione della sostanza o della miscela e della società/impresa

- **1.1 Identificatore del prodotto**
- **Denominazione commerciale:** COLLODION, 5% SOLUTION, USP
- **Articolo numero:** 12600, 12600-30
- **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: info@emsdiasum.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. 1 H224 Liquido e vapori altamente infiammabili.



GHS07

Acute Tox. 4 H302 Nocivo se ingerito.

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



GHS07

- **Avvertenza Pericolo**

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

ossido di dietile

· **Indicazioni di pericolo**

H224 Liquido e vapori altamente infiammabili.

H302 Nocivo se ingerito.

H336 Può provocare sonnolenza o vertigini.

· **Consigli di prudenza**

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

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

P261 Evitare di respirare la polvere/i fumi/i gas/la nebbia/i vapori/gli aerosol.

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.

P405 Conservare sotto chiave.

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

· **Ulteriori dati:**

EUH019 Può formare perossidi esplosivi.

· **2.3 Altri pericoli**

· **Risultati della valutazione PBT e vPvB**

· **PBT:** Non applicabile.

· **vPvB:** Non applicabile.

SEZIONE 3: Composizione/informazioni sugli ingredienti

· **3.2 Caratteristiche chimiche: Miscela**

· **Descrizione:** Miscela delle seguenti sostanze con additivi non pericolosi.

· **Sostanze pericolose:**

CAS: 60-29-7	ossido di dietile	>50-≤100%
EINECS: 200-467-2	☠ Flam. Liq. 1, H224; ⚠ Acute Tox. 4, H302; STOT SE 3, H336	
CAS: 64-17-5	etanolo	>25-≤50%
EINECS: 200-578-6	☠ Flam. Liq. 2, H225	

· **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:**

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.

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

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

· **Contatto con gli occhi:** Lavare con acqua corrente per alcuni minuti tenendo le palpebre ben aperte.

· **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.

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SEZIONE 5: Misure antincendio

- **5.1 Mezzi di estinzione**
- **Mezzi di estinzione idonei:** CO₂, sabbia, polvere. Non usare acqua.
- **Mezzi di estinzione inadatti per motivi di sicurezza:** Getti d'acqua
- **5.2 Pericoli speciali derivanti dalla sostanza o dalla miscela** Non sono disponibili altre informazioni.
- **5.3 Raccomandazioni per gli addetti all'estinzione degli incendi**
- **Mezzi protettivi specifici:** Non sono richiesti provvedimenti particolari.

SEZIONE 6: Misure in caso di rilascio accidentale

- **6.1 Precauzioni personali, dispositivi di protezione e procedure in caso di emergenza**
Indossare equipaggiamento protettivo. Allontanare le persone non equipaggiate.
- **6.2 Precauzioni ambientali:** *Impedire infiltrazioni nella fognatura/nelle acque superficiali/nelle acque freatiche.*
- **6.3 Metodi e materiali per il contenimento e per la bonifica:**
*Raccogliere il liquido con materiale assorbente (sabbia, tripoli, legante di acidi, legante universale, segatura).
 Smaltimento del materiale contaminato conformemente al punto 13.
 Provvedere ad una sufficiente areazione.
 Non dilavare con acqua o detergenti liquidi.*
- **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.*
- **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.
 Chiudere i recipienti non a tenuta di gas.
 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.*

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· 8.1 Parametri di controllo

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

60-29-7 ossido di dietile

TWA	Valore a breve termine: 1516 mg/m ³ , 500 ppm Valore a lungo termine: 1213 mg/m ³ , 400 ppm
VL	Valore a breve termine: 616 mg/m ³ , 200 ppm Valore a lungo termine: 308 mg/m ³ , 100 ppm

64-17-5 etanolo

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

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

· 8.2 Controlli dell'esposizione

· **Mezzi protettivi individuali:**

· **Norme generali protettive e di igiene del lavoro:**

Tenere lontano da cibo, bevande e foraggi.

Lavarsi le mani prima dell'intervallo o a lavoro terminato.

· **Maschera protettiva:**

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

· **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:** Caratteristico

· **Soglia olfattiva:** Non definito.

· **valori di pH:** Non definito.

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· Cambiamento di stato	
Punto di fusione/punto di congelamento:	Non definito.
Punto di ebollizione iniziale e intervallo di ebollizione:	35 °C
· Punto di infiammabilità:	-52 °C
· Infiammabilità (solidi, gas):	Non applicabile.
· Temperatura di accensione:	170 °C
· Temperatura di decomposizione:	Non definito.
· Temperatura di autoaccensione:	Prodotto non autoinfiammabile.
· Proprietà esplosive:	Può formare perossidi esplosivi.
· Limiti di infiammabilità:	
Inferiore:	1,7 Vol %
Superiore:	36 Vol %
· Tensione di vapore a 20 °C:	587 hPa
· Densità:	Non definito.
· Densità relativa	Non definito.
· Densità di vapore:	Non definito.
· Velocità di evaporazione	Non definito.
· Solubilità in/Miscibilità con acqua:	Poco e/o non miscibile.
· Coefficiente di ripartizione: n-ottanolo/acqua:	Non definito.
· Viscosità:	
Dinamica:	Non definito.
Cinematica:	Non definito.
· Tenore del solvente:	
Solventi organici:	95,0 %
VOC (CE)	95,00 %
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.

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SEZIONE 11: Informazioni tossicologiche

· **11.1 Informazioni sugli effetti tossicologici**

· **Tossicità acuta**

Nocivo se ingerito.

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

60-29-7 ossido di dietile

Orale	LD50	1.215 mg/kg (rat)
Per inalazione	LC50/4 h	73.000 mg/l (rat)

· **Irritabilità primaria:**

· **Corrosione/irritazione cutanea** Basandosi sui dati disponibili i criteri di classificazione non sono soddisfatti.

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

Basandosi sui dati disponibili i criteri di classificazione non sono soddisfatti.

· **Sensibilizzazione respiratoria o cutanea**

Basandosi sui dati disponibili i criteri di classificazione non sono soddisfatti.

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

· **Mutagenicità delle cellule germinali**

Basandosi sui dati disponibili i criteri di classificazione non sono soddisfatti.

· **Cancerogenicità** Basandosi sui dati disponibili i criteri di classificazione non sono soddisfatti.

· **Tossicità per la riproduzione** Basandosi sui dati disponibili i criteri di classificazione non sono soddisfatti.

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

Può provocare sonnolenza o vertigini.

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

Basandosi sui dati disponibili i criteri di classificazione non sono soddisfatti.

· **Pericolo in caso di aspirazione** Basandosi sui dati disponibili i criteri di classificazione non sono soddisfatti.

SEZIONE 12: Informazioni ecologiche

· **12.1 Tossicità**

· **Tossicità acquatica:** Non sono disponibili altre informazioni.

· **12.2 Persistenza e degradabilità** Non sono disponibili altre informazioni.

· **12.3 Potenziale di bioaccumulo** Non sono disponibili altre informazioni.

· **12.4 Mobilità nel suolo** Non sono disponibili altre informazioni.

