

# Safety Data Sheet

acc. to OSHA HCS

Printing date 12/31/2015

Reviewed on 12/31/2015

## 1 Identification

- **Product identifier**
- **Trade name:** ETHYL ALCOHOL, DENATURED
- **Article number:** 15050, 15051
- **Application of the substance / the mixture** Laboratory chemicals
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**  
Electron Microscopy Sciences  
1560 Industry Road  
USA-Hatfield, PA 19440  
Tel: 215-412-8400 Fax: 215-412-8450  
email: sgkcck@aol.com  
www.emsdiasum.com
- **Information department:** Product safety department
- **Emergency telephone number:**  
ChemTrec 1-800-424-9300 Contract CCN7661  
1-703-527-3887

## 2 Hazard(s) identification

- **Classification of the substance or mixture**



GHS02 Flame

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



GHS08 Health hazard

Carc. 1A H350 May cause cancer.

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

STOT SE 2 H371 May cause damage to organs.



GHS07

Acute Tox. 4 H332 Harmful if inhaled.

- **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:**

Ethyl Alcohol, Absolute, 200 Proof

Reagent, ACS (Ethanol)

15055

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**Trade name: ETHYL ALCOHOL, DENATURED**

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*Methyl Alcohol*

· **Hazard statements**

*Highly flammable liquid and vapor.*

*Harmful if inhaled.*

*May cause cancer.*

*Suspected of damaging fertility or the unborn child.*

*May cause damage to organs.*

· **Precautionary statements**

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

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

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

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

*Ground/bond container and receiving equipment.*

*Keep container tightly closed.*

*Use only non-sparking tools.*

*Take precautionary measures against static discharge.*

*Wash thoroughly after handling.*

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

*Use only outdoors or in a well-ventilated area.*

*Obtain special instructions before use.*

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

*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.*

*Call a POISON CENTER/doctor if you feel unwell.*

*IF exposed or concerned: Get medical advice/attention.*

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

*Store locked up.*

*Store in a well-ventilated place. Keep cool.*

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

· **Classification system:**

· **NFPA ratings (scale 0 - 4)**



*Health = 3*

*Fire = 3*

*Reactivity = 0*

· **HMIS-ratings (scale 0 - 4)**



*Health = 3*

*Fire = 3*

*Reactivity = 0*

· **Other hazards**

· **Results of PBT and vPvB assessment**

· **PBT:** Not applicable.

· **vPvB:** Not applicable.

## 3 Composition/information on ingredients

· **Chemical characterization: Mixtures**

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

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<b>· Dangerous components:</b>		
64-17-5	Ethyl Alcohol, Absolute, 200 Proof Reagent, ACS (Ethanol) 15055	50-100%
67-56-1	Methyl Alcohol	2,5-10%
108-10-1	4-methylpentan-2-one	≤ 2,5%
110-54-3	n-hexane	≤ 2,5%

## 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. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist. In case of unconsciousness place patient stably in side position for transportation.
- **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:** If symptoms persist consult doctor.
- **Information for doctor:**
- **Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed**  
No further relevant information available.

## 5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:**  
CO<sub>2</sub>, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** Mouth respiratory protective device.

## 6 Accidental release measures

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

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See Section 13 for disposal information.

## 7 Handling and storage

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

## 8 Exposure controls/personal protection

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

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

**64-17-5 Ethyl Alcohol, Absolute, 200 Proof  
 Reagent, ACS (Ethanol)  
 15055**

PEL Long-term value: 1900 mg/m<sup>3</sup>, 1000 ppm

REL Long-term value: 1900 mg/m<sup>3</sup>, 1000 ppm

TLV Short-term value: 1880 mg/m<sup>3</sup>, 1000 ppm

**67-56-1 Methyl Alcohol**

PEL Long-term value: 260 mg/m<sup>3</sup>, 200 ppm

REL Short-term value: 325 mg/m<sup>3</sup>, 250 ppm

Long-term value: 260 mg/m<sup>3</sup>, 200 ppm  
 Skin

TLV Short-term value: 328 mg/m<sup>3</sup>, 250 ppm

Long-term value: 262 mg/m<sup>3</sup>, 200 ppm  
 Skin; BEI

- **Ingredients with biological limit values:**

**67-56-1 Methyl Alcohol**

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<b>BEI</b>	15 mg/L Medium: urine Time: end of shift Parameter: Methanol (background, nonspecific)
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· **Additional information:** The lists that were valid during the creation were used as basis.

· **Exposure controls**

· **Personal protective equipment:**

· **General protective and hygienic measures:**

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing.

Wash hands before breaks and at the end of work.

Store protective clothing separately.

· **Breathing equipment:**

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

· **Protection of hands:**



Protective gloves

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

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

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

· **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

· **Penetration time of glove material**

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

· **Eye protection:**



Tightly sealed goggles

## 9 Physical and chemical properties

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

· **General Information**

· **Appearance:**

**Form:** Liquid

**Color:** Colorless

· **Odor:** Aromatic

· **Odor threshold:** Not determined.

· **pH-value:** Not determined.

· **Change in condition**

**Melting point/Melting range:** Undetermined.

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<b>Boiling point/Boiling range:</b>	79 °C (174 °F)
· <b>Flash point:</b>	14 °C (57 °F)
· <b>Flammability (solid, gaseous):</b>	Not flammable.
· <b>Ignition temperature:</b>	425 °C (797 °F)
· <b>Decomposition temperature:</b>	Not determined.
· <b>Auto igniting:</b>	Product is not selfigniting.
· <b>Danger of explosion:</b>	Product is not explosive. However, formation of explosive air/vapor mixtures are possible.
· <b>Explosion limits:</b>	
<b>Lower:</b>	3.5 Vol %
<b>Upper:</b>	15.0 Vol %
· <b>Vapor pressure at 20 °C (68 °F):</b>	59 hPa (44 mm Hg)
· <b>Density at 20 °C (68 °F):</b>	0.7905 g/cm <sup>3</sup> (6.597 lbs/gal)
· <b>Relative density</b>	Not determined.
· <b>Vapor density</b>	Not determined.
· <b>Evaporation rate</b>	Not determined.
· <b>Solubility in / Miscibility with Water:</b>	Fully miscible.
· <b>Partition coefficient (n-octanol/water):</b>	Not determined.
· <b>Viscosity:</b>	
<b>Dynamic:</b>	Not determined.
<b>Kinematic:</b>	Not determined.
· <b>Solvent content:</b>	
<b>Organic solvents:</b>	95.3 %
<b>Water:</b>	4.7 %
<b>VOC content:</b>	95.3 %
	782.5 g/l / 6.53 lb/gl
· <b>Other information</b>	No further relevant information available.

## 10 Stability and reactivity

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

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## 11 Toxicological information

- **Information on toxicological effects**

- **Acute toxicity:**

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

### 67-56-1 Methyl Alcohol

Oral	LD50	5628 mg/kg (rat)
Dermal	LD50	15800 mg/kg (rabbit)

- **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.

- **Carcinogenic categories**

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

64-17-5	Ethyl Alcohol, Absolute, 200 Proof Reagent, ACS (Ethanol) 15055	1
108-10-1	4-methylpentan-2-one	2B
108-88-3	toluene	3

- **NTP (National Toxicology Program)**

None of the ingredients is listed.

- **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.

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## 13 Disposal considerations

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

## 14 Transport information

- |   |   |
|---|---|
| <b>· UN-Number</b>  | UN1170  |
| <b>· DOT, ADR, IMDG, IATA</b>   | UN1170  |
| <b>· UN proper shipping name</b>  | Ethanol solutions   |
| <b>· DOT, IATA</b>  | 1170 Ethanol solutions  |
| <b>· ADR</b>  | ETHANOL SOLUTION (ETHYL ALCOHOL SOLUTION)                       |
| <b>· IMDG</b>   | ETHANOL SOLUTION (ETHYL ALCOHOL SOLUTION)                       |
| <b>· Transport hazard class(es)</b>   |   |
| <b>· DOT</b>  |   |
|   |   |
| <b>· Class</b>  | 3 Flammable liquids   |
| <b>· Label</b>  | 3   |
|   |   |
| <b>· ADR, IMDG, IATA</b>  |   |
|  |   |
| <b>· Class</b>  | 3 Flammable liquids   |
| <b>· Label</b>  | 3   |
| <b>· Packing group</b>  | II  |
| <b>· DOT, ADR, IMDG, IATA</b>   | II  |
| <b>· Environmental hazards:</b>   | Not applicable.   |
| <b>· Special precautions for user</b>   | Warning: Flammable liquids                                      |
| <b>· Danger code (Kemler):</b>  | 33  |
| <b>· EMS Number:</b>  | F-E,S-D   |
| <b>· Stowage Category</b>   | A   |
| <b>· Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</b>    | Not applicable.   |
| <b>· Transport/Additional information:</b>  |   |
| <b>· DOT</b>  |   |
| <b>· Quantity limitations</b>   | On passenger aircraft/rail: 5 L<br>On cargo aircraft only: 60 L |

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- |  |   |
|--|---|
| <ul style="list-style-type: none"> <li>· <b>ADR</b></li> <li>· <b>Excepted quantities (EQ)</b></li> </ul>  | <ul style="list-style-type: none"> <li>Code: E2</li> <li>Maximum net quantity per inner packaging: 30 ml</li> <li>Maximum net quantity per outer packaging: 500 ml</li> </ul>             |
| <ul style="list-style-type: none"> <li>· <b>IMDG</b></li> <li>· <b>Limited quantities (LQ)</b></li> <li>· <b>Excepted quantities (EQ)</b></li> </ul> | <ul style="list-style-type: none"> <li>1L</li> <li>Code: E2</li> <li>Maximum net quantity per inner packaging: 30 ml</li> <li>Maximum net quantity per outer packaging: 500 ml</li> </ul> |
| <ul style="list-style-type: none"> <li>· <b>UN "Model Regulation":</b></li> </ul>  | <ul style="list-style-type: none"> <li>UN 1170 ETHANOL SOLUTIONS, 3, II</li> </ul>  |

## 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):**

67-56-1	Methyl Alcohol
108-10-1	4-methylpentan-2-one
110-54-3	n-hexane
108-88-3	toluene

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

All ingredients are listed.

- **Proposition 65**

- **Chemicals known to cause cancer:**

108-10-1	4-methylpentan-2-one
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- **Chemicals known to cause reproductive toxicity for females:**

108-88-3	toluene
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- **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, Absolute, 200 Proof Reagent, ACS (Ethanol) 15055
67-56-1	Methyl Alcohol
108-10-1	4-methylpentan-2-one
108-88-3	toluene

- **Carcinogenic categories**

- **EPA (Environmental Protection Agency)**

108-10-1	4-methylpentan-2-one	I
110-54-3	n-hexane	II
108-88-3	toluene	II

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

64-17-5	Ethyl Alcohol, Absolute, 200 Proof Reagent, ACS (Ethanol) 15055	A3
108-88-3	toluene	A4

· **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:**

Ethyl Alcohol, Absolute, 200 Proof  
Reagent, ACS (Ethanol)  
15055

Methyl Alcohol

· **Hazard statements**

Highly flammable liquid and vapor.

Harmful if inhaled.

May cause cancer.

Suspected of damaging fertility or the unborn child.

May cause damage to organs.

· **Precautionary statements**

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

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

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

Wear protective gloves / eye protection / face protection.

Ground/bond container and receiving equipment.

Keep container tightly closed.

Use only non-sparking tools.

Take precautionary measures against static discharge.

Wash thoroughly after handling.

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

Use only outdoors or in a well-ventilated area.

Obtain special instructions before use.

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

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.

Call a POISON CENTER/doctor if you feel unwell.

IF exposed or concerned: Get medical advice/attention.

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

Store locked up.

Store in a well-ventilated place. Keep cool.

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

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- **National regulations:**
- **Information about limitation of use:**  
Workers are not allowed to be exposed to the hazardous carcinogenic materials contained in this preparation. Exceptions can be made by the authorities in certain cases.
- **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

## 16 Other information

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

- **Date of preparation / last revision** 12/31/2015 / -
- **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**  
 BEI: **Biological Exposure Limit**  
 Flam. Liq. 2: **Flammable liquids, Hazard Category 2**  
 Acute Tox. 4: **Acute toxicity, Hazard Category 4**  
 Carc. 1A: **Carcinogenicity, Hazard Category 1A**  
 Repr. 2: **Reproductive toxicity, Hazard Category 2**  
 STOT SE 2: **Specific target organ toxicity - Single exposure, Hazard Category 2**

US

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

Printing date 31.12.2015

Revision: 31.12.2015

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

- **Product identifier**
- **Trade name:** ETHYL ALCOHOL, DENATURED
- **Article number:** 15050, 15051
- **Relevant identified uses of the substance or mixture and uses advised against**  
No further relevant information available.
- **Application of the substance / the mixture** Laboratory chemicals
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**  
Electron Microscopy Sciences  
1560 Industry Road  
USA-Hatfield, PA 19440  
Tel: 215-412-8400 Fax: 215-412-8450  
email: sgkcck@aol.com  
www.emsdiasum.com
- ProSciTech Pty Ltd  
11 Carlton Street, Kirwan QLD 4817 Australia  
Telephone Number: (07) 4773 9444 - 8:30am - 5:00pm, Monday to Friday (excluding Public Holidays)  
Emergency Contact: (07) 4773 9444 - 8:30am - 5:00pm, Monday to Friday (excluding Public Holidays)
- Emgrid Australia Pty. Ltd.  
P.O. Box 118  
The Patch VIC 3792  
Australia  
Tel: 03 9752 1785  
Fax: 03 9752 1784  
Website: www.emgrid.com.au
- **Further information obtainable from:** Product safety department
- **Emergency telephone number:**  
ChemTrec 1-800-424-9300 Contract CCN7661  
1-703-527-3887

## 2 Hazards identification

- **Classification of the substance or mixture**



GHS02 flame

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



GHS08 health hazard

Carc. 1A H350 May cause cancer.

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

STOT SE 2 H371 May cause damage to organs.



GHS07

Acute Tox. 4 H332 Harmful if inhaled.

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AU

# Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.12.2015

Revision: 31.12.2015

**Trade name: ETHYL ALCOHOL, DENATURED**

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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:**  
*Ethyl Alcohol, Absolute, 200 Proof*  
*Reagent, ACS (Ethanol)*  
*15055*  
*Methyl Alcohol*
- **Hazard statements**  
*Highly flammable liquid and vapour.*  
*Harmful if inhaled.*  
*May cause cancer.*  
*Suspected of damaging fertility or the unborn child.*  
*May cause damage to organs.*
- **Precautionary statements**  
*Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.*  
*Use explosion-proof electrical/ventilating/lighting/equipment.*  
*Do not breathe dust/fume/gas/mist/vapours/spray.*  
*Wear protective gloves / eye protection / face protection.*  
*Ground/bond container and receiving equipment.*  
*Keep container tightly closed.*  
*Use only non-sparking tools.*  
*Take precautionary measures against static discharge.*  
*Wash thoroughly after handling.*  
*Do not eat, drink or smoke when using this product.*  
*Use only outdoors or in a well-ventilated area.*  
*Obtain special instructions before use.*  
*Do not handle until all safety precautions have been read and understood.*  
*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.*  
*Call a POISON CENTER/doctor if you feel unwell.*  
*IF exposed or concerned: Get medical advice/attention.*  
*In case of fire: Use for extinction: CO2, powder or water spray.*  
*Store locked up.*  
*Store in a well-ventilated place. Keep cool.*  
*Dispose of contents/container in accordance with local/regional/national/international regulations.*
- **Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

### 3 Composition/information on ingredients

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

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<b>· Dangerous components:</b>		
64-17-5	Ethyl Alcohol, Absolute, 200 Proof Reagent, ACS (Ethanol) 15055	50-100%
67-56-1	Methyl Alcohol	2,5-10%
108-10-1	4-methylpentan-2-one	≤ 2,5%
110-54-3	n-hexane	≤ 2,5%

· **Additional information:** For the wording of the listed risk 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. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist. In case of unconsciousness place patient stably in side position for transportation.
- **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:** If symptoms persist consult doctor.
- **Information for doctor:**
- **Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed**  
No further relevant information available.

#### 5 Firefighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:**  
CO<sub>2</sub>, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** Mouth respiratory protective device.

#### 6 Accidental release measures

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

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See Section 13 for disposal information.

## 7 Handling and storage

- **Handling:**
- **Precautions for safe handling**  
Ensure good ventilation/exhaustion at the workplace.  
Open and handle receptacle with care.  
Prevent formation of aerosols.
- **Information about fire - and explosion protection:**  
Keep ignition sources away - Do not smoke.  
Protect from heat.  
Protect against electrostatic charges.  
Keep respiratory protective device available.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** Store in a cool location.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:**  
Keep container tightly sealed.  
Store in cool, dry conditions in well sealed receptacles.  
Protect from heat and direct sunlight.
- **Specific end use(s)** No further relevant information available.