· **Ulteriori indicazioni in materia ambientale:**

· **Ulteriori indicazioni:**

Pericolosità per le acque classe 1 (D) (Autoclassificazione): poco pericoloso

Non immettere nelle acque freatiche, nei corsi d'acqua o nelle fognature non diluito o in grandi quantità.

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

· **PBT:** Non applicabile.

· **vPvB:** Non applicabile.

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

SEZIONE 13: Considerazioni sullo smaltimento

· **13.1 Metodi di trattamento dei rifiuti**

· **Consigli:** Non smaltire il prodotto insieme ai rifiuti domestici Non immettere nelle fognature.

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- **Imballaggi non puliti:**
- **Consigli:** Smaltimento in conformità con le disposizioni amministrative.

SEZIONE 14: Informazioni sul trasporto

· 14.1 Numero ONU · ADR, IMDG, IATA	UN1993
· 14.2 Nome di spedizione dell'ONU · ADR · IMDG · IATA	1993 LIQUIDO INFIAMMABILE, N.A.S. (ETERE DIETILICO (ETERE ETILICO), ETANOLO (ALCOL ETILICO)) FLAMMABLE LIQUID, N.O.S. (DIETHYL ETHER (ETHYL ETHER), ETHANOL (ETHYL ALCOHOL)) FLAMMABLE LIQUID, N.O.S. (DIETHYL ETHER (ETHYL ETHER), ETHANOL)
· 14.3 Classi di pericolo connesso al trasporto · ADR, IMDG, IATA	
	
· Classe · Etichetta	3 Liquidi infiammabili 3
· 14.4 Gruppo di imballaggio · ADR, IMDG, IATA	I
· 14.5 Pericoli per l'ambiente:	Non applicabile.
· 14.6 Precauzioni speciali per gli utilizzatori · Numero Kemler: · Numero EMS: · Stowage Category	Attenzione: Liquidi infiammabili 33 F-E, <u>S-E</u> E
· 14.7 Trasporto di rifiuti secondo l'allegato II di MARPOL ed il codice IBC	Non applicabile.
· Trasporto/ulteriori indicazioni:	
· ADR · Quantità limitate (LQ) · Quantità esenti (EQ)	0 Codice: E3 Quantità massima netta per imballaggio interno: 30 ml Quantità massima netta per imballaggio esterno: 300 ml
· Categoria di trasporto · Codice di restrizione in galleria	1 D/E
· IMDG · Limited quantities (LQ) · Excepted quantities (EQ)	0 Code: E3 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 300 ml

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Stampato il: 12.03.2019

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Denominazione commerciale: COLLODION, 5% SOLUTION, USP

(Segue da pagina 7)

· **UN "Model Regulation":** UN 1993 LIQUIDO INFIAMMABILE, N.A.S. (ETERE DIETILICO (ETERE ETILICO), ETANOLO (ALCOL ETILICO)), 3, I

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 P5a** LIQUIDI INFIAMMABILI
- **Quantità limite (tonnellate) ai fini dell'applicazione dei requisiti di soglia inferiore 10 t**
- **Quantità limite (tonnellate) ai fini dell'applicazione dei requisiti di soglia superiore 50 t**
- **REGOLAMENTO (CE) n. 1907/2006 ALLEGATO XVII** Restrizioni: 3

· **Disposizioni nazionali:**

· **Istruzione tecnica aria:**

Classe	quota in %
NC	95,0

· **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.

· **Fraasi rilevanti**

H224 Liquido e vapori altamente infiammabili.
H225 Liquido e vapori facilmente infiammabili.
H302 Nocivo se ingerito.
H336 Può provocare sonnolenza o vertigini.

· **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. 1: Liquidi infiammabili – Categoria 1
Flam. Liq. 2: Liquidi infiammabili – Categoria 2
Acute Tox. 4: Tossicità acuta – Categoria 4
STOT SE 3: Tossicità specifica per organi bersaglio (esposizione singola) – Categoria 3

물질안전보건자료

GHS에 따라 라다

기압점: 2019.03.12

개정: 2019.03.12

1 화학제품과 회사에 관한 정보

제품제품제명

- 제품명: COLLODION, 5% SOLUTION, USP

- 상품번호: 12600, 12600-30

해당 해당 물질이나 혼합물(예) 관련 위험도 및 사용금지용도 추가적인 정보가 존재하지 않습니다.

- 제품의 권고 용도와 사용 형태에 대한 제한사항 실화 학품

- 안전데이터표(Safety Data Sheet)내 공급업체 관련 정보

- 제조자/수입자/유통업체 정보

Electron Microscopy Sciences
1560 Industry Road
USA-Hatfield, PA 19440
Tel: 215-412-8400 Fax: 215-412-8450
email: info@emsdiasum.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: 제품 안전 부서 안전 관리 부서

- 비상연락 전화번호:

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

2 유해성·위험성

- 순물질 또는 혼합물(예) 분류분류



화염

인화성 액체 - 구분 1

H224 극인화성 액체 및 증기



급성 독성 - 경구 - 구분 4

H302 삼키면 유해함

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

- 라벨표기 요소요소

- 라벨 라벨 요소

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

(2 쪽에 계속)

물질안전보건자료 GHS에 따라라다

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· **각각적인 의료처치 및 특별치료가 필요함을 시사하는 징후 중** **정확적인 정보가 존재하지 않습니다.** (2 쪽부터계속)

5 폭발·화재시 대처방법

- **소화제**
 - **적절한 소화제:** 이 산 화 탄 소, 모 래, 석 회 가 루를 사용 하고, 물 을 사 용 하 지 않 는 다.
 - **부적절한 소화제:** 플레트용 물
 - **본 화학물질이나 혼합물에서 발생가능한 특별한 위험 특성** 추가적인 정보가 존재하지 않습니다.
 - **소방관**에 대한 **대응사항**
- 화재 **화재**에 **적합**한 **소화**용 **보호구 및 예방조치:** 특 별 한 조 치 가 필 요 없 음.

6 누출 사고 시 대처방법

- **개인적 예방조치, 보호장비 및 응급 처치 절차** 전 장 비 착 용 하 고, 무 방 비 의 사 람 은 격 리 시 킨 다.
- 환경 **환경**에 **적합**한 **조치:** 하수도망/해수면위오물/지하수로도달하지 않게 한다.
- 밀폐 **밀폐**된 **용기**에 **적합**한 **조치:** 소 새 소 재 액 체 가 혼 합 된 물 질 (모 래, 규 조 토, 산 성 결 합 물, 일 반 결 합 물, 톱 밥)에 흡입되도록 한다. 항목 13에 따라 오염된 물질을 쓰레기로 처분한다. 충분한 환기가 되도록 한다. 물 이 나 묽 은 세 척 제 로 씻 어 내 지 마 십 시 오
- 석 **석**에 **적합**한 **조치:** 안 전 관 리 에 대 한 정 보 는 제 7 장 을 참 고 하 시 오. 개 인 보 호 장 비 에 대 한 정 보 는 제 8 장 을 참 고 하 시 오. 쓰레기 처리에 대한 정보는 제13 장 을 참고하시오.

7 취급 및 저장방법

- 취급 **취급**취급
- 안전 **안전**을 **위**한 **예방**조치
- 작업장에서는 통풍이 잘 되고/습기 제거가 잘 되게 주의한다.
 - 조심스럽게 용기를 개봉하거나 취급한다.
 - 연무질이 형성되는 것을 피한다.
- 화재 **화재**에 **적합**한 **조치:** 발 화 요 소 는 멀 리 둔 다. 급 연. 열로부터 보호한다. 정 전기 의 충 전 으로부터 보호한다.
- **혼합 위험성**에 **적합**한 **조치**
- 보관 **보관**보관
- **안전한 저장 방법**가 **운**장 **소**에 **보**관 **한**다.
 - **하 나**의 **공 통**한 **보 관** **조**건 **에** **대**한 **예**외 **조**건 **이** **존**재 **하**지 **않**는 **경**우 **에** **적**용 **하**는 **경**우 **가** **없**음
 - **보 관 조 건**에 **관**한 **추 가 정 보** **정 보**
- 용기를 새지 않게 밀폐한 채 보관한다. 용기를 가스가 새지 않게 밀폐시킨다. 밀폐된 용기속에서 늘 하고 건조하게 보관한다. 열이나 직사광선으로부터 보호한다.
- **구체적** **최**종 **취**용 **자** 추가적인 정보가 존재하지 않습니다.

물질안전보건자료

GHS에 따라 라다

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(3 쪽부터 계속)

8 노출방지 및 개인보호구

· **첨단시설 디자인에 대한 추가정보:** 더 이상 의 자료는 없음. 항 목 7 을 참고하시 오.

통제 ~~통제~~ ~~통제~~ 변수

· **화학물질의 노출기준, 생물학적 노출기준 등:**

60-29-7 diethyl ether

TLV (KR)	단기간의값: 500 ppm 장기간의값: 400 ppm
IOELV (EU)	단기간의값: 616 mg/m ³ , 200 ppm 장기간의값: 308 mg/m ³ , 100 ppm
PEL (US)	장기간의값: 1200 mg/m ³ , 400 ppm
TLV (US)	단기간의값: 1520 mg/m ³ , 500 ppm 장기간의값: 1210 mg/m ³ , 400 ppm

64-17-5 Ethyl Alcohol, denatured

TLV (KR)	장기간의값: 1000 ppm 발암성 1A
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

· **추가정보** 정보조 할 당시에 유 효 한 목 록 을 기초로 사용했다.

노출 ~~노출~~ ~~통제~~ 통제

개인 ~~개인~~ ~~보호구~~ 보호구

· **일반적보호조치및위생조치:**

- 식료 품, 음 료 수와 사 료 로 부 터 멀 리 떨 어 뜨 려 놓 는 다.
- 휴 식 전 이 나 작 업 이 끝 날 때 마 다 손 을 씻 는 다.

· **호흡기보호보호**

단 시 간 또 는 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.

보충보호보호

- 장갑재질은 제품 / 원료 / 조제를 통과시키지 않아야 하고, 내구성이 있어야 한다.
- 테스트를 하지 않았기 때문에 제품 / 조제 / 화학 혼합물에 적합한 장갑재질에 대한 추천이 없다.
- 투과 시간, 침투율과 저하를 고려해서 장갑 재료를 선택한다.

· **장갑의재료**

적합한 장갑의 선정은 재질 차이뿐만 아니라 품질 기준 차이도 고려하여 이루어져야 하고 제조업종에 따라서도 다르게 선정되어야 한다. 제품은 다양한 재료로부터의 조제가 이루어지는 것이기 때문에, 장갑재질의 안정성은 사전에 예측되어질 수 있는 것이 아니고, 반드시 사용 전에 (그 안전성이) 체크되어야 한다.

· **장갑재료의 투과시간** 정확한 관통 시간은 보호 장갑 제조자에 의 하여 인 지 되 고, 준 수 되 어 야 한 다.

보충보호보호



팍조이는보안경

KR

(5 쪽에 계속)

물질안전보건자료 GHS에 따라

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(4 쪽부터 계속)

9 물리화학적 특성

기본 물리화학적 특성에 대한 정보

· 일반정보	
외형/외형의형	액체
· 물량/계상 상태	액체
· 색:	색소가 없는
· 냄새/냄새	특색있는
· 후각역치	알맞지 않다.
· pH:	알맞지 않다.
· 상태변화	
· 녹는점/어는점:	맞지 않는
· 초기/중기/고온점과 끓는점/범위/범위	35 °C
· 인화점:	-52 °C
· 인화성 고체/기체/기체	해당사항 없음.
· 점화온도:	170 °C
· 분해온도	알맞지 않다.
· 자기점화:	이제품은 자연발화성이 없다.
· 폭발위험:	폭발 가능성이 있는 과산화물이 형성될 수 있는가
인화 안전/폭발/폭발 위험/상한/하한	
· 아래로:	1.7 Vol %
· 위로/위로	36 Vol %
· 증기압 의 경우 20 °C:	587 hPa
밀도/밀도/밀도	맞지 않는다.
· 비중/비중/비중	알맞지 않다.
· 증기밀도:	알맞지 않다.
· 증발/증발/증발 속도	알맞지 않다.
· 용해도:	
· 물:	각각의 경우에 따라서는 거의 혼합할 수 없는
· n 옥탄올/물 분배계수:	알맞지 않다.
점도/점도/점도	
· 역학성:	알맞지 않다.
· 동점성:	알맞지 않다.
· 용매 내용물	
· 유기용매:	95.0 %
· VOC (EU)	95.00 %
· 고체 함량/함량	0.0 %
기타 정보/정보	추가적인 정보가 존재하지 않습니다.

10 안정성 및 반응성

- 반응성 추가적인 정보가 존재하지 않습니다.
- 화학적 안정성
- 화학적 안정성/유해 반응의 가능성 / 피해/조건/조건에 따라 사용 할 경우 해체는 없다
- 유해반응 가능성 위험한 반응으로는 알려지지 않았다.

(6 쪽에 계속)

물질안전보건자료 GHS에 따라라따

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(5 쪽부터계속)

- **피해예방조건** 추가적인 정보가 존재하지 않습니다.
- **혼합 혼합물** 추가적인 정보가 존재하지 않습니다.
- **유해분해물질:** 위험성있는분해물들은 알려지지않았다.