## 8 Exposure controls/personal protection

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

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

**64-17-5 Ethyl Alcohol, Absolute, 200 Proof**  
**Reagent, ACS (Ethanol)**  
**15055**

NES | Long-term value: 1880 mg/m<sup>3</sup>, 1000 ppm

**67-56-1 Methyl Alcohol**

NES | Short-term value: 328 mg/m<sup>3</sup>, 250 ppm  
Long-term value: 262 mg/m<sup>3</sup>, 200 ppm  
Sk

- **Additional information:** The lists valid during the making were used as basis.
- **Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:**  
Keep away from foodstuffs, beverages and feed.  
Immediately remove all soiled and contaminated clothing  
Wash hands before breaks and at the end of work.  
Store protective clothing separately.
- **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.

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· **Protection of hands:**

Protective gloves

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

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

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

· **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

· **Penetration time of glove material**

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

· **Eye protection:**

Tightly sealed goggles

## 9 Physical and chemical properties

· **Information on basic physical and chemical properties**· **General Information**· **Appearance:**

· <b>Form:</b>	Liquid
· <b>Colour:</b>	Colourless
· <b>Odour:</b>	Aromatic
· <b>Odour threshold:</b>	Not determined.

· **pH-value:** Not determined.

· **Change in condition**

· <b>Melting point/Melting range:</b>	Undetermined.
· <b>Boiling point/Boiling range:</b>	79 °C

· **Flash point:** 14 °C

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

· **Ignition temperature:** 425 °C

· **Decomposition temperature:** Not determined.

· **Self-igniting:** Product is not selfigniting.

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

· **Explosion limits:**

· <b>Lower:</b>	3.5 Vol %
· <b>Upper:</b>	15.0 Vol %

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

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- |   |  |
|---|--|
| · <b>Density at 20 °C:</b>                        | 0.7905 g/cm <sup>3</sup>                   |
| · <b>Relative density</b>                         | Not determined.                            |
| · <b>Vapour density</b>                           | Not determined.                            |
| · <b>Evaporation rate</b>                         | Not determined.                            |
| · <b>Solubility in / Miscibility with water:</b>  | Fully miscible.                            |
| · <b>Partition coefficient (n-octanol/water):</b> | Not determined.                            |
| · <b>Viscosity:</b>                               |  |
| <b>Dynamic:</b>                                   | Not determined.                            |
| <b>Kinematic:</b>                                 | Not determined.                            |
| · <b>Solvent content:</b>                         |  |
| <b>Organic solvents:</b>                          | 95.3 %                                     |
| <b>Water:</b>                                     | 4.7 %                                      |
| <b>VOC (EC)</b>                                   | 95.33 %                                    |
| · <b>Other information</b>                        | 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:**

### 67-56-1 Methyl Alcohol

Oral	LD50	5628 mg/kg (rat)
Dermal	LD50	15800 mg/kg (rabbit)

- **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

Carcinogenic.

- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**  
Carc. 1A, Repr. 2

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**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.

**13 Disposal considerations**

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

**14 Transport information**

· <b>UN-Number</b>	
· <b>ADG, IMDG, IATA</b>	UN1170
· <b>UN proper shipping name</b>	
· <b>ADG</b>	1170 ETHANOL SOLUTION (ETHYL ALCOHOL SOLUTION)
· <b>IMDG</b>	ETHANOL SOLUTION (ETHYL ALCOHOL SOLUTION)
· <b>IATA</b>	Ethanol solutions
· <b>Transport hazard class(es)</b>	
· <b>ADG, IMDG, IATA</b>	
	
· <b>Class</b>	3 Flammable liquids.
· <b>Label</b>	3
· <b>Packing group</b>	
· <b>ADG, IMDG, IATA</b>	II
· <b>Environmental hazards:</b>	Not applicable.
· <b>Special precautions for user</b>	Warning: Flammable liquids.

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· <b>Danger code (Kemler):</b>	33
· <b>EMS Number:</b>	F-E,S-D
· <b>Stowage Category</b>	A
· <b>Transport in bulk according to Annex II of Marpol and the IBC Code</b>	Not applicable.
· <b>Transport/Additional information:</b>	
· <b>ADG</b>	
· <b>Limited quantities (LQ)</b>	1L
· <b>Excepted quantities (EQ)</b>	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· <b>Transport category</b>	2
· <b>Tunnel restriction code</b>	D/E
· <b>IMDG</b>	
· <b>Limited quantities (LQ)</b>	1L
· <b>Excepted quantities (EQ)</b>	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· <b>UN "Model Regulation":</b>	UN 1170 ETHANOL SOLUTION (ETHYL ALCOHOL SOLUTION), 3, II

### 15 Regulatory information

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

· **Australian Inventory of Chemical Substances**

All ingredients are listed.

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

67-56-1	Methyl Alcohol	S5, S6
108-10-1	4-methylpentan-2-one	S5
108-88-3	toluene	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:**

Ethyl Alcohol, Absolute, 200 Proof

Reagent, ACS (Ethanol)

15055

Methyl Alcohol

· **Hazard statements**

Highly flammable liquid and vapour.

Harmful if inhaled.

May cause cancer.

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*Suspected of damaging fertility or the unborn child.**May cause damage to organs.***· Precautionary statements***Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.**Use explosion-proof electrical/ventilating/lighting/equipment.**Do not breathe dust/fume/gas/mist/vapours/spray.**Wear protective gloves / eye protection / face protection.**Ground/bond container and receiving equipment.**Keep container tightly closed.**Use only non-sparking tools.**Take precautionary measures against static discharge.**Wash thoroughly after handling.**Do not eat, drink or smoke when using this product.**Use only outdoors or in a well-ventilated area.**Obtain special instructions before use.**Do not handle until all safety precautions have been read and understood.**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.**Call a POISON CENTER/doctor if you feel unwell.**IF exposed or concerned: Get medical advice/attention.**In case of fire: Use for extinction: CO<sub>2</sub>, powder or water spray.**Store locked up.**Store in a well-ventilated place. Keep cool.**Dispose of contents/container in accordance with local/regional/national/international regulations.***· Directive 2012/18/EU****· Named dangerous substances - ANNEX I Methyl Alcohol****· Seveso category P5c FLAMMABLE LIQUIDS****· Qualifying quantity (tonnes) for the application of lower-tier requirements 5,000 t****· Qualifying quantity (tonnes) for the application of upper-tier requirements 50,000 t****· National regulations:****· Information about limitation of use:***Workers are not allowed to be exposed to the hazardous carcinogenic materials contained in this preparation.**Exceptions can be made by the authorities in certain cases.***· Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.**16 Other information***This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.***· Abbreviations and acronyms:***ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)**IMDG: International Maritime Code for Dangerous Goods**IATA: International Air Transport Association**EINECS: European Inventory of Existing Commercial Chemical Substances**ELINCS: European List of Notified Chemical Substances**CAS: Chemical Abstracts Service (division of the American Chemical Society)**VOC: Volatile Organic Compounds (USA, EU)**LC50: Lethal concentration, 50 percent**LD50: Lethal dose, 50 percent**PBT: Persistent, Bioaccumulative and Toxic**vPvB: very Persistent and very Bioaccumulative**Flam. Liq. 2: Flammable liquids, Hazard Category 2**Acute Tox. 4: Acute toxicity, Hazard Category 4**Carc. 1A: Carcinogenicity, Hazard Category 1A*

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*Repr. 2: Reproductive toxicity, Hazard Category 2*  
*STOT SE 2: Specific target organ toxicity - Single exposure, Hazard Category 2*

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# Safety Data Sheet

acc. to OSHA HCS

Printing date 12/31/2015

Reviewed on 12/31/2015

## 1 Identification

- **Product identifier**
- **Trade name:** ETHYL ALCOHOL, DENATURED
- **Article number:** 15050, 15051
- **Application of the substance / the mixture** Laboratory chemicals
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**  
 Electron Microscopy Sciences  
 1560 Industry Road  
 USA-Hatfield, PA 19440  
 Tel: 215-412-8400 Fax: 215-412-8450  
 email: sgkcck@aol.com  
 www.emsdiasum.com
- **Information department:** Product safety department
- **Emergency telephone number:**  
 ChemTrec 1-800-424-9300 Contract CCN7661  
 1-703-527-3887

## 2 Hazard(s) identification

- **Classification of the substance or mixture**



GHS02 Flame

Flammable Liquids - Category 2

H225

Highly flammable liquid and vapour.



GHS08 Health hazard

Carcinogenicity - Category 1A

H350

May cause cancer.

Reproductive Toxicity - Category 2

H361-H362

Suspected of damaging fertility or the unborn child. May cause harm to breast-fed children.

Specific Target Organ Toxicity - Single Exposure - Category 2

H371

May cause damage to organs.



GHS07

Acute Toxicity (Inhalation) - Category 4

H332

Harmful if inhaled.

- **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

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**Trade name: ETHYL ALCOHOL, DENATURED**

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

Ethyl Alcohol, Absolute, 200 Proof

Reagent, ACS (Ethanol)

15055

Methyl Alcohol

· **Hazard statements**

Highly flammable liquid and vapour.

Harmful if inhaled.

May cause cancer.

Suspected of damaging fertility or the unborn child. May cause harm to breast-fed children.

May cause damage to organs.

· **Precautionary statements**

Avoid contact during pregnancy and while nursing.

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

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

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

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

Ground and bond container and receiving equipment.

Keep container tightly closed.

Use non-sparking tools.

Take actions to prevent static discharges.

Wash thoroughly after handling.

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

Use only outdoors or in a well-ventilated area.

Obtain special instructions before use.

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

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.

Call a POISON CENTER/doctor if you feel unwell.

IF exposed or concerned: Get medical advice/attention.

In case of fire: Use for extinction: CO<sub>2</sub>, powder or water spray.

Store locked up.

Store in a well-ventilated place. Keep cool.

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

· **Hazard description:**

· **WHMIS-symbols:**

B2 - Flammable liquid

D2A - Very toxic material causing other toxic effects



· **Classification system:**

· **NFPA ratings (scale 0 - 4)**



Health = 3

Fire = 3

Reactivity = 0

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**Trade name: ETHYL ALCOHOL, DENATURED**

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· **HMIS-ratings (scale 0 - 4)**

HEALTH	3	Health = 3
FIRE	3	Fire = 3
REACTIVITY	0	Reactivity = 0

- **Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

### 3 Composition/information on ingredients

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

· **Dangerous components:**

64-17-5	Ethyl Alcohol, Absolute, 200 Proof Reagent, ACS (Ethanol) 15055	60-100% w/w
67-56-1	Methyl Alcohol	1-5% w/w
110-54-3	n-hexane	≤ 1% w/w

### 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. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist. In case of unconsciousness place patient stably in side position for transportation.
- **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:** If symptoms persist consult doctor.
- **Information for doctor:**  
· **Most important symptoms and effects, both acute and delayed** No further relevant information available.  
· **Indication of any immediate medical attention and special treatment needed**  
No further relevant information available.

### 5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:**  
CO<sub>2</sub>, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** Mouth respiratory protective device.

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**Trade name: ETHYL ALCOHOL, DENATURED**

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## 6 Accidental release measures

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

## 7 Handling and storage

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

## 8 Exposure controls/personal protection

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

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

**64-17-5 Ethyl Alcohol, Absolute, 200 Proof**  
**Reagent, ACS (Ethanol)**  
**15055**

EL Short-term value: 1000 ppm

EV Long-term value: 1,900 mg/m<sup>3</sup>, 1,000 ppm

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**Trade name: ETHYL ALCOHOL, DENATURED**

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### 67-56-1 Methyl Alcohol

EL	Short-term value: 250 ppm Long-term value: 200 ppm Skin
EV	Short-term value: 325 mg/m <sup>3</sup> , 250 ppm Long-term value: 260 mg/m <sup>3</sup> , 200 ppm Skin

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

· **Exposure controls**

· **Personal protective equipment:**

· **General protective and hygienic measures:**

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing.

Wash hands before breaks and at the end of work.

Store protective clothing separately.

· **Breathing equipment:**

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

· **Protection of hands:**



Protective gloves

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

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

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

· **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

· **Penetration time of glove material**

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

· **Eye protection:**



Tightly sealed goggles

## 9 Physical and chemical properties

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

· **General Information**

· **Appearance:**

Form: Liquid

Color: Colorless

· **Odor:** Aromatic

· **Odor threshold:** Not determined.

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Trade name: **ETHYL ALCOHOL, DENATURED**

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· <b>pH-value:</b>	Not determined.
· <b>Change in condition</b>	
<b>Melting point/Melting range:</b>	Undetermined.
<b>Boiling point/Boiling range:</b>	79 °C
· <b>Flash point:</b>	14 °C
· <b>Flammability (solid, gaseous):</b>	Not flammable.
· <b>Ignition temperature:</b>	425 °C
· <b>Decomposition temperature:</b>	Not determined.
· <b>Auto igniting:</b>	Product is not selfigniting.
· <b>Danger of explosion:</b>	Product is not explosive. However, formation of explosive air/vapor mixtures are possible.
· <b>Explosion limits:</b>	
<b>Lower:</b>	3.5 Vol %
<b>Upper:</b>	15.0 Vol %
· <b>Vapor pressure at 20 °C:</b>	59 hPa
· <b>Density at 20 °C:</b>	0.7905 g/cm <sup>3</sup>
· <b>Relative density</b>	Not determined.
· <b>Vapor density</b>	Not determined.
· <b>Evaporation rate</b>	Not determined.
· <b>Solubility in / Miscibility with Water:</b>	Fully miscible.
· <b>Partition coefficient (n-octanol/water):</b>	Not determined.
· <b>Viscosity:</b>	
<b>Dynamic:</b>	Not determined.
<b>Kinematic:</b>	Not determined.
· <b>Solvent content:</b>	
<b>Organic solvents:</b>	95.3 %
<b>Water:</b>	4.7 %
· <b>Other information</b>	No further relevant information available.

## 10 Stability and reactivity

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

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Printing date 12/31/2015

Reviewed on 12/31/2015

Trade name: **ETHYL ALCOHOL, DENATURED**

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## 11 Toxicological information

- **Information on toxicological effects**

- **Acute toxicity:**

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

### 67-56-1 Methyl Alcohol

Oral	LD50	5628 mg/kg (rat)
Dermal	LD50	15800 mg/kg (rabbit)

- **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.

- **Carcinogenic categories**

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

64-17-5	Ethyl Alcohol, Absolute, 200 Proof Reagent, ACS (Ethanol) 15055	1
108-10-1	4-methylpentan-2-one	2B
108-88-3	toluene	3

- **NTP (National Toxicology Program)**

None of the ingredients is listed.

- **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.

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**Trade name: ETHYL ALCOHOL, DENATURED**

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## 13 Disposal considerations

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

## 14 Transport information

- |   |   |
|---|---|
| <b>· UN-Number</b>  | UN1170  |
| <b>· DOT, TDG, IMDG, IATA</b>   | UN1170  |
| <b>· UN proper shipping name</b>  | Ethanol solutions   |
| <b>· DOT, IATA</b>  | 1170 Ethanol solutions  |
| <b>· TDG</b>  | ETHANOL SOLUTION (ETHYL ALCOHOL SOLUTION)                       |
| <b>· IMDG</b>   | ETHANOL SOLUTION (ETHYL ALCOHOL SOLUTION)                       |
| <b>· Transport hazard class(es)</b>   |   |
| <b>· DOT</b>  |   |
|   |   |
| <b>· Class</b>  | 3 Flammable liquids   |
| <b>· Label</b>  | 3   |
| <b>· TDG, IMDG, IATA</b>  |   |
|  |   |
| <b>· Class</b>  | 3 Flammable liquids   |
| <b>· Label</b>  | 3   |
| <b>· Packing group</b>  | II  |
| <b>· DOT, TDG, IMDG, IATA</b>   | II  |
| <b>· Environmental hazards:</b>   | Not applicable.   |
| <b>· Special precautions for user</b>   | Warning: Flammable liquids                                      |
| <b>· Danger code (Kemler):</b>  | 33  |
| <b>· EMS Number:</b>  | F-E,S-D   |
| <b>· Stowage Category</b>   | A   |
| <b>· Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</b>    | Not applicable.   |
| <b>· Transport/Additional information:</b>  |   |
| <b>· DOT</b>  |   |
| <b>· Quantity limitations</b>   | On passenger aircraft/rail: 5 L<br>On cargo aircraft only: 60 L |

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· **TDG**· **Excepted quantities (EQ)**

Code: E2

Maximum net quantity per inner packaging: 30 ml

Maximum net quantity per outer packaging: 500 ml

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

1L

· **Excepted quantities (EQ)**

Code: E2

Maximum net quantity per inner packaging: 30 ml

Maximum net quantity per outer packaging: 500 ml

· **UN "Model Regulation":**

UN 1170 ETHANOL SOLUTIONS, 3, II

## 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):**

67-56-1 Methyl Alcohol

108-10-1 4-methylpentan-2-one

110-54-3 n-hexane

108-88-3 toluene

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

All ingredients are listed.