11 독성에 관한 정보

- **독성학적 영향에 대한개요정보**
급성독성독성독성

· LD/LC50-수 체에 대한분류분류		
60-29-7 diethyl ether		
구강의	LD50	1,215 mg/kg (rat)
흡입의	LC50/4 h	73,000 mg/l (rat)

- **일차적 자극효과**
피부피부 자극성 또는 자극성: 무자극
심한심한 자극성 또는 자극성: 무자극.
- **감각화:** 민감한영향이없는것으로알려져있다.
- **추가적인 독성에 관한정보**
이제품은유럽공동체의공동분류원칙의합법적인절차에근거하여최근에발효된원고에서아래위험들의사전 준비에대하여제시하고있다.
건강에해로운

12 환경에 미치는 영향

독성독성독성

- **수생독성:** 추가적인 정보가 존재하지 않습니다.
- **지속성 및 분해성** 추가적인 정보가 존재하지 않습니다.
- **환경 시스템에서의 행동:**
- **생물농축 잠재성** 추가적인 정보가 존재하지 않습니다.
- **토양내 이동성** 추가적인 정보가 존재하지 않습니다.
- **추가적인 생태학 정보정보**

일반 열안정성특징

- 수질오염등급 1 (자체등급분류): 약하게수질오염이된 희석시키지않은채량으로지하수나, 하천으로그리고하수도망에도달하지않게한다.
- PBT(잔류성, 생물농축성, 물질독성) 및 vPvB(고 잔류성, 고 생물농축성, 물질독성) 결과
- PBT(잔류성, 생물농축성, 물질독성) 당사항 없음.
- vPvB(고 잔류성, 고 생물농축성, 물질독성) 당사항 없음.
- 기타기타 **부작용** 추가적인 정보가 존재하지 않습니다.

13 폐기시 주의사항

- **폐기물처리방법**
권고권고권고활쓰레기와함께처리되어서는안된다. 하수도망으로유입되어서는안된다.
- **비위생적 포장포장**
권고권고권고의지침에입각한쓰레기처리.

KR

(7 쪽에계속)

물질안전보건자료

GHS에 따라라따


기압점: 2019.03.12

개정: 2019.03.12

제품명: COLLODION, 5% SOLUTION, USP

(6 쪽부터계속)

14 운송에 필요한 정보

유엔 유엔번호 · ADR, IMDG, IATA	UN1993
적정적정적정명 · ADR · IMDG · IATA	1993 FLAMMABLE LIQUID, N.O.S. (DIETHYL ETHER (ETHYL ETHER), ETHANOL (ETHYL ALCOHOL)) FLAMMABLE LIQUID, N.O.S. (DIETHYL ETHER (ETHYL ETHER), ETHANOL (ETHYL ALCOHOL)) FLAMMABLE LIQUID, N.O.S. (DIETHYL ETHER (ETHYL ETHER), ETHANOL)
교통 교통 위험 위험 · ADR, IMDG, IATA	<div style="text-align: center;">  </div>
등급 등급 등급 · 위험물 라벨라벨	3 발화성용액 3
용기 등급 · ADR, IMDG, IATA	I
환경적 유해물질:	해당사항 없음.
이 용기 특별 취급 조치 위험 위험 코드 · E 번호 번호 · Stowage Category	경고: 발화성용액 33 F-E, S-E E
· MARPOL73/78(선박으로부터의 해양오염방지협약) 부속서2 및 IBC Code(국제선적화물코드)에 따른 다른 벌크 벌크 운송 운송	해당사항 없음.
· 운송 추가 정보	
· ADR 한정량 (제한량) · Excepted quantities (EQ)	0 Code: E3 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 300 ml
운송 운송 구분 터널 터널 제한 코드	1 D/E
· IMDG · Limited quantities (LQ) · Excepted quantities (EQ)	0 Code: E3 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 300 ml

(8 쪽에 계속)

물질안전보건자료

GHS에 따라라따

기압점: 2019.03.12

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(7 쪽부터계속)

· **UN번호** **UN 1993**

UN 1993 FLAMMABLE LIQUID, N.O.S. (DIETHYL ETHER (ETHYL ETHER), ETHANOL (ETHYL ALCOHOL)), 3, I

15 법적 규제현황

· **산업안전보건법에 의한 유해화학물질 규제**

제조제조자금지물질:

어떠한내용물도목록화되어있지않다

· **허가대상물질:**

어떠한내용물도목록화되어있지않다

· **관리대상유해물질:**

60-29-7 diethyl ether

해당 해당 **수용액** 또는 **모양 물질**에 대한 **화학안전보건법** 제 15조 제 1항 제 1호 **화학물질관리법** 법률

· **Korean Existing Chemical Inventory**

60-29-7	diethyl ether	KE-27690
64-17-5	Ethyl Alcohol, denatured	KE-13217
9004-70-0	CELLULOSE NITRATE (PARLODION)	KE-25980

· **화학물질관리법**

· **사고대비물질**

어떠한내용물도목록화되어있지않다

· **금지물질**

어떠한내용물도목록화되어있지않다

· **제한물질**

어떠한내용물도목록화되어있지않다

· **유독물질**

어떠한내용물도목록화되어있지않다

· **허가물질**

어떠한내용물도목록화되어있지않다

· **GHS 라벨 구성요소**

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

· **그림문자**



GHS02 GHS07

· **신호어 위험**

· **상표상에명확히위험성이표시된성분:**

diethyl ether

유해 **유해화학물질** 문구

극산화성 액체 및 증기

삼키면 유해함

졸음 또는 현기증을 일으킬 수 있음

(9 쪽에계속)

물질안전보건자료

GHS에 따라라따

기압점: 2019.03.12

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제품명: COLLODION, 5% SOLUTION, USP

(8 쪽부터계속)

· 예방 조치 문구문구

- 열·스파크·화염·고열로부터 멀리하십시오 - 금연
- 폭발 방지용 전기·환기·조명·장비를 사용하십시오.
- (분진·흙·가스·미스트·증기·스프레이)의 흡입을 피하십시오.
- 피부(또는 머리카락)에 묻으면 오염된 모든 의복은 벗으십시오. 피부를 물로 씻으십시오/샤워하십시오.
- 잠금장치가 있는 저장장소에 저장하십시오.
- 현지/지역/국가/국제 규정에 따라서 내용물/용기 노출
- **· 화학물질 안전성 평가 평가 화학물질 안전성 평가가 수행되지 않음**

16 그 밖의 참고사항

이보고는우리지식에대한오늘날의상태에대하여평가하고있다, 하지만이보고서는생산특성에관한보증은 기술하지않았으며계약적인법률관계에기반을두고있지도않다

최초 **최초 작성 일자**: 2019.03.12

개정 **개정 일자**: 1 / 2019.03.12

· 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

KR

物質安全資料表

據根根據據根T 16483-2008, GB/T 17519-2013

打印日期 2019.03.12

在 2019.03.12 審核

1 化學品及企業標識

- 產品識別者
- 化學品中文名稱名稱名稱化學品俗名或商品名: COLLODION, 5% SOLUTION, USP
- 商品編號: 12600, 12600-30
- 相應純物質或者混合物的相關下位用途及禁止用途 無相關詳細資料。
- 原材料的應用/準備工作進行 實驗室化學物
- 安全技術說明書內供應商詳細信息
- 企業名稱:
Electron Microscopy Sciences
1560 Industry Road
USA-Hatfield, PA 19440
Tel: 215-412-8400 Fax: 215-412-8450
email: info@emsdiasum.com
www.emsdiasum.com
- 可獲取更多資料的部門: Product safety department
- 緊急聯繫電話號碼:
ChemTrec 1-800-424-9300 Contract CCN7661
1-703-527-3887