· **Proposition 65**· **Chemicals known to cause cancer:**

108-10-1 4-methylpentan-2-one

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

108-88-3 toluene

· **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, Absolute, 200 Proof  
Reagent, ACS (Ethanol)  
15055

67-56-1 Methyl Alcohol

108-10-1 4-methylpentan-2-one

108-88-3 toluene

· **Carcinogenic categories**· **EPA (Environmental Protection Agency)**

108-10-1 4-methylpentan-2-one

I

110-54-3 n-hexane

II

108-88-3 toluene

II

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

64-17-5	Ethyl Alcohol, Absolute, 200 Proof Reagent, ACS (Ethanol) 15055	A3
108-88-3	toluene	A4

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

None of the ingredients is 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, Absolute, 200 Proof Reagent, ACS (Ethanol) 15055
---------	---

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

67-56-1	Methyl Alcohol
---------	----------------

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

· **Hazard pictograms**



· **Signal word** Danger

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

Ethyl Alcohol, Absolute, 200 Proof

Reagent, ACS (Ethanol)

15055

Methyl Alcohol

· **Hazard statements**

Highly flammable liquid and vapour.

Harmful if inhaled.

May cause cancer.

Suspected of damaging fertility or the unborn child. May cause harm to breast-fed children.

May cause damage to organs.

· **Precautionary statements**

Avoid contact during pregnancy and while nursing.

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

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

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

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

Ground and bond container and receiving equipment.

Keep container tightly closed.

Use non-sparking tools.

Take actions to prevent static discharges.

Wash thoroughly after handling.

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

Use only outdoors or in a well-ventilated area.

Obtain special instructions before use.

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**Trade name: ETHYL ALCOHOL, DENATURED**

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

*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.*

*Call a POISON CENTER/doctor if you feel unwell.*

*IF exposed or concerned: Get medical advice/attention.*

*In case of fire: Use for extinction: CO<sub>2</sub>, powder or water spray.*

*Store locked up.*

*Store in a well-ventilated place. Keep cool.*

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

· **National regulations:**

· **Information about limitation of use:**

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

*Exceptions can be made by the authorities in certain cases.*

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

## 16 Other information

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

· **Date of preparation / last revision** 12/31/2015 / -

· **Abbreviations and acronyms:**

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)

WHMIS: Workplace Hazardous Materials Information System (Canada)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

NIOSH: National Institute for Occupational Safety

OSHA: Occupational Safety **Health**

**Flammable Liquids - Category 2: Flammable liquids, Hazard Category 2**

**Acute Toxicity (Inhalation) - Category 4: Acute toxicity, Hazard Category 4**

**Carcinogenicity - Category 1A: Carcinogenicity, Hazard Category 1A**

**Reproductive Toxicity - Category 2: Reproductive toxicity, Hazard Category 2**

**Specific Target Organ Toxicity - Single Exposure - Category 2: Specific target organ toxicity - Single exposure, Hazard Category 2**

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

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

- **1.1 Product identifier**
- **Trade name:** ETHYL ALCOHOL, DENATURED
- **Article number:** 15050, 15051
- **1.2 Relevant identified uses of the substance or mixture and uses advised against**  
No further relevant information available.
- **Application of the substance / the mixture** Laboratory chemicals
- **1.3 Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**  
Electron Microscopy Sciences  
1560 Industry Road  
USA-Hatfield, PA 19440  
Tel: 215-412-8400 Fax: 215-412-8450  
email: sgkcck@aol.com  
www.emsdiasum.com
- **Further information obtainable from:** Product safety department
- **1.4 Emergency telephone number:**  
ChemTrec 1-800-424-9300 Contract CCN7661  
1-703-527-3887

### SECTION 2: Hazards identification

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



GHS02 flame

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



GHS08 health hazard

Carc. 1A H350 May cause cancer.  
Repr. 2 H361 Suspected of damaging fertility or the unborn child.  
STOT SE 2 H371 May cause damage to organs.



GHS07

Acute Tox. 4 H332 Harmful if inhaled.

- **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



GHS08

- **Signal word** *Danger*

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## according to 1907/2006/EC, Article 31

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Trade name: **ETHYL ALCOHOL, DENATURED**

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

Methyl Alcohol

- **Hazard statements**

H225 Highly flammable liquid and vapour.

H332 Harmful if inhaled.

H350 May cause cancer.

H361 Suspected of damaging fertility or the unborn child.

H371 May cause damage to organs.

- **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.

P260 Do not breathe 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.

- **2.3 Other hazards**

- **Results of PBT and vPvB assessment**

- **PBT:** Not applicable.

- **vPvB:** Not applicable.

### SECTION 3: Composition/information on ingredients

- **3.2 Chemical characterisation: Mixtures**

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

- **Dangerous components:**

CAS: 64-17-5 EINECS: 200-578-6	Ethyl Alcohol, Absolute, 200 Proof Reagent, ACS (Ethanol) 15055 ----- ⚠ Flam. Liq. 2, H225	50-100%
CAS: 67-56-1 EINECS: 200-659-6	Methyl Alcohol ----- ⚠ Flam. Liq. 2, H225; ⚠ STOT SE 1, H370; ⚠ Acute Tox. 4, H302; Acute Tox. 4, H312; Acute Tox. 4, H332; Skin Irrit. 2, H315	2,5-10%
CAS: 110-54-3 EINECS: 203-777-6	n-hexane ----- ⚠ Flam. Liq. 2, H225; ⚠ Repr. 2, H361f; STOT RE 2, H373; Asp. Tox. 1, H304; ⚠ Aquatic Chronic 2, H411; ⚠ Skin Irrit. 2, H315; STOT SE 3, H336	≤ 2,5%

- **Additional information:** For the wording of the listed risk 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. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist.

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

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

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

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- **After swallowing:** *If symptoms persist consult doctor.*
- **4.2 Most important symptoms and effects, both acute and delayed** *No further relevant information available.*
- **4.3 Indication of any immediate medical attention and special treatment needed**  
*No further relevant information available.*

### **SECTION 5: Firefighting measures**

- **5.1 Extinguishing media**
- **Suitable extinguishing agents:**  
*CO<sub>2</sub>, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.*
- **5.2 Special hazards arising from the substance or mixture** *No further relevant information available.*
- **5.3 Advice for firefighters**
- **Protective equipment:** *Mouth respiratory protective device.*

### **SECTION 6: Accidental release measures**

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

### **SECTION 7: Handling and storage**

- **7.1 Precautions for safe handling**  
*Ensure good ventilation/exhaustion at the workplace.*  
*Open and handle receptacle with care.*  
*Prevent formation of aerosols.*
- **Information about fire - and explosion protection:**  
*Keep ignition sources away - Do not smoke.*  
*Protect from heat.*  
*Protect against electrostatic charges.*  
*Keep respiratory protective device available.*
- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** *Store in a cool location.*
- **Information about storage in one common storage facility:** *Not required.*
- **Further information about storage conditions:**  
*Keep container tightly sealed.*  
*Store in cool, dry conditions in well sealed receptacles.*  
*Protect from heat and direct sunlight.*

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· 7.3 **Specific end use(s)** No further relevant information available.

### SECTION 8: Exposure controls/personal protection

· **Additional information about design of technical facilities:** No further data; see item 7.· 8.1 **Control parameters**· **Ingredients with limit values that require monitoring at the workplace:**

**64-17-5 Ethyl Alcohol, Absolute, 200 Proof**  
**Reagent, ACS (Ethanol)**  
**15055**

WEL Long-term value: 1920 mg/m<sup>3</sup>, 1000 ppm

**67-56-1 Methyl Alcohol**

WEL Short-term value: 333 mg/m<sup>3</sup>, 250 ppm  
Long-term value: 266 mg/m<sup>3</sup>, 200 ppm  
Sk

· **Additional information:** The lists valid during the making were used as basis.· 8.2 **Exposure controls**· **Personal protective equipment:**· **General protective and hygienic measures:**

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing

Wash hands before breaks and at the end of work.

Store protective clothing separately.

· **Respiratory protection:**

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

· **Protection of hands:**

Protective gloves

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

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

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

· **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

· **Penetration time of glove material**

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

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· **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:	Aromatic
Odour threshold:	Not determined.

· **pH-value:** Not determined.· **Change in condition**

Melting point/Melting range:	Undetermined.
Boiling point/Boiling range:	79 °C

· **Flash point:** 14 °C· **Flammability (solid, gaseous):** Not applicable.· **Ignition temperature:** 425 °C· **Decomposition temperature:** Not determined.· **Self-igniting:** Product is not selfigniting.· **Danger of explosion:** Product is not explosive. However, formation of explosive air/vapour mixtures are possible.· **Explosion limits:**

Lower:	3.5 Vol %
Upper:	15.0 Vol %

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

Density at 20 °C:	0.7905 g/cm <sup>3</sup>
Relative density	Not determined.
Vapour density	Not determined.
Evaporation rate	Not determined.

· **Solubility in / Miscibility with water:** Fully miscible.· **Partition coefficient (n-octanol/water):** Not determined.· **Viscosity:**

Dynamic:	Not determined.
Kinematic:	Not determined.

· **Solvent content:**

Organic solvents:	95.3 %
Water:	4.7 %
VOC (EC)	95.33 %

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· **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 inhaled.

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

#### 67-56-1 Methyl Alcohol

Oral	LD50	5628 mg/kg (rat)
Dermal	LD50	15800 mg/kg (rabbit)

- **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 (carcinogenicity, mutagenicity and toxicity for reproduction)**
- **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
- **Carcinogenicity**  
May cause cancer.
- **Reproductive toxicity**  
Suspected of damaging fertility or the unborn child.
- **STOT-single exposure**  
May cause damage to organs.
- **STOT-repeated exposure** Based on available data, the classification criteria are not met.
- **Aspiration hazard** Based on available data, the classification criteria are not met.

### SECTION 12: Ecological information

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

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- **vPvB:** Not applicable.
- **12.6 Other adverse effects** No further relevant information available.

### SECTION 13: Disposal considerations

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

### SECTION 14: Transport information

- |   |   |
|---|---|
| · <b>14.1 UN-Number</b><br>· <b>ADR, IMDG, IATA</b>   | UN1170  |
| · <b>14.2 UN proper shipping name</b><br>· <b>ADR</b><br>· <b>IMDG</b><br>· <b>IATA</b>   | 1170 ETHANOL SOLUTION (ETHYL ALCOHOL SOLUTION)<br>ETHANOL SOLUTION (ETHYL ALCOHOL SOLUTION)<br>Ethanol solutions      |
| · <b>14.3 Transport hazard class(es)</b><br>· <b>ADR, IMDG, IATA</b>  |   |
|    |   |
| · <b>Class</b><br>· <b>Label</b>  | 3 Flammable liquids.<br>3   |
| · <b>14.4 Packing group</b><br>· <b>ADR, IMDG, IATA</b>   | II  |
| · <b>14.5 Environmental hazards:</b>  | Not applicable.   |
| · <b>14.6 Special precautions for user</b><br>· <b>Danger code (Kemler):</b><br>· <b>EMS Number:</b><br>· <b>Stowage Category</b> | Warning: Flammable liquids.<br>33<br>F-E,S-D<br>A   |
| · <b>14.7 Transport in bulk according to Annex II of Marpol and the IBC Code</b>  | Not applicable.   |
| · <b>Transport/Additional information:</b>  |   |
| · <b>ADR</b><br>· <b>Limited quantities (LQ)</b><br>· <b>Excepted quantities (EQ)</b>   | 1L<br>Code: E2<br>Maximum net quantity per inner packaging: 30 ml<br>Maximum net quantity per outer packaging: 500 ml |
| · <b>Transport category</b><br>· <b>Tunnel restriction code</b>   | 2<br>D/E  |

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<ul style="list-style-type: none"> <li>· <b>IMDG</b></li> <li>· <b>Limited quantities (LQ)</b></li> <li>· <b>Excepted quantities (EQ)</b></li> </ul>	<p>1L Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml</p>
<ul style="list-style-type: none"> <li>· <b>UN "Model Regulation":</b></li> </ul>	<p>UN 1170 ETHANOL SOLUTION (ETHYL ALCOHOL SOLUTION), 3, II</p>

### 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 Methyl Alcohol**
- **Seveso category P5c FLAMMABLE LIQUIDS**
- **Qualifying quantity (tonnes) for the application of lower-tier requirements 5,000 t**
- **Qualifying quantity (tonnes) for the application of upper-tier requirements 50,000 t**
- **National regulations:**
- **Information about limitation of use:**  
Workers are not allowed to be exposed to the hazardous carcinogenic materials contained in this preparation. Exceptions can be made by the authorities in certain cases.
- **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

### SECTION 16: Other information

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

- **Relevant phrases**  
H225 Highly flammable liquid and vapour.  
H302 Harmful if swallowed.  
H304 May be fatal if swallowed and enters airways.  
H312 Harmful in contact with skin.  
H315 Causes skin irritation.  
H332 Harmful if inhaled.  
H336 May cause drowsiness or dizziness.  
H361f Suspected of damaging fertility.  
H370 Causes damage to organs.  
H373 May cause damage to organs through prolonged or repeated exposure.  
H411 Toxic to aquatic life with long lasting effects.
- **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

(Contd. on page 9)

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

Printing date 31.12.2015

Revision: 31.12.2015

**Trade name: ETHYL ALCOHOL, DENATURED**

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*Flam. Liq. 2: Flammable liquids, Hazard Category 2*  
*Acute Tox. 4: Acute toxicity, Hazard Category 4*  
*Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2*  
*Carc. 1A: Carcinogenicity, Hazard Category 1A*  
*Repr. 2: Reproductive toxicity, Hazard Category 2*  
*Repr. 2: Reproductive toxicity, Hazard Category 2*  
*STOT SE 1: Specific target organ toxicity - Single exposure, Hazard Category 1*  
*STOT SE 2: Specific target organ toxicity - Single exposure, Hazard Category 2*  
*STOT SE 3: Specific target organ toxicity - Single exposure, Hazard Category 3*  
*STOT RE 2: Specific target organ toxicity - Repeated exposure, Hazard Category 2*  
*Asp. Tox. 1: Aspiration hazard, Hazard Category 1*  
*Aquatic Chronic 2: Hazardous to the aquatic environment - Chronic Hazard, Category 2*

GB

# Veiligheidsinformatieblad

volgens 1907/2006/EG, Artikel 31

datum van de druk: 31.12.2015

Herziening van: 31.12.2015

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

### · 1.1 Productidentificatie

· Handelsnaam: ETHYL ALCOHOL, DENATURED

· Artikelnummer: 15050, 15051

### · 1.2 Relevant geïdentificeerd gebruik van de stof of het mengsel en ontraden gebruik

Geen verdere relevante informatie verkrijgbaar.

· Toepassing van de stof / van de bereiding Laboratoriumchemicaliën

### · 1.3 Details betreffende de verstrekker van het veiligheidsinformatieblad

#### · Fabrikant/leverancier:

Electron Microscopy Sciences

1560 Industry Road

USA-Hatfield, PA 19440

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

email: [sgkcck@aol.com](mailto:sgkcck@aol.com)

[www.emsdiasum.com](http://www.emsdiasum.com)

Aurion

Binnenhaven 5

6709 PD Wageningen

The Netherlands

Tel: 31 317 415094

Fax: 31 317 415955

email: [info@aurion.nl](mailto:info@aurion.nl)

· Inlichtingengevende sector: Product safety department

### · 1.4 Telefoonnummer voor noodgevallen:

ChemTrec 1-800-424-9300 Contract CCN7661

1-703-527-3887

## RUBRIEK 2: Identificatie van de gevaren

### · 2.1 Indeling van de stof of het mengsel

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



GHS02 vlam

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



GHS08 gezondheidsgevaar

Carc. 1A H350 Kan kanker veroorzaken.

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

STOT SE 2 H371 Kan schade aan organen veroorzaken.



GHS07

Acute Tox. 4 H332 Schadelijk bij inademing.