2 危險性概述

· 緊急情況概述:

無色的，液體，極度易燃液體和蒸氣。吞食有害。可能造成困倦或暈眩。

· GHS危險性類別



火焰

易燃液體 第1級

H224 極度易燃液體和蒸氣



急毒性物質(吞食) 第4級

H302 吞食有害

特定標的器官系統毒性物質(單一暴露) 第3級 H336 可能造成困倦或暈眩

· 標籤因素

- GHS標籤元素 本產品根據化學物質分類及標記全球協調制度(GHS)進行了分類及標記。

圖示圖示圖示



GHS02



GHS07

名稱名稱名稱

- 標籤上辨別危險的成份:

二乙基 醚

- 危險字句

極度易燃液體和蒸氣

吞食有害

可能造成困倦或暈眩

(在 2 頁繼續)

物質安全資料表

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(在 1 頁繼續)

- **警戒字句**
- **預防措施**
遠離熱源/火花/明火/熱表面。 - 禁止抽菸。
使用防爆的電氣/通風/照明/設備。
避免吸入粉塵/煙/氣體/煙霧/蒸氣/噴霧。
- **事故響應**
如皮膚(或頭髮)沾染：立即移除或脫掉所有沾染的衣物。用水沖洗/淋洗皮膚。
- **安全貯存**
加鎖存放。
- **廢棄處置**
按照地方/區域/國家/國際法規處理內容物之廢棄/容器。
- **其他有害性**
- PBT(殘留性、生物濃縮性、毒性物質) 及 vPvB(高殘留性、高生物濃縮性物質)評價結果
- PBT(殘留性、生物濃縮性、毒性物質) 不適用的
- vPvB(高殘留性、高生物濃縮性物質): 不適用的

3 成分/組成資訊

· 混合物

描述描述描述以下含有無害添加劑的成分組成的混合物

· 危險的成分:

60-29-7	二乙基 醚 ⚠ 易燃液體 第1級, H224; ⚠ 急毒性物質(吞食) 第4級, H302; 特定標的器官系統 毒性物質(單一暴露) 第3級, H336	>50-≤100%
64-17-5	無水酒精 ⚠ 易燃液體 第2級, H225	>25-≤50%

4 急救措施

· 應急措施要領

· **總說明:** 中毒的症狀可能會在幾個小時以後才出現;因此在發生事故之後起碼要有 48 小時的醫療觀察。

吸入吸入吸入給新鮮空氣;如果病人感到不適時要詢問醫生。

· **皮膚接觸:** 一般的產品不會刺激皮膚。

· **眼睛接觸:** 張開眼睛在流水下沖洗數分鐘。

食入食入食入上召喚醫生。

· 給醫生的資料:

· **最重要的急慢性症狀及其影響** 無相關詳細資料。

· **需要及時的醫療處理及特別處理的症狀** 無相關詳細資料。

5 消防措施

· 滅火方法

· **滅火的方法和滅火劑:** 使用二氧化碳 (CO₂)、沙粒、滅火粉末. 切勿使用水。

· **為了安全,不適當的滅火劑會:** 使用全噴嘴的水

· **特別危險性** 無相關詳細資料。

· 特殊滅火方法

· **消防人員特殊的防護裝備:** 沒有要求特別的措施。

-TW-

(在 3 頁繼續)

物質安全資料表

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打印日期 2019.03.12

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(在 2 頁繼續)

6 洩漏應急處理

- **保護措施** 帶上保護儀器. 讓未受到保護的人們遠離.
- **環境保護措施:** 切勿讓其進入下水道/水面或地下水.
- **密封及淨化方法和材料:**
吸收液體粘合原料 (沙粒、矽藻土、酸性粘合劑、通用粘合劑、鋸屑).
根據第 13 條條款棄置受汙染物.
確保有足夠的通風裝置.
切勿用水或水溶清潔劑來沖清.
- **參照其他部分**
有關安全處理的資料請參閱第 7 節.
有關個人保護裝備的資料請參閱第 8 節.
有關棄置的資料請參閱第 13 節.

7 操作處置與儲存

- **操作處置**
- **儲存** 儲存 儲存
確保工作間有良好的通風/排氣裝置.
小心打開及處理貯藏器.
防止氣溶膠的形成.
- **有關火災及防止爆炸的資料:**
遠離火源 - 切勿吸煙.
防熱.
防靜電.
- **混合危險性等安全儲存條件**
- **儲存** 儲存 儲存
· **儲存庫和容器須要達到的要求:** 儲存在陰涼的位置.
· **有關使用一個普通的儲存設施來儲存的資料:** 不需要.
· **有關儲存條件的更多資料:**
將容器密封.
切勿將貯藏器氣密式封上.
儲存密封的貯藏器內, 並放在陰涼、幹爽的位置.
免受接觸熱力和直接受陽光照射.
· **具體的最終用戶** 無相關詳細資料.

8 接觸控制和個體防護

- **工程控制方法:** 沒有進一步數據, 見第 7 項.
- **控制變數**

· **在工作場需要監控的限值成分****60-29-7 二乙基 醚**PEL (TW) | PC-TWA: 1210 mg/m³, 400 ppmOEL (CN) | PC-STEL: 500 mg/m³PC-TWA: 300 mg/m³**64-17-5 無水酒精**PEL (TW) | PC-TWA: 1880 mg/m³, 1000 ppm

- **額外的資料:** 制作期間有效的清單將作為基礎來使用.

(在 4 頁繼續)

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(在 3 頁繼續)

- 遺漏控制
- 個人防護設備:
- 一般保護和衛生措施:
 - 遠離食品、飲料和飼料.
 - 在休息之前和工作完畢後請清洗雙手.
- 呼吸系統防護:
 - 如果曾短暫接觸或在低污染的情況下,請使用呼吸過濾裝置. 如果曾深入或較長時間接觸,請使用獨立的呼吸保護裝置.
- 手防護:
 - 手套的物料必須是不滲透性的,且能抵抗該產品/物質/添加劑.
 - 基於缺乏測試,對於產品/制劑/化學混合物,並不會提供手套材料的建議
 - 選擇手套材料時,請注意材料的滲透時間,滲濾率和降解參數
- 手套材料
 - 選擇合適的手套不單取決於材料,亦取決於質量特征,以及來自哪一間生產廠家,因為該產品是由很多材料
 - 配制而成. 手套材料的抵抗力並不可預計,所以,必須在使用之前進行檢查
- 滲入手套材料的時間 請向勞保手套生產廠家獲取準確的破裂時間並觀察實際的破裂時間
- 眼睛防護:



密封的護目鏡

9 理化特性

· 有關基本物理及化學特性的資訊	
· 一般說明	
外觀外觀外觀	
形狀形狀形狀	液體
顏色顏色顏色	無色的
氣味氣味氣味	有特性的
· 嗅覺閾限	未決定.
· pH值:	未決定.
· 條件的更改	
熔點熔點熔點	未確定的
沸點沸點沸點	沸點和沸程: 35 °C
閃點閃點閃點	-52 °C
· 可燃性(固體、氣體): 不適用的	
點火點度溫度	170 °C
· 分解溫度:	未決定.
· 自燃溫度:	該產品是不自燃的
· 爆炸的危險性:	可能形成爆炸性的過氧化物.
爆炸爆炸極限:	
較低較低較低	1.7 Vol %
較高:	36 Vol %
· 蒸氣壓 在 20 °C:	587 hPa
· 密度:	未決定的

(在 5 頁繼續)

物質安全資料表

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(在 4 頁繼續)

· 相對密度	未決定.
· 氣蒸氣密度	未決定.
· 蒸發速率	未決定.
溶解溶解溶解	
· 水:	不能拌和的或難以拌和
· 辛醇-水分配係數	未決定.
· 黏性:	
· 動態動態動態	未決定.
· 運動運動運動學的	未決定.
· 溶劑成份:	
· 機體機溶劑溶	95.0 %
· 固體成份:	0.0 %
· 其他資訊	無相關詳細資料。

10 穩定性和反應性

- 應度應性應相關詳細資料。
- 穩定穩定穩定
- 熱分解避免危險情況: 如果遵照規格使用則不會分解。
- 有害有害有害應可應性 未有已知的危險反應。
- 避免避免避免條件 無相關詳細資料。
- 不相容的物質: 無相關詳細資料。
 - 危險的接觸產物產物 和有危險的分解產品。

11 毒理學資訊

- 對毒性學影響的資訊
 - 急性毒性:
- | | | |
|----------------------|----------|-------------------|
| · 與分類相關的 LD/ LC50 值: | | |
| 60-29-7 二乙基 醚 | | |
| 口腔 | LD50 | 1,215 mg/kg (rat) |
| 吸入 | LC50/4 h | 73,000 mg/l (rat) |
- 要的弱刺激劑刺激劑影響:
- 皮膚皮膚皮膚有刺激性影響。
- 在眼睛上面: 沒有刺激的影響。
- 致敏致敏致敏作用 有已知的敏化影響。
- 更多毒物的資料:
- 根據有關配製的一般歐盟分類指南的計算方法 (刊印在最新版本), 該產品顯示以下的危險:
- 有害的

12 生態學資訊

- 毒態毒性毒性
 - 水生毒性: 無相關詳細資料。
- 持久性和降解降解降解相關詳細資料。
- 環境系統習性:
 - 潛在的累積累積累積相關詳細資料。

(在 6 頁繼續)

物質安全資料表

據根據據報T 16483-2008, GB/T 17519-2013

打印日期 2019.03.12

在 2019.03.12 審核

化學品中文名稱名稱名稱學品俗名或商品名：COLLODION, 5% SOLUTION, USP

土壤土壤動植物相關詳細資料。

(在 5 頁繼續)

· 額外的生態學資料:

· 總括注解:

水危害級別 1(德國規例) (通過名單進行自我評估): 對水是稍微危害的
不要讓未稀釋或大量的產品接觸地下水、水道或者污水系統。

· PBT(殘留性、生物濃縮性、毒性物質) 及 vPvB(高殘留性、高生物濃縮性物質)評價結果

· PBT(殘留性、生物濃縮性、毒性物質) 不適用的

· vPvB(高殘留性、高生物濃縮性物質): 不適用的

其他其他圖他作用相關詳細資料。

13 廢棄處置

· 廢棄處置方法

建議建議建議將該產品和家居垃圾一起丟棄. 不要讓該產品接觸污水系統。

· 受污染的容器和包裝:

建議建議建議根據官方的規章來丟棄。

14 運輸資訊

聯合聯合圖危險貨物編號(UN號)

· ADR, IMDG, IATA

UN1993

· UN適當裝船名

· ADR

1993 FLAMMABLE LIQUID, N.O.S. (DIETHYL ETHER (ETHYL ETHER), ETHANOL (ETHYL ALCOHOL))

· IMDG

FLAMMABLE LIQUID, N.O.S. (DIETHYL ETHER (ETHYL ETHER), ETHANOL (ETHYL ALCOHOL))

· IATA

FLAMMABLE LIQUID, N.O.S. (DIETHYL ETHER (ETHYL ETHER), ETHANOL)

運輸運輸危險等級

· ADR, IMDG, IATA



· 級別

3 易燃液體

標籤標籤標籤

3

· 包裝組別

· ADR, IMDG, IATA

I

· 危害環境:

不適用的

· 用戶特別預防措施

警告: 易燃液體

· 危險編碼:

33

· 歐洲碼號碼號碼

F-E,S-E

· Stowage Category

E

(在 7 頁繼續)

物質安全資料表

據根據據報T 16483-2008, GB/T 17519-2013

打印日期 2019.03.12

在 2019.03.12 審核

化學品中文名稱名稱名稱化學品俗名或商品名：COLLODION, 5% SOLUTION, USP

(在 6 頁繼續)

· MARPOL73/78(針對船舶引起的海洋污染預防協約
 附件書根據根據C國際國際船貨物編碼)值大量大量
 運送運送運送 不適用

運輸運輸運輸的資料:

· ADR
 · Excepted quantities (EQ) Code: E3
 Maximum net quantity per inner packaging: 30 ml
 Maximum net quantity per outer packaging: 300 ml

· IMDG
 · Limited quantities (LQ) 0
 · Excepted quantities (EQ) Code: E3
 Maximum net quantity per inner packaging: 30 ml
 Maximum net quantity per outer packaging: 300 ml

· UN "標準規定": UN 1993 FLAMMABLE LIQUID, N.O.S. (DIETHYL ETHER (ETHYL ETHER), ETHANOL (ETHYL ALCOHOL)), 3, I

15 法規資訊

· 對相應純物質或者混合物的安全、保健及環境法規/法律

國現國現國稅學物質名錄

列出所有成份

· TCSCA

列管編號編號編號

沒有列出成份

· 毒性分類

沒有列出成份

制量濃度濃度(%)

沒有列出成份

· 大量運作基準(公斤)

沒有列出成份

· TCSI - Taiwan Chemical Substance Inventory

列出所有成份

· GHS標籤元素 本產品根據化學物質分類及標記全球協調制度(GHS)進行了分類及標記。

圖示圖示圖示



GHS02 GHS07

名稱名稱名稱

· 標籤上辨別危險的成份:

二乙基 醚

· 危險字句

極度易燃液體和蒸氣

(在 8 頁繼續)

物質安全資料表

據根據根據T 16483-2008, GB/T 17519-2013

打印日期 2019.03.12

在 2019.03.12 審核

化學品中文名稱名稱名稱化學品俗名或商品名：COLLODION, 5% SOLUTION, USP

(在 7 頁繼續)