### · 2.2 Etiketteringselementen

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

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

(Vervolg op blz. 2)

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**Handelsnaam: ETHYL ALCOHOL, DENATURED**

(Vervolg van blz. 1)

· **Gevarenpictogrammen**



GHS02    GHS07    GHS08

· **Signaalwoord** Gevaar

· **Gevaaraanduidende componenten voor de etikettering:**

methanol

· **Gevarenaanduidingen**

H225 Licht ontvlambare vloeistof en damp.

H332 Schadelijk bij inademing.

H350 Kan kanker veroorzaken.

H361 Kan mogelijk de vruchtbaarheid of het ongeboren kind schaden.

H371 Kan schade aan organen veroorzaken.

· **Veiligheidsaanbevelingen**

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

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

P260 Stof/rook/gas/nevel/damp/spuitnevel niet inademen.

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.

· **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: 64-17-5 EINECS: 200-578-6	ethanol Flam. Liq. 2, H225	50-100%
CAS: 67-56-1 EINECS: 200-659-6	methanol Flam. Liq. 2, H225; STOT SE 1, H370; Acute Tox. 4, H302; Acute Tox. 4, H312; Acute Tox. 4, H332; Skin Irrit. 2, H315	2,5-10%
CAS: 110-54-3 EINECS: 203-777-6	n-hexaan Flam. Liq. 2, H225; Repr. 2, H361f; STOT RE 2, H373; Asp. Tox. 1, H304; Aquatic Chronic 2, H411; Skin Irrit. 2, H315; STOT SE 3, H336	≤ 2,5%

· **Aanvullende gegevens:**

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

(Vervolg op blz. 3)

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(Vervolg van blz. 2)

### 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, eventueel beademing, warmte. Wanneer de klachten niet ophouden, een arts raadplegen. Bij bewusteloosheid ligging en vervoer in stabiele zijligging.

##### · 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: Als de klachten niet minderen, een arts raadplegen

#### · 4.2 Belangrijkste acute en uitgestelde symptomen en effecten

Geen verdere relevante informatie verkrijgbaar.

#### · 4.3 Vermelding van de vereiste onmiddellijke medische verzorging en speciale behandeling

Geen verdere relevante informatie verkrijgbaar.

### RUBRIEK 5: Brandbestrijdingsmaatregelen

#### · 5.1 Blusmiddelen

##### · Geschikte blusmiddelen:

CO<sub>2</sub>, bluspoeder of waterstraal. Grotere brand met waterstraal bestrijden of met schuim, dat tegen alcohol bestand is.

#### · 5.2 Speciale gevaren die door de stof of het mengsel worden veroorzaakt

Geen verdere relevante informatie verkrijgbaar.

#### · 5.3 Advies voor brandweertieners

##### · Speciale beschermende kleding: Ademhalingsstoestel aantrekken.

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

#### · 6.1 Persoonlijke voorzorgsmaatregelen, beschermde uitrusting en noodprocedures

Beschermende kleding aantrekken. Niet beschermde personen op afstand houden.

#### · 6.2 Milieuvoorzorgsmaatregelen:

Met veel water verdunnen.

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.

#### · 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.

(Vervolg op blz. 4)

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Beschermen tegen hitte.  
Maatregelen treffen tegen ontlading van statische elektriciteit.  
Ademhalingstoestellen gereedhouden.

· **7.2 Voorwaarden voor een veilige opslag, met inbegrip van incompatibele producten**

· **Opslag:**

· **Eisen ten opzichte van opslagruimte en tanks:** Op een koele plaats bewaren.

· **Informatie m.b.t. gezamenlijke opslag:** Niet noodzakelijk.

· **Verdere inlichtingen over eisen m.b.t. de opslag:**

Tanks ondoordringbaar gesloten houden.

Koel en droog bewaren in goed gesloten vaten.

Tegen hitte en directe zonnestrallen beschermen.

· **7.3 Specifiek eindgebruik** Geen verdere relevante informatie verkrijgbaar.

### RUBRIEK 8: Maatregelen ter beheersing van blootstelling/persoonlijke bescherming

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

· **8.1 Controleparameters**

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

**64-17-5 ethanol**

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

**67-56-1 methanol**

WGW	Lange termijn waarde: 133 mg/m <sup>3</sup> , 100 ppm
-----	---

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

· **8.2 Maatregelen ter beheersing van blootstelling**

· **Persoonlijke beschermingsvoorzieningen:**

· **Algemene beschermings- en gezondheidsmaatregelen:**

Verwijderd houden van eet- en drinkwaren.

Verontreinigde kleding onmiddellijk uittrekken.

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

Beschermende kleding afzonderlijk bewaren.

· **Ademhalingsbescherming:**

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

· **Handbescherming:**



Veiligheidshandschoenen

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

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

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

· **Handschoenmateriaal**

De keuze van een geschikte handschoen is niet alleen afhankelijk van het materiaal, maar ook van andere kwaliteitskenmerken en verschilt van fabrikant tot fabrikant. Aangezien het product uit meerdere stoffen is samengesteld, is de duurzaamheid van de handschoenmaterialen niet vooraf berekenbaar en moet derhalve vóór het gebruik worden getest.

· **Doordringingstijd van het handschoenmateriaal**

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

(Vervolg op blz. 5)

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(Vervolg van blz. 4)

## · 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
Reuk:	Aromatisch
Geurdrempelwaarde:	Niet bepaald.

· pH-waarde: Niet bepaald.

## · Toestandsverandering

Smeltpunt/smeltbereik:	Niet bepaald.
Kookpunt/kookpuntbereik:	79 °C

· Vlampunt: 14 °C

· Ontvlambaarheid (vast, gasvormig): Niet bruikbaar.

· Ontstekingstemperatuur: 425 °C

· Ontbindingstemperatuur: Niet bepaald.

· Zelfonsteking: Het produkt ontbrandt niet uit zichzelf.

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

## · Ontploffingsgrenzen:

Onderste:	3.5 Vol %
Bovenste:	15.0 Vol %

· Dampspanning bij 20 °C: 59 hPa

· Dichtheid bij 20 °C: 0.7905 g/cm<sup>3</sup>

· Relatieve dichtheid: Niet bepaald.

· Dampdichtheid: Niet bepaald.

· Verdampingsnelheid: Niet bepaald.

## · Oplosbaarheid in/mengbaarheid met

Water: Volledig mengbaar.

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

## · Viscositeit

Dynamisch:	Niet bepaald.
Kinematisch:	Niet bepaald.

## · Oplosmiddelgehalte:

Organisch oplosmiddel:	95.3 %
Water:	4.7 %
VOC (EG)	95,33 %

(Vervolg op blz. 6)



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- **12.5 Resultaten van PBT- en zPzB-beoordeling**
- **PBT:** Niet bruikbaar.
- **zPzB:** Niet bruikbaar.
- **12.6 Andere schadelijke effecten** Geen verdere relevante informatie verkrijgbaar.

### RUBRIEK 13: Instructies voor verwijdering

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

### RUBRIEK 14: Informatie met betrekking tot het vervoer

- |  |  |
|--|--|
| <ul style="list-style-type: none"> <li>· <b>14.1 VN-nummer</b></li> <li>· <b>ADR, IMDG, IATA</b></li> </ul>  | <p style="text-align: right;">UN1170</p>   |
| <ul style="list-style-type: none"> <li>· <b>14.2 Juiste ladingnaam overeenkomstig de modelreglementen van de VN</b></li> <li>· <b>ADR</b></li> <li>· <b>IMDG</b></li> <li>· <b>IATA</b></li> </ul>       | <p style="text-align: right;">1170 ETHANOL, OPLOSSING (ETHYLALCOHOL, OPLOSSING)</p> <p style="text-align: right;">ETHANOL SOLUTION (ETHYL ALCOHOL SOLUTION)</p> <p style="text-align: right;">Ethanol solutions</p>  |
| <ul style="list-style-type: none"> <li>· <b>14.3 Transportgevarenklasse(n)</b></li> <li>· <b>ADR, IMDG, IATA</b></li> </ul>  | <div style="text-align: center;">  </div> <p style="text-align: right;">3 Brandbare vloeistoffen</p> <p style="text-align: right;">3</p>  |
| <ul style="list-style-type: none"> <li>· <b>14.4 Verpakkingsgroep:</b></li> <li>· <b>ADR, IMDG, IATA</b></li> </ul>  | <p style="text-align: right;">II</p>   |
| <ul style="list-style-type: none"> <li>· <b>14.5 Milieugevaren:</b></li> </ul>   | <p style="text-align: right;">Niet bruikbaar.</p>  |
| <ul style="list-style-type: none"> <li>· <b>14.6 Bijzondere voorzorgen voor de gebruiker</b></li> <li>· <b>Kemler-getal:</b></li> <li>· <b>EMS-nummer:</b></li> <li>· <b>Stowage Category</b></li> </ul> | <p style="text-align: right;">Waarschuwing: Brandbare vloeistoffen</p> <p style="text-align: right;">33</p> <p style="text-align: right;">F-E,S-D</p> <p style="text-align: right;">A</p>  |
| <ul style="list-style-type: none"> <li>· <b>14.7 Vervoer in bulk overeenkomstig bijlage II bij Marpol en de IBC-code</b></li> </ul>  | <p style="text-align: right;">Niet bruikbaar.</p>  |
| <ul style="list-style-type: none"> <li>· <b>Transport/verdere gegevens:</b></li> </ul>   |  |
| <ul style="list-style-type: none"> <li>· <b>ADR</b></li> <li>· <b>Beperkte hoeveelheden (LQ)</b></li> <li>· <b>Uitzonderde hoeveelheden (EQ)</b></li> <li>· <b>Vervoerscategorie</b></li> </ul>          | <p style="text-align: right;">1L</p> <p style="text-align: right;">Code: E2</p> <p style="text-align: right;">Grootste netto hoeveelheid per binnenverpakking: 30 ml</p> <p style="text-align: right;">Grootste netto hoeveelheid per buitenverpakking: 500 ml</p> <p style="text-align: right;">2</p> |

(Vervolg op blz. 8)

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(Vervolg van blz. 7)

· <b>Tunnelbeperkingscode</b>	D/E
· <b>IMDG</b>	
· <b>Limited quantities (LQ)</b>	1L
· <b>Excepted quantities (EQ)</b>	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· <b>VN "Model Regulation":</b>	UN 1170 ETHANOL, OPLOSSING (ETHYLALCOHOL, OPLOSSING), 3, II

## RUBRIEK 15: Regelgeving

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

· **SZW-lijst van kankerverwekkende stoffen**

64-17-5	ethanol
---------	---------

· **SZW-lijst van mutagene stoffen**

geen der bestanddelen staat op de lijst.

· **NIET-limitatieve lijst van voor de voortplanting giftige stoffen - Vruchtbaarheid**

64-17-5	ethanol	1
---------	---------	---

110-54-3	n-hexaan	3
----------	----------	---

· **NIET-limitatieve lijst van voor de voortplanting giftige stoffen - Ontwikkeling**

64-17-5	ethanol	1
---------	---------	---

67-56-1	methanol	2
---------	----------	---

108-88-3	tolueen	3
----------	---------	---

· **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 methanol**

· **Seveso-categorie P5c ONTVLAMBARE VLOEISTOFFEN**

· **Drempelwaarde (ton) voor toepassing van voorschriften voor lagedrempelinrichtingen 5.000 t**

· **Drempelwaarde (ton) voor toepassing van voorschriften voor hogedrempelinrichtingen 50.000 t**

· **Nationale voorschriften:**

· **Aanwijzingen m.b.t. tewerkstellingsbeperking:**

Werknemers mogen aan de kankerverwekkende gevaarlijke stoffen van deze toebereiding niet blootgesteld worden. In uitzonderingsgevallen kan de overheid speciale vergunningen afgeven.

· **Gevaarklasse v. water: Waterbezwaarlijkheid (NL) 10: Saneringsinspanning A**

· **15.2 Chemischeveiligheidsbeoordeling: Een chemische veiligheidsbeoordeling is niet uitgevoerd.**

## RUBRIEK 16: Overige informatie

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

· **Relevante zinnen**

H225 Licht ontvlambare vloeistof en damp.

H302 Schadelijk bij inslikken.

H304 Kan dodelijk zijn als de stof bij inslikken in de luchtwegen terecht komt.

(Vervolg op blz. 9)

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**Handelsnaam: ETHYL ALCOHOL, DENATURED**

(Vervolg van blz. 8)

*H312 Schadelijk bij contact met de huid.**H315 Veroorzaakt huidirritatie.**H332 Schadelijk bij inademing.**H336 Kan slaperigheid of duizeligheid veroorzaken.**H361f Wordt ervan verdacht de vruchtbaarheid te schaden.**H370 Veroorzaakt schade aan organen.**H373 Kan schade aan organen veroorzaken bij langdurige of herhaalde blootstelling.**H411 Giftig voor in het water levende organismen, met langdurige gevolgen.***Afkortingen en acroniemen:***ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)**IMDG: International Maritime Code for Dangerous Goods**IATA: International Air Transport Association**GHS: Globally Harmonised System of Classification and Labelling of Chemicals**EINECS: European Inventory of Existing Commercial Chemical Substances**ELINCS: European List of Notified Chemical Substances**CAS: Chemical Abstracts Service (division of the American Chemical Society)**VOC: Volatile Organic Compounds (USA, EU)**LC50: Lethal concentration, 50 percent**LD50: Lethal dose, 50 percent**PBT: Persistent, Bioaccumulative and Toxic**vPvB: very Persistent and very Bioaccumulative**Flam. Liq. 2: Flammable liquids, Hazard Category 2**Acute Tox. 4: Acute toxicity, Hazard Category 4**Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2**Carc. 1A: Carcinogenicity, Hazard Category 1A**Repr. 2: Reproductive toxicity, Hazard Category 2**Repr. 2: Reproductive toxicity, Hazard Category 2**STOT SE 1: Specific target organ toxicity - Single exposure, Hazard Category 1**STOT SE 2: Specific target organ toxicity - Single exposure, Hazard Category 2**STOT SE 3: Specific target organ toxicity - Single exposure, Hazard Category 3**STOT RE 2: Specific target organ toxicity - Repeated exposure, Hazard Category 2**Asp. Tox. 1: Aspiration hazard, Hazard Category 1**Aquatic Chronic 2: Hazardous to the aquatic environment - Chronic Hazard, Category 2*

# Fiche de données de sécurité

## selon 1907/2006/CE, Article 31

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

- **1.1 Identificateur de produit**
- **Nom du produit:** ETHYL ALCOHOL, DENATURED
- **Code du produit:** 15050, 15051
- **1.2 Utilisations identifiées pertinentes de la substance ou du mélange et utilisations déconseillées**  
Pas d'autres informations importantes disponibles.
- **Emploi de la substance / de la préparation** Produits chimiques pour laboratoires
- **1.3 Renseignements concernant le fournisseur de la fiche de données de sécurité**
- **Producteur/fournisseur:**  
Electron Microscopy Sciences  
1560 Industry Road  
USA-Hatfield, PA 19440  
Tel: 215-412-8400 Fax: 215-412-8450  
email: sgkcck@aol.com  
www.emsdiasum.com
- **Service chargé des renseignements:** Product safety department
- **1.4 Numéro d'appel d'urgence:**  
ChemTrec 1-800-424-9300 Contract CCN7661  
1-703-527-3887

### RUBRIQUE 2: Identification des dangers

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



GHS02 flamme

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



GHS08 danger pour la santé

Carc. 1A H350 Peut provoquer le cancer.

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

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



GHS07

Acute Tox. 4 H332 Nocif par inhalation.

- **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



GHS08

- **Mention d'avertissement** Danger

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**Nom du produit: ETHYL ALCOHOL, DENATURED**

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

méthanol

**· Mentions de danger**

H225 Liquide et vapeurs très inflammables.

H332 Nocif par inhalation.

H350 Peut provoquer le cancer.

H361 Susceptible de nuire à la fertilité ou au fœtus.

H371 Risque présumé d'effets graves pour les organes.

**· 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.

P260 Ne pas 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/récipient conformément à la réglementation locale/régionale/nationale/internationale.

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

**· vPvB:** Non applicable.

### RUBRIQUE 3: Composition/informations sur les composants

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

**· Composants dangereux:**

CAS: 64-17-5 EINECS: 200-578-6	éthanol Flam. Liq. 2, H225	50-100%
CAS: 67-56-1 EINECS: 200-659-6	méthanol Flam. Liq. 2, H225; STOT SE 1, H370; Acute Tox. 4, H302; Acute Tox. 4, H312; Acute Tox. 4, H332; Skin Irrit. 2, H315	2,5-10%
CAS: 110-54-3 EINECS: 203-777-6	n-hexane Flam. Liq. 2, H225; Repr. 2, H361f; STOT RE 2, H373; Asp. Tox. 1, H304; Aquatic Chronic 2, H411; Skin Irrit. 2, H315; STOT SE 3, H336	≤ 2,5%

**· 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. Assistance respiratoire si nécessaire. Tenir le malade au chaud. Si les troubles persistent, consulter un médecin.