吞食有害

可能造成困倦或暈眩

· 警戒字句

· 預防措施

遠離熱源/火花/明火/熱表面。 - 禁止抽菸。

使用防爆的電氣/通風/照明/設備。

避免吸入粉塵/煙/氣體/煙霧/蒸氣/噴霧。

· 事故響應

如皮膚(或頭髮)沾染：立即移除或脫掉所有沾染的衣物。用水沖洗/淋洗皮膚。

· 安全貯存

加鎖存放。

· 廢棄處置

按照地方/區域/國家/國際法規處理內容物之廢棄/容器。

· 化學物質安全性評價：尚未進行化學物質安全性評價

16 其他資訊

該資料是基於我們目前的知識。然而,這並不構成對任何特定產品特性的擔保並且不建立一個法律上有效的合同關係。

· 縮寫:

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

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

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

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: 持久性生物累積性有毒物質

vPvB: very Persistent and very Bioaccumulative

易燃液體 第1級: Flammable liquids – Category 1

易燃液體 第2級: Flammable liquids – Category 2

急性毒性物質(吞食) 第4級: Acute toxicity – Category 4

特定標的器官系統毒性物質(單一暴露) 第3級: Specific target organ toxicity (single exposure) – Category 3

TW

Ficha de datos de seguridad

según 1907/2006/CE, Artículo 31

fecha de impresión 12.03.2019

Revisión: 12.03.2019

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

· 1.1 Identificador del producto

· **Nombre comercial:** COLLODION, 5% SOLUTION, USP

· **Número del artículo:** 12600, 12600-30

· 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: info@emsdiasum.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. 1 H224 Líquido y vapores extremadamente inflamables.



GHS07

Acute Tox. 4 H302 Nocivo en caso de ingestión.

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



GHS07

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(se continua en página 1)

- **Palabra de advertencia** Peligro

- **Componentes peligrosos a indicar en el etiquetaje:**

- éter dietílico

- **Indicaciones de peligro**

- H224 Líquido y vapores extremadamente inflamables.

- H302 Nocivo en caso de ingestión.

- H336 Puede provocar somnolencia o vértigo.

- **Consejos de prudencia**

- P210 Mantener alejado del calor, de superficies calientes, de chispas, de llamas abiertas y de cualquier otra fuente de ignición. No fumar.

- P241 Utilizar un material eléctrico, de ventilación o de iluminación/antideflagrante.

- P261 Evitar respirar el polvo/el humo/el gas/la niebla/los vapores/el aerosol.

- 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.

- P405 Guardar bajo llave.

- P501 Eliminar el contenido o el recipiente conforme a la reglamentación local/regional/nacional/internacional.

- **Datos adicionales:**

- EUH019 Puede formar peróxidos explosivos.

- **2.3 Otros peligros**

- **Resultados de la valoración PBT y mPmB**

- **PBT:** No aplicable.

- **mPmB:** No aplicable.

SECCIÓN 3: Composición/información sobre los componentes

- **3.2 Caracterización química: Mezclas**

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

- **Componentes peligrosos:**

CAS: 60-29-7	éter dietílico	>50-≤100%
EINECS: 200-467-2	☠ Flam. Liq. 1, H224; ⚠ Acute Tox. 4, H302; STOT SE 3, H336	
CAS: 64-17-5	etanol	>25-≤50%
EINECS: 200-578-6	☠ Flam. Liq. 2, H225	

- **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:**

- Los síntomas de intoxicación pueden presentarse después de muchas horas, por lo que se requiere una supervisión médica durante un mínimo de 48 horas después del accidente.

- **En caso de inhalación del producto:** Suministrar aire fresco. En caso de trastornos, consultar al médico.

- **En caso de contacto con la piel:** Por regla general, el producto no irrita la piel.

- **En caso de con los ojos:** Limpiar los ojos abiertos durante varios minutos con agua corriente.

- **En caso de 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.

ES

(se continua en página 3)

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SECCIÓN 5: Medidas de lucha contra incendios

- **5.1 Medios de extinción**
- **Sustancias extintoras apropiadas:** CO₂, arena, polvo extintor. No utilizar agua.
- **Sustancias extintoras inapropiadas por razones de seguridad:** Agua a pleno chorro
- **5.2 Peligros específicos derivados de la sustancia o la mezcla** No existen más datos relevantes disponibles.
- **5.3 Recomendaciones para el personal de lucha contra incendios**
- **Equipo especial de protección:** No se requieren medidas especiales.

SECCIÓN 6: Medidas en caso de vertido accidental

- **6.1 Precauciones personales, equipo de protección y procedimientos de emergencia**
Llevar puesto equipo de protección. Mantener alejadas las personas sin protección.
- **6.2 Precauciones relativas al medio ambiente:**
Evitar que penetre en la canalización /aguas de superficie /agua subterráneas.
- **6.3 Métodos y material de contención y de limpieza:**
Quitar con material absorbente (arena, kieselgur, aglutinante de ácidos, aglutinante universal, aserrín).
Desechar el material contaminado como vertido según ítem 13.
Asegurar suficiente ventilación.
No enjuagar con agua ni productos de limpieza acuosos.
- **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.
- **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.
No cerrar el recipiente estanco al gas.
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.

(se continua en página 4)

Ficha de datos de seguridad

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(se continua en página 3)

· 8.1 Parámetros de control

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

60-29-7 éter dietílico

LEP	Valor de corta duración: 616 mg/m ³ , 200 ppm
	Valor de larga duración: 308 mg/m ³ , 100 ppm
	VLI

64-17-5 etanol

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

· **Indicaciones adicionales:** Como base se han utilizado las listas vigentes en el momento de la elaboración.

· 8.2 Controles de la exposición

· Equipo de protección individual:

· Medidas generales de protección e higiene:

Mantener alejado de alimentos, bebidas y alimentos para animales.

Lavarse las manos antes de las pausas y al final del trabajo.

· 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:

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:

Característico

· Umbral olfativo:

No determinado.

· valor pH:

No determinado.

(se continua en página 5)

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Nombre comercial: COLLODION, 5% SOLUTION, USP

(se continua en página 4)

· Cambio de estado Punto de fusión/punto de congelación:	Indeterminado.
Punto inicial de ebullición e intervalo de ebullición:	35 °C
· Punto de inflamación:	-52 °C
· Inflamabilidad (sólido, gas):	No aplicable.
· Temperatura de ignición:	170 °C
· Temperatura de descomposición:	No determinado.
· Temperatura de auto-inflamación:	El producto no es autoinflamable.
· Propiedades explosivas:	Puede formar peróxidos explosivos.
· Límites de explosión: Inferior:	1,7 Vol %
Superior:	36 Vol %
· Presión de vapor a 20 °C:	587 hPa
· Densidad:	Indeterminado.
· Densidad relativa	No determinado.
· Densidad de vapor	No determinado.
· Tasa de evaporación:	No determinado.
· Solubilidad en / miscibilidad con agua:	Poco o no mezclable.
· Coefficiente de reparto: n-octanol/agua:	No determinado.
· Viscosidad: Dinámica:	No determinado.
Cinemática:	No determinado.
· Concentración del disolvente: Disolventes orgánicos:	95,0 %
VOC (CE)	95,00 %
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.