En cas d'inconscience, coucher et transporter la personne en position latérale stable.

**· 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.

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- **Après ingestion:** Si les troubles persistent, consulter un médecin.
- **4.2 Principaux symptômes et effets, aigus et différés** Pas d'autres informations importantes disponibles.
- **4.3 Indication des éventuels soins médicaux immédiats et traitements particuliers nécessaires**  
Pas d'autres informations importantes disponibles.

### RUBRIQUE 5: Mesures de lutte contre l'incendie

- **5.1 Moyens d'extinction**
- **Moyens d'extinction:**  
CO<sub>2</sub>, poudre d'extinction ou eau pulvérisée. Combattre les foyers importants avec de l'eau pulvérisée ou de la mousse résistant à l'alcool.
- **5.2 Dangers particuliers résultant de la substance ou du mélange**  
Pas d'autres informations importantes disponibles.
- **5.3 Conseils aux pompiers**
- **Équipement spécial de sécurité:** Porter un appareil de protection respiratoire.

### RUBRIQUE 6: Mesures à prendre en cas de dispersion accidentelle

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

### RUBRIQUE 7: Manipulation et stockage

- **7.1 Précautions à prendre pour une manipulation sans danger**  
Veiller à une bonne ventilation/aspiration du poste de travail.  
Ouvrir et manipuler les récipients avec précaution.  
Eviter la formation d'aérosols.
- **Préventions des incendies et des explosions:**  
Tenir à l'abri des sources d'inflammation - ne pas fumer.  
Tenir à l'abri de la chaleur.  
Prendre des mesures contre les charges électrostatiques.  
Tenir des appareils de protection respiratoire prêts.
- **7.2 Conditions d'un stockage sûr, y compris d'éventuelles incompatibilités**
- **Stockage:**
- **Exigences concernant les lieux et conteneurs de stockage:** Stocker dans un endroit frais.
- **Indications concernant le stockage commun:** Pas nécessaire.
- **Autres indications sur les conditions de stockage:**  
Tenir les emballages hermétiquement fermés.  
Stocker au frais et au sec dans des fûts bien fermés.

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Protéger de la forte chaleur et du rayonnement direct du soleil.

· **7.3 Utilisation(s) finale(s) particulière(s)** Pas d'autres informations importantes disponibles.

### RUBRIQUE 8: Contrôles de l'exposition/protection individuelle

· **Indications complémentaires pour l'agencement des installations techniques:**

Sans autre indication, voir point 7.

· **8.1 Paramètres de contrôle**

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

#### 64-17-5 éthanol

VME	Valeur momentanée: 9500 mg/m <sup>3</sup> , 5000 ppm Valeur à long terme: 1900 mg/m <sup>3</sup> , 1000 ppm
-----	--

#### 67-56-1 méthanol

VME	Valeur momentanée: 1300 mg/m <sup>3</sup> , 1000 ppm Valeur à long terme: 260 mg/m <sup>3</sup> , 200 ppm risque de pénétration percutanée, (11)
-----	--

· **Remarques supplémentaires:**

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

· **8.2 Contrôles de l'exposition**

· **Equipement de protection individuel:**

· **Mesures générales de protection et d'hygiène:**

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

Retirer immédiatement les vêtements souillés ou humectés.

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

Conserver à part les vêtements de protection.

· **Protection respiratoire:**

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

· **Protection des mains:**



Gants de protection

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

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

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

· **Matériau des gants**

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

· **Temps de pénétration du matériau des gants**

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

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## · 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:	Aromatique
Seuil olfactif:	Non déterminé.

· valeur du pH: Non déterminé.

## · Changement d'état

Point de fusion:	Non déterminé.
Point d'ébullition:	79 °C

· Point d'éclair 14 °C

· Inflammabilité (solide, gazeux): Non applicable.

· Température d'inflammation: 425 °C

· Température de décomposition: Non déterminé.

· Auto-inflammation: Le produit ne s'enflamme pas spontanément.

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

## · Limites d'explosion:

Inférieure:	3.5 Vol %
Supérieure:	15.0 Vol %

· Pression de vapeur à 20 °C: 59 hPa

· Densité à 20 °C: 0.7905 g/cm<sup>3</sup>

· Densité relative Non déterminé.

· Densité de vapeur. Non déterminé.

· Vitesse d'évaporation Non déterminé.

· Solubilité dans/miscibilité avec l'eau:

Entièrement miscible

· Coefficient de partage (n-octanol/eau): Non déterminé.

## · Viscosité:

Dynamique:	Non déterminé.
Cinématique:	Non déterminé.

## · Teneur en solvants:

Solvants organiques:	95.3 %
Eau:	4.7 %
VOC (CE)	95,33 %

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· **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 par inhalation.

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

#### 67-56-1 méthanol

Oral	LD50	5628 mg/kg (rat)
Dermique	LD50	15800 mg/kg (lapin)

- **Effet primaire d'irritation:**
- **Corrosion cutanée/irritation cutanée**  
Compte tenu des données disponibles, les critères de classification ne sont pas remplis.
- **Lésions oculaires graves/irritation oculaire**  
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**  
Peut provoquer le cancer.
- **Toxicité pour la reproduction**  
Susceptible de nuire à la fertilité ou au fœtus.
- **Toxicité spécifique pour certains organes cibles - exposition unique**  
Risque présumé d'effets graves pour les organes.
- **Toxicité spécifique pour certains organes cibles - exposition répétée**  
Compte tenu des données disponibles, les critères de classification ne sont pas remplis.
- **Danger par aspiration** Compte tenu des données disponibles, les critères de classification ne sont pas remplis.

### RUBRIQUE 12: Informations écologiques

- **12.1 Toxicité**
- **Toxicité aquatique:** Pas d'autres informations importantes disponibles.
- **12.2 Persistance et dégradabilité** Pas d'autres informations importantes disponibles.
- **12.3 Potentiel de bioaccumulation** Pas d'autres informations importantes disponibles.
- **12.4 Mobilité dans le sol** Pas d'autres informations importantes disponibles.

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- **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.
- **Produit de nettoyage recommandé:** Eau, éventuellement avec des produits de nettoyage

### RUBRIQUE 14: Informations relatives au transport

- |   |  |
|---|--|
| <ul style="list-style-type: none"> <li>· <b>14.1 Numéro ONU</b></li> <li>· <b>ADR, IMDG, IATA</b></li> </ul>  | <p style="text-align: center;">UN1170</p>  |
| <ul style="list-style-type: none"> <li>· <b>14.2 Désignation officielle de transport de l'ONU</b></li> <li>· <b>ADR</b></li> <li>· <b>IMDG</b></li> <li>· <b>IATA</b></li> </ul>                                    | <p style="text-align: center;">1170 ÉTHANOL EN SOLUTION (ALCOOL ÉTHYLIQUE EN SOLUTION)</p> <p style="text-align: center;">ETHANOL SOLUTION (ETHYL ALCOHOL SOLUTION)</p> <p style="text-align: center;">Ethanol solutions</p> |
| <ul style="list-style-type: none"> <li>· <b>14.3 Classe(s) de danger pour le transport</b></li> <li>· <b>ADR, IMDG, IATA</b></li> </ul>   | <div style="text-align: center;">  </div> <ul style="list-style-type: none"> <li>· <b>Classe</b></li> <li>· <b>Étiquette</b></li> </ul>   |
| <ul style="list-style-type: none"> <li>· <b>14.4 Groupe d'emballage</b></li> <li>· <b>ADR, IMDG, IATA</b></li> </ul>  | <p style="text-align: center;">3 Liquides inflammables.</p> <p style="text-align: center;">3</p> <p style="text-align: center;">II</p>   |
| <ul style="list-style-type: none"> <li>· <b>14.5 Dangers pour l'environnement:</b></li> </ul>   | <p style="text-align: center;">Non applicable.</p>   |
| <ul style="list-style-type: none"> <li>· <b>14.6 Précautions particulières à prendre par l'utilisateur</b></li> <li>· <b>Indice Kemler:</b></li> <li>· <b>No EMS:</b></li> <li>· <b>Stowage Category</b></li> </ul> | <p style="text-align: center;">Attention: Liquides inflammables.</p> <p style="text-align: center;">33</p> <p style="text-align: center;">F-E,S-D</p> <p style="text-align: center;">A</p>                                   |
| <ul style="list-style-type: none"> <li>· <b>14.7 Transport en vrac conformément à l'annexe II de la convention Marpol et au recueil IBC</b></li> </ul>  | <p style="text-align: center;">Non applicable.</p>   |

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**· Indications complémentaires de transport:**

**· ADR**

· Quantités limitées (LQ)

1L

· Quantités exceptées (EQ)

Code: E2

Quantité maximale nette par emballage intérieur: 30 ml  
Quantité maximale nette par emballage extérieur: 500 ml

· Catégorie de transport

2

· Code de restriction en tunnels

D/E

**· IMDG**

· Limited quantities (LQ)

1L

· Excepted quantities (EQ)

Code: E2

Maximum net quantity per inner packaging: 30 ml  
Maximum net quantity per outer packaging: 500 ml

· "Règlement type" de l'ONU:

UN 1170 ÉTHANOL EN SOLUTION (ALCOOL ÉTHYLIQUE EN SOLUTION), 3, II

### **RUBRIQUE 15: Informations relatives à la réglementation**

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

· Directive 2012/18/UE

· Substances dangereuses désignées - ANNEXE I méthanol

· Catégorie SEVESO P5c LIQUIDES INFLAMMABLES

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

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

· Prescriptions nationales:

· Indications sur les restrictions de travail:

Le personnel ne doit pas être exposé aux substances dangereuses cancérigènes contenues dans cette préparation.

Les autorités peuvent autoriser des exceptions dans des cas particuliers.

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

### **RUBRIQUE 16: Autres informations**

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

· Phrases importantes

H225 Liquide et vapeurs très inflammables.

H302 Nocif en cas d'ingestion.

H304 Peut être mortel en cas d'ingestion et de pénétration dans les voies respiratoires.

H312 Nocif par contact cutané.

H315 Provoque une irritation cutanée.

H332 Nocif par inhalation.

H336 Peut provoquer somnolence ou vertiges.

H361f Susceptible de nuire à la fertilité.

H370 Risque avéré d'effets graves pour les organes.

H373 Risque présumé d'effets graves pour les organes à la suite d'expositions répétées ou d'une exposition prolongée.

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**Nom du produit: ETHYL ALCOHOL, DENATURED**

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*H411 Toxique pour les organismes aquatiques, entraîne des effets néfastes à long terme.***· Acronymes et abréviations:***ADR: Accord européen sur le transport des marchandises dangereuses par Route**IMDG: International Maritime Code for Dangerous Goods**IATA: International Air Transport Association**GHS: Globally Harmonised System of Classification and Labelling of Chemicals**EINECS: European Inventory of Existing Commercial Chemical Substances**ELINCS: European List of Notified Chemical Substances**CAS: Chemical Abstracts Service (division of the American Chemical Society)**VOC: Volatile Organic Compounds (USA, EU)**LC50: Lethal concentration, 50 percent**LD50: Lethal dose, 50 percent**PBT: Persistent, Bioaccumulative and Toxic**vPvB: very Persistent and very Bioaccumulative**Flam. Liq. 2: Flammable liquids, Hazard Category 2**Acute Tox. 4: Acute toxicity, Hazard Category 4**Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2**Carc. 1A: Carcinogenicity, Hazard Category 1A**Repr. 2: Reproductive toxicity, Hazard Category 2**Repr. 2: Reproductive toxicity, Hazard Category 2**STOT SE 1: Specific target organ toxicity - Single exposure, Hazard Category 1**STOT SE 2: Specific target organ toxicity - Single exposure, Hazard Category 2**STOT SE 3: Specific target organ toxicity - Single exposure, Hazard Category 3**STOT RE 2: Specific target organ toxicity - Repeated exposure, Hazard Category 2**Asp. Tox. 1: Aspiration hazard, Hazard Category 1**Aquatic Chronic 2: Hazardous to the aquatic environment - Chronic Hazard, Category 2*

FR

# Sicherheitsdatenblatt

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überarbeitet am: 31.12.2015

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

- **1.1 Produktidentifikator**
- **Handelsname:** ETHYL ALCOHOL, DENATURED
- **Artikelnummer:** 15050, 15051
- **1.2 Relevante identifizierte Verwendungen des Stoffs oder Gemischs und Verwendungen, von denen abgeraten wird**  
Keine weiteren relevanten Informationen verfügbar.
- **Verwendung des Stoffes / des Gemisches** Laborchemikalien
- **1.3 Einzelheiten zum Lieferanten, der das Sicherheitsdatenblatt bereitstellt**
- **Hersteller/Lieferant:**  
Electron Microscopy Sciences  
1560 Industry Road  
USA-Hatfield, PA 19440  
Tel: 215-412-8400 Fax: 215-412-8450  
email: sgkcck@aol.com  
www.emsdiasum.com  
  
Science Services GmbH  
Unterhachinger Str. 75  
81737 München Germany  
Tel: +49(0)89 18 93 668-0  
safety@scienceservices.de  
  
24h Giftnotruf Munchen: +49 (0)89 19240  
Toxikologische Abteilung der II. Medizinischen Klinik  
rechts der Isar, Munchen. - www.toxinfo.org
- **Auskunftgebender Bereich:** Product safety department
- **1.4 Notrufnummer:**  
ChemTrec 1-800-424-9300 Contract CCN7661  
1-703-527-3887

### ABSCHNITT 2: Mögliche Gefahren

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



GHS02 Flamme

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

.....



GHS08 Gesundheitsgefahr

Carc. 1A H350 Kann Krebs erzeugen.  
Repr. 2 H361 Kann vermutlich die Fruchtbarkeit beeinträchtigen oder das Kind im Mutterleib schädigen.  
STOT SE 2 H371 Kann die Organe schädigen.

.....



GHS07

Acute Tox. 4 H332 Gesundheitsschädlich bei Einatmen.

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- **2.2 Kennzeichnungselemente**
- **Kennzeichnung gemäß Verordnung (EG) Nr. 1272/2008**  
Das Produkt ist gemäß CLP-Verordnung eingestuft und gekennzeichnet.
- **Gefahrenpiktogramme**



GHS02    GHS07    GHS08

- **Signalwort Gefahr**
- **Gefahrbestimmende Komponenten zur Etikettierung:**  
Methanol
- **Gefahrenhinweise**  
H225 Flüssigkeit und Dampf leicht entzündbar.  
H332 Gesundheitsschädlich bei Einatmen.  
H350 Kann Krebs erzeugen.  
H361 Kann vermutlich die Fruchtbarkeit beeinträchtigen oder das Kind im Mutterleib schädigen.  
H371 Kann die Organe schädigen.
- **Sicherheitshinweise**  
P210 Von Hitze, heißen Oberflächen, Funken, offenen Flammen und anderen Zündquellen fernhalten. Nicht rauchen.  
P241 Explosionsgeschützte elektrische Geräte/Lüftungsanlagen/Beleuchtungsanlagen verwenden.  
P260 Staub/Rauch/Gas/Nebel/Dampf/Aerosol nicht einatmen.  
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:**  
Nur für gewerbliche Anwender.
- **2.3 Sonstige Gefahren**
- **Ergebnisse der PBT- und vPvB-Beurteilung**
- **PBT:** Nicht anwendbar.
- **vPvB:** Nicht anwendbar.

### ABSCHNITT 3: Zusammensetzung/Angaben zu Bestandteilen

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

**Gefährliche Inhaltsstoffe:**

CAS: 64-17-5 EINECS: 200-578-6	Ethanol Flam. Liq. 2, H225	50-100%
CAS: 67-56-1 EINECS: 200-659-6	Methanol Flam. Liq. 2, H225; STOT SE 1, H370; Acute Tox. 4, H302; Acute Tox. 4, H312; Acute Tox. 4, H332; Skin Irrit. 2, H315	2,5-10%
CAS: 110-54-3 EINECS: 203-777-6	n-Hexan Flam. Liq. 2, H225; Repr. 2, H361f; STOT RE 2, H373; Asp. Tox. 1, H304; Aquatic Chronic 2, H411; Skin Irrit. 2, H315; STOT SE 3, H336	≤ 2,5%

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· **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:**

Frischlufzufuhr, gegebenenfalls Atemspende, Wärme. Bei anhaltenden Beschwerden Arzt konsultieren.

Bei Bewußtlosigkeit Lagerung und Transport in stabiler Seitenlage.

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

· **Nach Augenkontakt:** Augen bei geöffnetem Lidspalt mehrere Minuten mit fließendem Wasser spülen.

· **Nach Verschlucken:** Bei anhaltenden Beschwerden Arzt konsultieren.

· **4.2 Wichtigste akute und verzögert auftretende Symptome und Wirkungen**

Keine weiteren relevanten Informationen verfügbar.

· **4.3 Hinweise auf ärztliche Soforthilfe oder Spezialbehandlung**

Keine weiteren relevanten Informationen verfügbar.

### ABSCHNITT 5: Maßnahmen zur Brandbekämpfung

· **5.1 Löschmittel**

· **Geeignete Löschmittel:**

CO<sub>2</sub>, Löschpulver oder Wassersprühstrahl. Größeren Brand mit Wassersprühstrahl oder alkoholbeständigem Schaum bekämpfen.

· **5.2 Besondere vom Stoff oder Gemisch ausgehende Gefahren**

Keine weiteren relevanten Informationen verfügbar.

· **5.3 Hinweise für die Brandbekämpfung**

· **Besondere Schutzausrüstung:** Atemschutzgerät anlegen.

### ABSCHNITT 6: Maßnahmen bei unbeabsichtigter Freisetzung

· **6.1 Personenbezogene Vorsichtsmaßnahmen, Schutzausrüstungen und in Notfällen anzuwendende Verfahren**  
Schutzausrüstung tragen. Ungeschützte Personen fernhalten.

· **6.2 Umweltschutzmaßnahmen:**

Mit viel Wasser verdünnen.

Nicht in die Kanalisation/Oberflächenwasser/Grundwasser gelangen lassen.

· **6.3 Methoden und Material für Rückhaltung und Reinigung:**

Mit flüssigkeitsbindendem Material (Sand, Kieselgur, Säurebinder, Universalbinder, Sägemehl) aufnehmen.

Kontaminiertes Material als Abfall nach Abschnitt 13 entsorgen.

Für ausreichende Lüftung sorgen.

· **6.4 Verweis auf andere Abschnitte**

Informationen zur sicheren Handhabung siehe Abschnitt 7.

Informationen zur persönlichen Schutzausrüstung siehe Abschnitt 8.

Informationen zur Entsorgung siehe Abschnitt 13.

### ABSCHNITT 7: Handhabung und Lagerung

· **7.1 Schutzmaßnahmen zur sicheren Handhabung**

Für gute Belüftung/Absaugung am Arbeitsplatz sorgen.

Behälter mit Vorsicht öffnen und handhaben.

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Aerosolbildung vermeiden.

· **Hinweise zum Brand- und Explosionsschutz:**

Zündquellen fernhalten - nicht rauchen.

Vor Hitze schützen.

Maßnahmen gegen elektrostatische Aufladung treffen.

Atemschutzgeräte bereithalten.

· **7.2 Bedingungen zur sicheren Lagerung unter Berücksichtigung von Unverträglichkeiten**

· **Lagerung:**

· **Anforderung an Lagerräume und Behälter:** An einem kühlen Ort lagern.

· **Zusammenlagerungshinweise:** Nicht erforderlich.

· **Weitere Angaben zu den Lagerbedingungen:**

Behälter dicht geschlossen halten.

In gut verschlossenen Gebinden kühl und trocken lagern.

Vor Hitze und direkter Sonnenbestrahlung schützen.

· **Lagerklasse:**

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

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

### ABSCHNITT 8: Begrenzung und Überwachung der Exposition/Persönliche Schutzausrüstungen

· **Zusätzliche Hinweise zur Gestaltung technischer Anlagen:** Keine weiteren Angaben, siehe Abschnitt 7.

· **8.1 Zu überwachende Parameter**

· **Bestandteile mit arbeitsplatzbezogenen, zu überwachenden Grenzwerten:**

**64-17-5 Ethanol**

AGW	Langzeitwert: 960 mg/m <sup>3</sup> , 500 ml/m <sup>3</sup> 2(II);DFG, Y
-----	---

**67-56-1 Methanol**

AGW	Langzeitwert: 270 mg/m <sup>3</sup> , 200 ml/m <sup>3</sup> 4(II);DFG, EU, H, Y
-----	--

· **Bestandteile mit biologischen Grenzwerten:**

**67-56-1 Methanol**

BGW	30 mg/l Untersuchungsmaterial: Urin Probennahmezeitpunkt: bei Langzeitexposition: Nach mehreren vorangegangenen Schichten, Expositionsende bzw. Schichtende Parameter: Methanol
-----	---

· **Zusätzliche Hinweise:** Als Grundlage dienen die bei der Erstellung gültigen Listen.

· **8.2 Begrenzung und Überwachung der Exposition**

· **Persönliche Schutzausrüstung:**

· **Allgemeine Schutz- und Hygienemaßnahmen:**

Von Nahrungsmitteln, Getränken und Futtermitteln fernhalten.

Beschmutzte, getränkte Kleidung sofort ausziehen.

Vor den Pausen und bei Arbeitsende Hände waschen.

Getrennte Aufbewahrung der Schutzkleidung.

· **Atemschutz:**

Bei kurzzeitiger oder geringer Belastung Atemfiltergerät; bei intensiver bzw. längerer Exposition umluftunabhängiges Atemschutzgerät verwenden.

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**· Handschutz:**


Schutzhandschuhe

Das Handschuhmaterial muss undurchlässig und beständig gegen das Produkt / den Stoff / die Zubereitung sein. Aufgrund fehlender Tests kann keine Empfehlung zum Handschuhmaterial für das Produkt / die Zubereitung / das Chemikaliengemisch abgegeben werden.

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

**· Handschuhmaterial**

Die Auswahl eines geeigneten Handschuhs ist nicht nur vom Material, sondern auch von weiteren Qualitätsmerkmalen abhängig und von Hersteller zu Hersteller unterschiedlich. Da das Produkt eine Zubereitung aus mehreren Stoffen darstellt, ist die Beständigkeit von Handschuhmaterialien nicht vorausberechenbar und muß deshalb vor dem Einsatz überprüft werden.

**· Durchdringungszeit des Handschuhmaterials**

Die genaue Durchbruchzeit ist beim Schutzhandschuhhersteller zu erfahren und einzuhalten.

**· Augenschutz:**


Dichtschließende Schutzbrille

### ABSCHNITT 9: Physikalische und chemische Eigenschaften

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

**Form:** Flüssigkeit

**Farbe:** Farblos

**· Geruch:** Aromatisch

**· Geruchsschwelle:** Nicht bestimmt.

**· pH-Wert:** Nicht bestimmt.

**· Zustandsänderung**

**Schmelzpunkt/Schmelzbereich:** Nicht bestimmt.

**Siedepunkt/Siedebereich:** 79 °C

**· Flammpunkt:** 14 °C

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

**· Zündtemperatur:** 425 °C

**· Zersetzungstemperatur:** Nicht bestimmt.

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

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

**· Explosionsgrenzen:**

**Untere:** 3.5 Vol %

**Obere:** 15.0 Vol %

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· <b>Dampfdruck bei 20 °C:</b>	59 hPa
· <b>Dichte bei 20 °C:</b>	0.7905 g/cm <sup>3</sup>
· <b>Relative Dichte</b>	Nicht bestimmt.
· <b>Dampfdichte</b>	Nicht bestimmt.
· <b>Verdampfungsgeschwindigkeit</b>	Nicht bestimmt.
· <b>Löslichkeit in / Mischbarkeit mit Wasser:</b>	Vollständig mischbar.
· <b>Verteilungskoeffizient (n-Octanol/Wasser):</b>	Nicht bestimmt.
· <b>Viskosität:</b>	
<b>Dynamisch:</b>	Nicht bestimmt.
<b>Kinematisch:</b>	Nicht bestimmt.
· <b>Lösemittelgehalt:</b>	
<b>Organische Lösemittel:</b>	95,3 %
<b>Wasser:</b>	4,7 %
<b>VOC (EU)</b>	95,33 %
· <b>9.2 Sonstige Angaben</b>	Keine weiteren relevanten Informationen verfügbar.

### ABSCHNITT 10: Stabilität und Reaktivität

- **10.1 Reaktivität** Keine weiteren relevanten Informationen verfügbar.
- **10.2 Chemische Stabilität**
- **Thermische Zersetzung / zu vermeidende Bedingungen:**  
Keine Zersetzung bei bestimmungsgemäßer Verwendung.
- **10.3 Möglichkeit gefährlicher Reaktionen** Keine gefährlichen Reaktionen bekannt.
- **10.4 Zu vermeidende Bedingungen** Keine weiteren relevanten Informationen verfügbar.
- **10.5 Unverträgliche Materialien:** Keine weiteren relevanten Informationen verfügbar.
- **10.6 Gefährliche Zersetzungsprodukte:** Keine gefährlichen Zersetzungsprodukte bekannt.

### ABSCHNITT 11: Toxikologische Angaben

- **11.1 Angaben zu toxikologischen Wirkungen**
- **Akute Toxizität**  
Gesundheitsschädlich bei Einatmen.

· <b>Einstufungsrelevante LD/LC50-Werte:</b>		
<b>67-56-1 Methanol</b>		
Oral	LD50	5628 mg/kg (rat)
Dermal	LD50	15800 mg/kg (rabbit)

- **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**  
Kann Krebs erzeugen.
- **Reproduktionstoxizität**  
Kann vermutlich die Fruchtbarkeit beeinträchtigen oder das Kind im Mutterleib schädigen.

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- **Spezifische Zielorgan-Toxizität bei einmaliger Exposition**  
Kann die Organe schädigen.
- **Spezifische Zielorgan-Toxizität bei wiederholter Exposition**  
Aufgrund der verfügbaren Daten sind die Einstufungskriterien nicht erfüllt.
- **Aspirationsgefahr** Aufgrund der verfügbaren Daten sind die Einstufungskriterien nicht erfüllt.


### ABSCHNITT 12: Umweltbezogene Angaben

- **12.1 Toxizität**
- **Aquatische Toxizität:** Keine weiteren relevanten Informationen verfügbar.
- **12.2 Persistenz und Abbaubarkeit** Keine weiteren relevanten Informationen verfügbar.
- **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.
- **Ungereinigte Verpackungen:**
- **Empfehlung:** Entsorgung gemäß den behördlichen Vorschriften.
- **Empfohlenes Reinigungsmittel:** Wasser, gegebenenfalls mit Zusatz von Reinigungsmitteln.

### ABSCHNITT 14: Angaben zum Transport

- |   |   |
|---|---|
| <b>14.1 UN-Nummer</b>   |   |
| <b>ADR, IMDG, IATA</b>  | UN1170                                      |
| <b>14.2 Ordnungsgemäße UN-Versandbezeichnung</b>                                    |   |
| <b>ADR</b>  | 1170 ETHANOL, LÖSUNG (ETHYLALKOHOL, LÖSUNG) |
| <b>IMDG</b>   | ETHANOL SOLUTION (ETHYL ALCOHOL SOLUTION)   |
| <b>IATA</b>   | Ethanol solutions                           |
| <b>14.3 Transportgefahrenklassen</b>  |   |
| <b>ADR, IMDG, IATA</b>  |   |
|  |   |
| <b>Klasse</b>   | 3 Entzündbare flüssige Stoffe               |
| <b>Gefahrzettel</b>   | 3   |

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· <b>14.4 Verpackungsgruppe</b> · <b>ADR, IMDG, IATA</b>	<b>II</b>
· <b>14.5 Umweltgefahren:</b>	<i>Nicht anwendbar.</i>
· <b>14.6 Besondere Vorsichtsmaßnahmen für den Verwender</b> · <b>Kemler-Zahl:</b> · <b>EMS-Nummer:</b> · <b>Stowage Category</b>	<b>Achtung: Entzündbare flüssige Stoffe</b> <b>33</b> <b>F-E,S-D</b> <b>A</b>
· <b>14.7 Massengutbeförderung gemäß Anhang II des MARPOL-Übereinkommens und gemäß IBC-Code</b>	<i>Nicht anwendbar.</i>
· <b>Transport/weitere Angaben:</b>	
· <b>ADR</b> · <b>Begrenzte Menge (LQ)</b> · <b>Freigestellte Mengen (EQ)</b>	<b>1L</b> <b>Code: E2</b> <i>Höchste Nettomenge je Innenverpackung: 30 ml</i> <i>Höchste Nettomenge je Außenverpackung: 500 ml</i>
· <b>Beförderungskategorie</b> · <b>Tunnelbeschränkungscode</b>	<b>2</b> <b>D/E</b>
· <b>IMDG</b> · <b>Limited quantities (LQ)</b> · <b>Excepted quantities (EQ)</b>	<b>1L</b> <b>Code: E2</b> <i>Maximum net quantity per inner packaging: 30 ml</i> <i>Maximum net quantity per outer packaging: 500 ml</i>
· <b>UN "Model Regulation":</b>	<b>UN 1170 ETHANOL, LÖSUNG (ETHYLALKOHOL, LÖSUNG), 3, II</b>

### 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 Methanol**
  - **Seveso-Kategorie P5c ENTZÜNDBARE FLÜSSIGKEITEN**
  - **Mengenschwelle (in Tonnen) für die Anwendung in Betrieben der unteren Klasse 5.000 t**
  - **Mengenschwelle (in Tonnen) für die Anwendung in Betrieben der oberen Klasse 50.000 t**
  - **Nationale Vorschriften:**
  - **Hinweise zur Beschäftigungsbeschränkung:**  
*Arbeitnehmer dürfen den in dieser Zubereitung enthaltenen krebserzeugenden Gefahrstoffen nicht ausgesetzt sein. Im Einzelfall kann die Behörde Ausnahmen zulassen.*
  - **Technische Anleitung Luft:**
- | Klasse | Anteil in % |
|--------|-------------|
| Wasser | 4,7         |
| I      | 4,6         |
| NK     | 90,8        |
- **Wassergefährdungsklasse: WGK 1 (Selbsteinstufung): schwach wassergefährdend.**

(Fortsetzung auf Seite 9)

# Sicherheitsdatenblatt

## gemäß 1907/2006/EG, Artikel 31

Druckdatum: 31.12.2015

überarbeitet am: 31.12.2015

**Handelsname: ETHYL ALCOHOL, DENATURED**

(Fortsetzung von Seite 8)

· **15.2 Stoffsicherheitsbeurteilung:** Eine Stoffsicherheitsbeurteilung wurde nicht durchgeführt.

### ABSCHNITT 16: Sonstige Angaben

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

· **Relevante Sätze**

- H225 Flüssigkeit und Dampf leicht entzündbar.
- H302 Gesundheitsschädlich bei Verschlucken.
- H304 Kann bei Verschlucken und Eindringen in die Atemwege tödlich sein.
- H312 Gesundheitsschädlich bei Hautkontakt.
- H315 Verursacht Hautreizungen.
- H332 Gesundheitsschädlich bei Einatmen.
- H336 Kann Schläfrigkeit und Benommenheit verursachen.
- H361f Kann vermutlich die Fruchtbarkeit beeinträchtigen.
- H370 Schädigt die Organe.
- H373 Kann die Organe schädigen bei längerer oder wiederholter Exposition.
- H411 Giftig für Wasserorganismen, mit langfristiger Wirkung.