ES

(se continua en página 6)

Ficha de datos de seguridad

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fecha de impresión 12.03.2019

Revisión: 12.03.2019

Nombre comercial: COLLODION, 5% SOLUTION, USP

(se continua en página 5)

SECCIÓN 11: Información toxicológica

· 11.1 Información sobre los efectos toxicológicos

· Toxicidad aguda

Nocivo en caso de ingestión.

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

60-29-7 éter dietílico

Oral	LD50	1.215 mg/kg (rat)
Inhalatorio	LC50/4 h	73.000 mg/l (rat)

· Efecto estimulante primario:

· **Corrosión o irritación cutáneas** A la vista de los datos disponibles, no se cumplen los criterios de clasificación.

· Lesiones o irritación ocular graves

A la vista de los datos disponibles, no se cumplen los criterios de clasificación.

· Sensibilización respiratoria o cutánea

A la vista de los datos disponibles, no se cumplen los criterios de clasificación.

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

· Mutagenicidad en células germinales

A la vista de los datos disponibles, no se cumplen los criterios de clasificación.

· **Carcinogenicidad** A la vista de los datos disponibles, no se cumplen los criterios de clasificación.

· **Toxicidad para la reproducción** A la vista de los datos disponibles, no se cumplen los criterios de clasificación.

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

Puede provocar somnolencia o vértigo.

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

A la vista de los datos disponibles, no se cumplen los criterios de clasificación.

· **Peligro de aspiración** A la vista de los datos disponibles, no se cumplen los criterios de clasificación.

SECCIÓN 12: Información ecológica

· 12.1 Toxicidad

· **Toxicidad acuática:** No existen más datos relevantes disponibles.

· **12.2 Persistencia y degradabilidad** No existen más datos relevantes disponibles.

· **12.3 Potencial de bioacumulación** No existen más datos relevantes disponibles.

· **12.4 Movilidad en el suelo** No existen más datos relevantes disponibles.

· Indicaciones medioambientales adicionales:

· Indicaciones generales:

Nivel de riesgo para el agua 1 (autoclasiificación): escasamente peligroso para el agua

En estado no diluido o no neutralizado, no dejar que se infiltre en aguas subterráneas, aguas superficiales o en alcantarillados.

· 12.5 Resultados de la valoración PBT y mPmB

· **PBT:** No aplicable.

· **mPmB:** No aplicable.

· **12.6 Otros efectos adversos** No existen más datos relevantes disponibles.

SECCIÓN 13: Consideraciones relativas a la eliminación

· 13.1 Métodos para el tratamiento de residuos

· **Recomendación:** No debe desecharse con la basura doméstica. No debe llegar al alcantarillado.

(se continua en página 7)

Ficha de datos de seguridad
según 1907/2006/CE, Artículo 31

fecha de impresión 12.03.2019

Revisión: 12.03.2019

Nombre comercial: COLLODION, 5% SOLUTION, USP

(se continua en página 6)

- **Embalajes sin limpiar:**
- **Recomendación:** Eliminar conforme a las disposiciones oficiales.

SECCIÓN 14: Información relativa al transporte

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

UN1993

- **14.2 Designación oficial de transporte de las Naciones Unidas**
- **ADR**

1993 LÍQUIDO INFLAMABLE, N.E.P. (ÉTER DIETÍLICO (ÉTER ETÍLICO), ETANOL (ALCOHOL ETÍLICO))
FLAMMABLE LIQUID, N.O.S. (DIETHYL ETHER (ETHYL ETHER), ETHANOL (ETHYL ALCOHOL))
FLAMMABLE LIQUID, N.O.S. (DIETHYL ETHER (ETHYL ETHER), ETHANOL)

- **IMDG**
- **IATA**

- **14.3 Clase(s) de peligro para el transporte**

- **ADR, IMDG, IATA**



- **Clase**
- **Etiqueta**

3 Líquidos inflamables
3

- **14.4 Grupo de embalaje**
- **ADR, IMDG, IATA**

1

- **14.5 Peligros para el medio ambiente:**

No aplicable.

- **14.6 Precauciones particulares para los usuarios**
- **Número Kemler:**
- **Número EMS:**
- **Stowage Category**

Atención: Líquidos inflamables
33
F-E,S-E
E

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

No aplicable.

- **Transporte/datos adicionales:**

- **ADR**
- **Cantidades limitadas (LQ)**
- **Cantidades exceptuadas (EQ)**

0
Código: E3
Cantidad neta máxima por envase interior: 30 ml
Cantidad neta máxima por embalaje exterior: 300 ml

- **Categoría de transporte**
- **Código de restricción del túnel**

1
D/E

- **IMDG**
- **Limited quantities (LQ)**
- **Excepted quantities (EQ)**

0
Code: E3
Maximum net quantity per inner packaging: 30 ml
Maximum net quantity per outer packaging: 300 ml

(se continua en página 8)

Ficha de datos de seguridad

según 1907/2006/CE, Artículo 31

fecha de impresión 12.03.2019

Revisión: 12.03.2019

Nombre comercial: COLLODION, 5% SOLUTION, USP

(se continua en página 7)

· **"Reglamentación Modelo" de la UNECE:** UN 1993 LÍQUIDO INFLAMABLE, N.E.P. (ÉTER DIETÍLICO (ÉTER ETÍLICO), ETANOL (ALCOHOL ETÍLICO)), 3, I

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 P5a LÍQUIDOS INFLAMABLES**
- **Cantidad umbral (toneladas) a efectos de aplicación de los requisitos de nivel inferior 10 t**
- **Cantidad umbral (toneladas) a efectos de aplicación de los requisitos de nivel superior 50 t**
- **REGLAMENTO (CE) n° 1907/2006 ANEXO XVII Restricciones: 3**
- **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**
 - H224 Líquido y vapores extremadamente inflamables.
 - H225 Líquido y vapores muy inflamables.
 - H302 Nocivo en caso de ingestión.
 - H336 Puede provocar somnolencia o vértigo.
- **Abreviaturas y acrónimos:**
 - ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
 - IMDG: International Maritime Code for Dangerous Goods
 - IATA: International Air Transport Association
 - GHS: Globally Harmonised System of Classification and Labelling of Chemicals
 - EINECS: European Inventory of Existing Commercial Chemical Substances
 - ELINCS: European List of Notified Chemical Substances
 - CAS: Chemical Abstracts Service (division of the American Chemical Society)
 - VOC: Volatile Organic Compounds (USA, EU)
 - LC50: Lethal concentration, 50 percent
 - LD50: Lethal dose, 50 percent
 - PBT: Persistent, Bioaccumulative and Toxic
 - vPvB: very Persistent and very Bioaccumulative
 - Flam. Liq. 1: Líquidos inflamables – Categoría 1
 - Flam. Liq. 2: Líquidos inflamables – Categoría 2
 - Acute Tox. 4: Toxicidad aguda – Categoría 4
 - STOT SE 3: Toxicidad específica en determinados órganos (exposición única) – Categoría 3