· **Abkürzungen und Akronyme:**

- ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
- IMDG: International Maritime Code for Dangerous Goods
- IATA: International Air Transport Association
- GHS: Globally Harmonised System of Classification and Labelling of Chemicals
- EINECS: European Inventory of Existing Commercial Chemical Substances
- ELINCS: European List of Notified Chemical Substances
- CAS: Chemical Abstracts Service (division of the American Chemical Society)
- VOC: Volatile Organic Compounds (USA, EU)
- LC50: Lethal concentration, 50 percent
- LD50: Lethal dose, 50 percent
- PBT: Persistent, Bioaccumulative and Toxic
- vPvB: very Persistent and very Bioaccumulative
- Flam. Liq. 2: Flammable liquids, Hazard Category 2
- Acute Tox. 4: Acute toxicity, Hazard Category 4
- Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2
- Carc. 1A: Carcinogenicity, Hazard Category 1A
- Repr. 2: Reproductive toxicity, Hazard Category 2
- Repr. 2: Reproductive toxicity, Hazard Category 2
- STOT SE 1: Specific target organ toxicity - Single exposure, Hazard Category 1
- STOT SE 2: Specific target organ toxicity - Single exposure, Hazard Category 2
- STOT SE 3: Specific target organ toxicity - Single exposure, Hazard Category 3
- STOT RE 2: Specific target organ toxicity - Repeated exposure, Hazard Category 2
- Asp. Tox. 1: Aspiration hazard, Hazard Category 1
- Aquatic Chronic 2: Hazardous to the aquatic environment - Chronic Hazard, Category 2

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

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

- **1.1 Identificatore del prodotto**
- **Denominazione commerciale:** ETHYL ALCOHOL, DENATURED
- **Articolo numero:** 15050, 15051
- **1.2 Usi identificati pertinenti della sostanza o della miscela e usi sconsigliati**  
Non sono disponibili altre informazioni.
- **Utilizzazione della Sostanza / del Preparato** Prodotti chimici per laboratorio
- **1.3 Informazioni sul fornitore della scheda di dati di sicurezza**
- **Produttore/fornitore:**  
Electron Microscopy Sciences  
1560 Industry Road  
USA-Hatfield, PA 19440  
Tel: 215-412-8400 Fax: 215-412-8450  
email: sgkcck@aol.com  
www.emsdiasum.com
- **Società Italiana Chimici**  
Via Rio Nell Ellba 140  
00138 Rome, Italy  
Tel: 39 06 8800211  
Fax: 39 30 06 8815313  
Web: www.sichim.com
- **Informazioni fornite da:** Product safety department
- **1.4 Numero telefonico di emergenza:**  
ChemTrec 1-800-424-9300 Contract CCN7661  
1-703-527-3887

### SEZIONE 2: Identificazione dei pericoli

- **2.1 Classificazione della sostanza o della miscela**
- **Classificazione secondo il regolamento (CE) n. 1272/2008**



GHS02 fiamma

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



GHS08 pericolo per la salute

Carc. 1A H350 Può provocare il cancro.  
Repr. 2 H361 Sospettato di nuocere alla fertilità o al feto.  
STOT SE 2 H371 Può provocare danni agli organi.



GHS07

Acute Tox. 4 H332 Nocivo se inalato.

- **2.2 Elementi dell'etichetta**
- **Etichettatura secondo il regolamento (CE) n. 1272/2008**  
Il prodotto è classificato ed etichettato conformemente al regolamento CLP.

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· **Pittogrammi di pericolo**



GHS02    GHS07    GHS08

· **Avvertenza Pericolo**

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

metanolo

· **Indicazioni di pericolo**

H225 Liquido e vapori facilmente infiammabili.

H332 Nocivo se inalato.

H350 Può provocare il cancro.

H361 Sospettato di nuocere alla fertilità o al feto.

H371 Può provocare danni agli organi.

· **Consigli di prudenza**

P210 Tenere lontano da fonti di calore, superfici riscaldate, scintille, fiamme e altre fonti di innesco. Vietato fumare.

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

P260 Non 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.

· **2.3 Altri pericoli**

· **Risultati della valutazione PBT e vPvB**

· **PBT:** Non applicabile.

· **vPvB:** Non applicabile.

**SEZIONE 3: Composizione/informazioni sugli ingredienti**

· **3.2 Caratteristiche chimiche: Miscela**

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

· **Sostanze pericolose:**

CAS: 64-17-5 EINECS: 200-578-6	etanolo Flam. Liq. 2, H225	50-100%
CAS: 67-56-1 EINECS: 200-659-6	metanolo Flam. Liq. 2, H225; STOT SE 1, H370; Acute Tox. 4, H302; Acute Tox. 4, H312; Acute Tox. 4, H332; Skin Irrit. 2, H315	2,5-10%
CAS: 110-54-3 EINECS: 203-777-6	n-esano Flam. Liq. 2, H225; Repr. 2, H361f; STOT RE 2, H373; Asp. Tox. 1, H304; Aquatic Chronic 2, H411; Skin Irrit. 2, H315; STOT SE 3, H336	≤ 2,5%

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

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#### **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, praticare eventualmente la respirazione artificiale, tenere al caldo. Se i disturbi persistono consultare il medico.*

*Se il soggetto è svenuto provvedere a tenerlo durante il trasporto in posizione stabile su un fianco.*

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

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

· **4.3 Indicazione dell'eventuale necessità di consultare immediatamente un medico e di trattamenti speciali**

*Non sono disponibili altre informazioni.*

#### **SEZIONE 5: Misure antincendio**

· **5.1 Mezzi di estinzione**

· **Mezzi di estinzione idonei:**

*CO2, polvere o acqua nebulizzata. Estinguere gli incendi di grosse dimensioni con acqua nebulizzata o con schiuma resistente all'alcool.*

· **5.2 Pericoli speciali derivanti dalla sostanza o dalla miscela** Non sono disponibili altre informazioni.

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

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

#### **SEZIONE 6: Misure in caso di rilascio accidentale**

· **6.1 Precauzioni personali, dispositivi di protezione e procedure in caso di emergenza**

*Indossare equipaggiamento protettivo. Allontanare le persone non equipaggiate.*

· **6.2 Precauzioni ambientali:**

*Diluire abbondantemente con acqua.*

*Impedire infiltrazioni nella fognatura/nelle acque superficiali/nelle acque freatiche.*

· **6.3 Metodi e materiali per il contenimento e per la bonifica:**

*Raccogliere il liquido con materiale assorbente (sabbia, tripoli, legante di acidi, legante universale, segatura).*

*Smaltimento del materiale contaminato conformemente al punto 13.*

*Provvedere ad una sufficiente areazione.*

· **6.4 Riferimento ad altre sezioni**

*Per informazioni relative ad una 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.*

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- Proteggere dal calore.  
Adottare provvedimenti contro cariche elettrostatiche.  
Tener pronto il respiratore.
- **7.2 Condizioni per lo stoccaggio sicuro, comprese eventuali incompatibilità**
  - **Stoccaggio:**
  - **Requisiti dei magazzini e dei recipienti:** Conservare in ambiente fresco.
  - **Indicazioni sullo stoccaggio misto:** Non necessario.
  - **Ulteriori indicazioni relative alle condizioni di immagazzinamento:**  
Mantenere i recipienti ermeticamente chiusi.  
Conservare in luogo fresco e asciutto in fusti ben chiusi.  
Proteggere dal calore e dai raggi diretti del sole.
  - **7.3 Usi finali particolari** Non sono disponibili altre informazioni.

### SEZIONE 8: Controllo dell'esposizione/protezione individuale

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

- **8.1 Parametri di controllo**

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

**64-17-5 etanolo**

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

**67-56-1 metanolo**

TWA	Valore a breve termine: 328 mg/m <sup>3</sup> , 250 ppm
	Valore a lungo termine: 262 mg/m <sup>3</sup> , 200 ppm
	Cute, IBE
VL	Valore a lungo termine: 260 mg/m <sup>3</sup> , 200 ppm
	Pelle

- **Componenti con valori limite biologici:**

**67-56-1 metanolo**

IBE	15 mg/l
	Campioni: urine
	Momento del prelievo: a fine turno
	Indicatore biologico: metanolo

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

- **8.2 Controlli dell'esposizione**

- **Mezzi protettivi individuali:**

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

- Tenere lontano da cibo, bevande e foraggi.
- Togliere immediatamente gli abiti contaminati.
- Lavarsi le mani prima dell'intervallo o a lavoro terminato.
- Custodire separatamente l'equipaggiamento protettivo.

- **Maschera protettiva:**

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

- **Guanti protettivi:**



Guanti protettivi

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*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:** Aromatico

· **Soglia olfattiva:** Non definito.

· **valori di pH:** Non definito.

· **Cambiamento di stato**

**Temperatura di fusione/ambito di fusione:** Non definito.

**Temperatura di ebollizione/ambito di ebollizione:** 79 °C

· **Punto di infiammabilità:** 14 °C

· **Infiammabilità (solido, gassoso):** Non applicabile.

· **Temperatura di accensione:** 425 °C

· **Temperatura di decomposizione:** Non definito.

· **Autoaccensione:** Prodotto non autoinfiammabile.

· **Pericolo di esplosione:** Prodotto non è esplosivo, è tuttavia possibile la formazione di miscele di vapori/aria esplosive.

· **Limiti di infiammabilità:**

**Inferiore:** 3.5 Vol %

**Superiore:** 15.0 Vol %

· **Tensione di vapore a 20 °C:** 59 hPa

· **Densità a 20 °C:** 0.7905 g/cm<sup>3</sup>

· **Densità relativa** Non definito.

· **Densità del vapore** Non definito.

· **Velocità di evaporazione** Non definito.

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· <b>Solubilità in/Miscibilità con acqua:</b>	Completamente miscibile.
· <b>Coefficiente di distribuzione (n-Octanol/acqua):</b>	Non definito.
· <b>Viscosità:</b>	
<b>Dinamica:</b>	Non definito.
<b>Cinematica:</b>	Non definito.
· <b>Tenore del solvente:</b>	
<b>Solventi organici:</b>	95,3 %
<b>Acqua:</b>	4,7 %
<b>VOC (CE)</b>	95,33 %
· <b>9.2 Altre informazioni</b>	Non sono disponibili altre informazioni.

### SEZIONE 10: Stabilità e reattività

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

### SEZIONE 11: Informazioni tossicologiche

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

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

#### 67-56-1 metanolo

Orale	LD50	5628 mg/kg (rat)
Cutaneo	LD50	15800 mg/kg (rabbit)

- **Irritabilità primaria:**
- **Corrosione/irritazione cutanea** Basandosi sui dati disponibili i criteri di classificazione non sono soddisfatti.
- **Lesioni oculari gravi/irritazioni oculari gravi**  
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**  
Può provocare il cancro.
- **Tossicità per la riproduzione**  
Sospettato di nuocere alla fertilità o al feto.
- **Tossicità specifica per organi bersaglio (STOT) - esposizione singola**  
Può provocare danni agli organi.
- **Tossicità specifica per organi bersaglio (STOT) - esposizione ripetuta**  
Basandosi sui dati disponibili i criteri di classificazione non sono soddisfatti.

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· **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.
- **Imballaggi non puliti:**
- **Consigli:** Smaltimento in conformità con le disposizioni amministrative.
- **Detergente consigliato:** Acqua eventualmente con l'aggiunta di detersivi.

### SEZIONE 14: Informazioni sul trasporto

- |   |  |
|---|--|
| · <b>14.1 Numero ONU</b><br>· <b>ADR, IMDG, IATA</b>  | UN1170   |
| · <b>14.2 Nome di spedizione dell'ONU</b><br>· <b>ADR</b><br>· <b>IMDG</b><br>· <b>IATA</b> | 1170 ETANOLO IN SOLUZIONE (ALCOL ETILICO IN SOLUZIONE)<br>ETHANOL SOLUTION (ETHYL ALCOHOL SOLUTION)<br>Ethanol solutions |
| · <b>14.3 Classi di pericolo connesso al trasporto</b><br>· <b>ADR, IMDG, IATA</b>          |  |
|          |  |
| · <b>Classe</b><br>· <b>Etichetta</b>   | 3 Liquidi infiammabili<br>3  |
| · <b>14.4 Gruppo di imballaggio</b><br>· <b>ADR, IMDG, IATA</b>                             | II   |
| · <b>14.5 Pericoli per l'ambiente:</b>  | Non applicabile.   |

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<ul style="list-style-type: none"> <li>· <b>14.6 Precauzioni speciali per gli utilizzatori</b>      <i>Attenzione: Liquidi infiammabili</i></li> <li>· <b>Numero Kemler:</b>      33</li> <li>· <b>Numero EMS:</b>      F-E,S-D</li> <li>· <b>Stowage Category</b>      A</li> </ul>	
<ul style="list-style-type: none"> <li>· <b>14.7 Trasporto di rinfuse secondo l'allegato II di MARPOL ed il codice IBC</b>      <i>Non applicabile.</i></li> </ul>	
<p>· <b>Trasporto/ulteriori indicazioni:</b></p> <hr style="border-top: 1px dashed black;"/>	
<ul style="list-style-type: none"> <li>· <b>ADR</b></li> <li>· <b>Quantità limitate (LQ)</b>      1L</li> <li>· <b>Quantità esenti (EQ)</b>      <i>Codice: E2</i> <i>Quantità massima netta per imballaggio interno: 30 ml</i> <i>Quantità massima netta per imballaggio esterno: 500 ml</i></li> <li>· <b>Categoria di trasporto</b>      2</li> <li>· <b>Codice di restrizione in galleria</b>      D/E</li> </ul> <hr style="border-top: 1px dashed black;"/>	
<ul style="list-style-type: none"> <li>· <b>IMDG</b></li> <li>· <b>Limited quantities (LQ)</b>      1L</li> <li>· <b>Excepted quantities (EQ)</b>      <i>Code: E2</i> <i>Maximum net quantity per inner packaging: 30 ml</i> <i>Maximum net quantity per outer packaging: 500 ml</i></li> </ul>	
<ul style="list-style-type: none"> <li>· <b>UN "Model Regulation":</b>      <i>UN 1170 ETANOLO IN SOLUZIONE (ALCOL ETILICO IN SOLUZIONE), 3, II</i></li> </ul>	

### 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 metanolo**
- **Categoria Seveso P5c LIQUIDI INFIAMMABILI**
- **Quantità limite (tonnellate) ai fini dell'applicazione dei requisiti di soglia inferiore 5.000 t**
- **Quantità limite (tonnellate) ai fini dell'applicazione dei requisiti di soglia superiore 50.000 t**
- **Disposizioni nazionali:**
- **Indicazioni relative alla limitazione delle attività lavorative:**  
*Il personale non deve essere esposto alle sostanze cancerogene contenute in questo preparato L'autorità può ammettere nei singoli casi delle eccezioni.*
- **Istruzione tecnica aria:**

Classe	quota in %
NC	95,3
- **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.*

- **Frasi rilevanti**  
*H225 Liquido e vapori facilmente infiammabili.*

(continua a pagina 9)

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

Stampato il: 31.12.2015

Revisione: 31.12.2015

**Denominazione commerciale: ETHYL ALCOHOL, DENATURED**

(Segue da pagina 8)

*H302 Nocivo se ingerito.**H304 Può essere letale in caso di ingestione e di penetrazione nelle vie respiratorie.**H312 Nocivo per contatto con la pelle.**H315 Provoca irritazione cutanea.**H332 Nocivo se inalato.**H336 Può provocare sonnolenza o vertigini.**H361f Sospettato di nuocere alla fertilità**H370 Provoca danni agli organi.**H373 Può provocare danni agli organi in caso di esposizione prolungata o ripetuta.**H411 Tossico per gli organismi acquatici con effetti di lunga durata.***· Abbreviazioni e acronimi:***ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)**IMDG: International Maritime Code for Dangerous Goods**IATA: International Air Transport Association**GHS: Globally Harmonised System of Classification and Labelling of Chemicals**EINECS: European Inventory of Existing Commercial Chemical Substances**ELINCS: European List of Notified Chemical Substances**CAS: Chemical Abstracts Service (division of the American Chemical Society)**VOC: Volatile Organic Compounds (USA, EU)**LC50: Lethal concentration, 50 percent**LD50: Lethal dose, 50 percent**PBT: Persistent, Bioaccumulative and Toxic**vPvB: very Persistent and very Bioaccumulative**Flam. Liq. 2: Flammable liquids, Hazard Category 2**Acute Tox. 4: Acute toxicity, Hazard Category 4**Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2**Carc. 1A: Carcinogenicity, Hazard Category 1A**Repr. 2: Reproductive toxicity, Hazard Category 2**Repr. 2: Reproductive toxicity, Hazard Category 2**STOT SE 1: Specific target organ toxicity - Single exposure, Hazard Category 1**STOT SE 2: Specific target organ toxicity - Single exposure, Hazard Category 2**STOT SE 3: Specific target organ toxicity - Single exposure, Hazard Category 3**STOT RE 2: Specific target organ toxicity - Repeated exposure, Hazard Category 2**Asp. Tox. 1: Aspiration hazard, Hazard Category 1**Aquatic Chronic 2: Hazardous to the aquatic environment - Chronic Hazard, Category 2*

IT

# 안전지침서

## 제31조의 1907/2006/EC에 따라

기압점: 2015.12.31

개정: 2015.12.31

### 1 화학제품과 회사에 관한 정보

- **제품 식별자**
- **제품명: ETHYL ALCOHOL, DENATURED**
- **상품번호: 15050, 15051**
- **해당 순물질이나 혼합물의 관련 하위용도 및 사용금지용도** 추가적인 정보가 존재하지 않습니다.
- **제품의 권고 용도와 사용상의 제한: 실험실 화학품**
- **안전데이터표(Safety Data Sheet)내 공급업체 관련 상세 정보**
- **제조사/수입자/유통업자 정보:**  
 Electron Microscopy Sciences  
 1560 Industry Road  
 USA-Hatfield, PA 19440  
 Tel: 215-412-8400 Fax: 215-412-8450  
 email: sgkcck@aol.com  
 www.emsdiasum.com
- **Samchang Commercial Co., Ltd.**  
 Yeo Eui Do  
 PO Box 1110  
 Seoul, Korea  
 Tel: 82 2 703 3040  
 Fax: 82 2 717 3298
- **추가적인 정보 획득 가능: Product safety department**
- **비상연락 전화번호:**  
 ChemTrec 1-800-424-9300 Contract CCN7661  
 1-703-527-3887

### 2 유해성.위험성

- **순물질 또는 혼합물의 분류**



화염

인화성 액체 구분2          H225 고인화성 액체 및 증기



건강에 위험

발암성 구분1A          H350 암을 일으킬 수 있음  
 생식 독성 구분2          H361 태아 또는 생식능력에 손상을 일으킬 것으로 의심됨  
 표적장기-1회노출 구분2 H371 신체 중에 손상을 일으킬 수 있음

- **라벨표기 요소**
- **GHS 라벨 요소**  
 본 제품은 화학물질의 분류 및 표기에 관한 국제조화시스템(GHS)에 따라 분류 및 표기되었습니다.
- **그림문자**



GHS02    GHS08

- **신호어 위험**

(2 쪽에 계속)

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기압점: 2015.12.31

개정: 2015.12.31

**제품명: ETHYL ALCOHOL, DENATURED**

(1 쪽부터계속)

**· 상표상에명확히위험성이표시된성분:**

Methyl Alcohol

**· 유해.위험 문구**

- 고인화성 액체 및 증기
- 암을 일으킬 수 있음
- 태아 또는 생식능력에 손상을 일으킬 것으로 의심됨
- 신체 중에 손상을 일으킬 수 있음

**· 예방조치 문구**

- 열·스파크·화염·고열로부터 멀리하시오 - 금연
- 폭발 방지용 전기·환기·조명·장비를 사용하시오.
- (분진·흙·가스·미스트·증기·스프레이)를(을) 흡입하지 마시오.
- 피부(모발)에 접촉 시: 모든 오염된 옷을 즉시 벗으시오 피부를 물/샤워로 헹구시오.
- 잠금장치가 있는 저장장소에 저장하시오.
- 현지/지역/국가/국제 규정에 따라서 내용물/용기 노출

**· 기타 유해성**

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

### 3 구성성분의 명칭 및 함유량

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

**· 위험 요소:**

64-17-5	Ethyl Alcohol, Absolute, 200 Proof Reagent, ACS (Ethanol) 15055 ⚠ 인화성 액체 구분2, H225	50-100%
67-56-1	Methyl Alcohol ⚠ 인화성 액체 구분2, H225; ⚠ 표적장기-1회노출 구분1, H370; ⚠ 급성독성(경구) 구분4, H302; 급성독성(경피) 구분4, H312; 급성독성(흡입) 구분4, H332; 심각한손상/자극성 구분2, H319	2,5-10%
110-54-3	n-hexane ⚠ 인화성 액체 구분2, H225; ⚠ 생식독성 구분2, H361; 표적장기-반복노출 구분2, H373; 흡인유해성 구분1, H304; ⚠ 수생환경유해성-만성 구분2, H411; ⚠ 피부부식성/자극성 구분2, H315; 표적장기-1회노출 구분3, H336	≤ 2,5%

### 4 응급조치 요령

**· 응급조치요령 내용**

**· 일반적 정보:**

중독 증상은 몇 시간이 지난 뒤에 발생할 수 있다. 따라서 사고가 발생한 후에 적어도 48 시간동안은 의료진의 관찰을 받아야 한다.

**· 흡입했을 때:**

신선한 공기를 쐬고, 필요할 경우에는 산소호흡기의 도움을 받는다. 환자를 따뜻하게 하고, 증상이 지속될 경우에는 의료진의 도움을 구한다.

환자가 의식을 잃었을 경우에는 안전한 자세에서 환자를 운반한다.

**· 피부에 접촉했을 때:** 일반적으로 이 제품은 피부에 자극적이지 않다.

**· 눈에 들어갔을 때:** 흐르는 물에 눈을 몇분동안 씻어낸다.

**· 먹었을 때:** 증상이 지속될 경우에는 의사와 상담한다.

(3 쪽에계속)

# 안전지침서

## 제31조의 1907/2006/EC에 따라

기압점: 2015.12.31

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**제품명: ETHYL ALCOHOL, DENATURED**

(2 쪽부터계속)

- 기타 의사의 주의사항:
- 가장 중요한 급·만성 중상 및 영향 추가적인 정보가 존재하지 않습니다.
- 즉각적인 의료처치 및 특별치료가 필요함을 시사하는 징후 추가적인 정보가 존재하지 않습니다.

### 5 폭발·화재시 대처방법

- 소화제
- 적절한 소화제:
  - 이산화탄소, 진화용 석회 가루 또는 물 방사를 사용하고, 더 큰 화재는 물을 분사 하거나 알코올 이함유된 거품으로 끈다.
- 본 화학물질이나 혼합물에서 발생하는 특별 유해성 추가적인 정보가 존재하지 않습니다.
- 소방관에 대한 권고사항
- 화재 진압 시 착용할 보호구 및 예방조치: 호흡보호장비설치.

### 6 누출 사고 시 대처방법

- 개인적 예방조치, 보호장비 및 응급처치 절차 안전장비 착용하고, 무방비의 사람은 격리시킨다.
- 환경 관련 예방조치:
  - 많은 물로 희석 시킨다.
  - 하수도망/해수면위의물/지하수로도달하지않게한다.
- 밀폐 및 정화 방법과 소재:
  - 액체가 혼합된 물질(모래, 규조토, 산성 결합물, 일반 결합물, 톱밥)에 흡입되도록 한다.
  - 항목 13에 따라 오염된 물질을 쓰레기로 처분한다.
  - 충분한 환기가 되도록 한다.
- 타 섹션 참조
  - 안전 관리에 대한 정보는 제7 장 을 참고하시오.
  - 개인 보호 장비에 대한 정보는 제8 장 을 참고하시오.
  - 쓰레기 처리에 대한 정보는 제13 장 을 참고하시오.

### 7 취급 및 저장방법

- 취급:
  - 안전 취급을 위한 예방조치
    - 작업장에서는통풍이잘되고/습기제거가잘되게주의한다.
    - 조심스럽게용기를 개봉하거나취급한다.
    - 연무질이형성되는것을피한다.
- 화재 및 폭발 사고 예방대책에 관한 정보:
  - 발화요소는 멀리둔다.금연.
  - 열로부터보호한다.
  - 정전기의 충전으로부터 보호한다.
  - 호흡보호장비를항상비치한다.
- 혼합위험성 등 안전 저장 조건
- 보관:
  - 안전한 저장 방법: 차가운 장소에 보관한다.
  - 하나의 공동 보관 시설에 대한 보관 관련 정보: 필요없음
  - 보관 조건에 관한 추가적인 정보:
    - 용기를새지않게밀폐한채보관한다.
    - 밀폐된 용기속에서늘하고건조하게보관한다.
    - 열이나직사광선으로부터보호한다.

(4 쪽에계속)

# 안전지침서

## 제31조의 1907/2006/EC에 따라

기압점: 2015.12.31

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**제품명: ETHYL ALCOHOL, DENATURED**

(3 쪽부터계속)

· **구체적 최종 사용자** 추가적인 정보가 존재하지 않습니다.

### 8 노출방지 및 개인보호구

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

· **통제 변수**

· **화학물질의 노출기준, 생물학적 노출기준 등:**

**64-17-5 Ethyl Alcohol, Absolute, 200 Proof  
Reagent, ACS (Ethanol)  
15055**

TLV (KR)	장기간의값: 1900 mg/m <sup>3</sup> , 1000 ppm
PEL (US)	장기간의값: 1900 mg/m <sup>3</sup> , 1000 ppm
REL (US)	장기간의값: 1900 mg/m <sup>3</sup> , 1000 ppm
TLV (US)	단기간의값: 1880 mg/m <sup>3</sup> , 1000 ppm

**67-56-1 Methyl Alcohol**

TLV (KR)	단기간의값: 310 mg/m <sup>3</sup> , 250 ppm 장기간의값: 260 mg/m <sup>3</sup> , 200 ppm Skin
IOELV (EU)	장기간의값: 260 mg/m <sup>3</sup> , 200 ppm Skin
PEL (US)	장기간의값: 260 mg/m <sup>3</sup> , 200 ppm
REL (US)	단기간의값: 325 mg/m <sup>3</sup> , 250 ppm 장기간의값: 260 mg/m <sup>3</sup> , 200 ppm Skin
TLV (US)	단기간의값: 328 mg/m <sup>3</sup> , 250 ppm 장기간의값: 262 mg/m <sup>3</sup> , 200 ppm Skin; BEI

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

· **노출 통제**

· **개인 보호구**

· **일반적보호조치및위생조치:**

· 식료품, 음료수와 사료로부터 멀리 떨어져 두어 놓는다.

· 더러워지거나 음료수가 묻은 옷은 즉시 탈의한다.

· 휴식 전 이 나 작업이 끝날때마다 손을 씻는다.

· 방호복은 따로 보관한다.

· **호흡기 보호:**

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

· **손 보호:**



보호용 장갑

· 장갑재질은제품 / 원료 / 조제를투과시키지않아야하고, 내구성이있어야한다.

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

· 투과 시간, 침투율과 저하를 고려해서 장갑 재료를 선택한다.

(5 쪽에계속)

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**제품명: ETHYL ALCOHOL, DENATURED**

(4 쪽부터계속)

- **장갑 의재료**  
적합한장갑의선정은재질차이뿐만아니라품질기준의차이도고려하여이루어져야하고제조업종에따라서도다르게선정되어야한다. 제품은다양한재료로부터의조제로이루어지는것이기때문에, 장갑재질의안정성은사전에예측되어질수있는것이아니고, 반드시사용전에 (그안전성이) 체크되어져야한다.
- **장갑 재료 의 투과시간** 정확한관통시간은보호장갑제조자에의하여인지되고, 준수되어야한다.
- **눈 보호:**



꼭조이는보안경

### 9 물리화학적 특성

· **기본 물리 및 화학적 특성에 대한 정보**

· **일반정보**

· **외형**

· 물리적 상태:	액체
· 색:	색소가없는
· 냄새:	향기있는
· 후각역치	알맞지않다.

· pH: 알맞지않다.

· **상태변화**

· 녹는점/어는점:	맞지않는
· 초기 끓는점과 끓는점 범위:	79 °C

· 인화점: 14 °C

· 인화성(고체, 기체): 해당사항 없음.

· 점화온도: 425 °C

· 분해 온도: 알맞지않다.

· 자기점화: 이제품은자연발화성이없다.

· 폭발위험: 이제품은폭발위험성이없지만, 폭발가능성이있는증기화합물/공기화합물의형성가능성이있다.

· **인화 또는 폭발 범위의 상한/하한**

· 아래로:	3.5 Vol %
· 위로:	15.0 Vol %

· 증기압 의경우 20 °C: 59 hPa

· 밀도 의경우 20 °C: 0.7905 g/cm<sup>3</sup>

· 비중: 알맞지않다.

· 증기밀도: 알맞지않다.

· 증발 속도: 알맞지않다.

· **용해도:**

· 물: 완전히혼합할수있는

· n 옥탄올/물 분배계수: 알맞지않다.

· **점도:**

· 역학적: 알맞지않다.

(6 쪽에계속)

# 안전지침서

## 제31조의 1907/2006/EC에 따라

기압점: 2015.12.31

개정: 2015.12.31

**제품명: ETHYL ALCOHOL, DENATURED**

(5 쪽부터계속)

<b>등점성:</b>	알맞지않다.
<b>· 용매내용물</b>	
<b>유기용매:</b>	95.3 %
<b>물:</b>	4.7 %
<b>VOC (EU)</b>	95.33 %
<b>· 기타 정보</b>	추가적인 정보가 존재하지 않습니다.

### 10 안정성 및 반응성

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

### 11 독성에 관한 정보

- 독성학적 영향에 대한 정보
- 급성 독성:

· LD/LC50-수치에 따른 분류:		
67-56-1 Methyl Alcohol		
구강의	LD50	5628 mg/kg (rat)
피부의	LD50	15800 mg/kg (rabbit)

- 일차적 자극 효과:
- 피부 부식성 또는 자극성: 무자극
- 심한 눈 손상 또는 자극성: 무자극.
- 감각화: 민감한영향이없는것으로알려져있다.
- 추가적인 독성에 관한 정보:  
이제품은유럽공동체의공동분류원칙의합법적인절차에근거하여최근에발효된원고에서아래위험들의사전준비에대하여제시하고있다.  
건강에해로운  
암을유발하는
- 다음 종류의 잠재적인 효과에 대한 정보
- CMR-효과 (암 유발, 돌연변이성 그리고 생식 독성)  
발암성 구분1A, 생식 독성 구분2

### 12 환경에 미치는 영향

- 독성
- 수생독성: 추가적인 정보가 존재하지 않습니다.
- 지속성 및 분해성 추가적인 정보가 존재하지 않습니다.
- 환경 시스템에서의 행동:
- 생물농축 잠재성 추가적인 정보가 존재하지 않습니다.
- 토양내 이동성 추가적인 정보가 존재하지 않습니다.
- 추가적인 생태학 정보:
- 일반 특징:  
수질오염등급 1 (자체등급분류): 약하게수질오염이된

(7 쪽에계속)

# 안전지침서

## 제31조의 1907/2006/EC에 따라

기압점: 2015.12.31

개정: 2015.12.31

**제품명: ETHYL ALCOHOL, DENATURED**

(6 쪽부터계속)

- 희석시키지않은채대량으로지하수나, 하천으로그리고하수도망에도달하지않게한다.
- PBT(잔류성, 생물농축성, 독성 물질) 및 vPvB(고 잔류성, 고 생물농축성 물질) 평가 결과
- PBT(잔류성, 생물농축성, 독성 물질): 해당사항 없음.
- vPvB(고 잔류성, 고 생물농축성 물질): 해당사항 없음.
- 기타 부작용 추가적인 정보가 존재하지 않습니다.

### 13 폐기시 주의사항

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

### 14 운송에 필요한 정보

<ul style="list-style-type: none"> <li>· 유엔 번호</li> <li>· ADR, IMDG, IATA</li> </ul>	<p style="text-align: center;">UN1170</p>
<ul style="list-style-type: none"> <li>· UN 적정 선적명</li> <li>· ADR</li> <li>· IMDG</li> <li>· IATA</li> </ul>	<p>1170 ETHANOL SOLUTION (ETHYL ALCOHOL SOLUTION)</p> <p>ETHANOL SOLUTION (ETHYL ALCOHOL SOLUTION)</p> <p>Ethanol solutions</p>
<ul style="list-style-type: none"> <li>· 교통 위험 클래스</li> <li>· ADR, IMDG, IATA</li> </ul>	<div style="text-align: center;">  </div>
<ul style="list-style-type: none"> <li>· 등급</li> <li>· 위험물 라벨</li> </ul>	<p>3 발화성용액</p> <p>3</p>
<ul style="list-style-type: none"> <li>· 용기등급</li> <li>· ADR, IMDG, IATA</li> </ul>	<p style="text-align: center;">II</p>
<ul style="list-style-type: none"> <li>· 환경적 유해물질:</li> </ul>	<p>해당사항 없음.</p>
<ul style="list-style-type: none"> <li>· 이용자 특별 예방조치</li> <li>· 위험 코드:</li> <li>· EMS-번호:</li> <li>· Stowage Category</li> </ul>	<p>경고: 발화성용액</p> <p>33</p> <p>F-E,S-D</p> <p>A</p>
<ul style="list-style-type: none"> <li>· MARPOL73/78(선박으로부터의 해양오염방지협약) 부속서2 및 IBC Code(국제선적화물코드)에 따른 벌크(bulk) 운송</li> </ul>	<p>해당사항 없음.</p>

(8 쪽에계속)

# 안전지침서

## 제31조의 1907/2006/EC에 따라

기압점: 2015.12.31

개정: 2015.12.31

**제품명: ETHYL ALCOHOL, DENATURED**

(7 쪽부터계속)

**· 운 송/추가 정보:**

**· ADR**

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

**· 운송 구분**

· 터널 제한 코드 D/E

**· IMDG**

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

**· UN "모범 규제":**

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

### 15 법적 규제현황

**· 해당 순물질 또는 혼합물에 대한 안전, 보건 및 환경 규제/법률**

**· Korean Existing Chemical Inventory**

64-17-5	Ethyl Alcohol, Absolute, 200 Proof Reagent, ACS (Ethanol) 15055	KE-13217
67-56-1	Methyl Alcohol	KE-23193
108-10-1	4-methylpentan-2-one	KE-24725
141-78-6	ethyl acetate	KE-00047
110-54-3	n-hexane	KE-18626
108-88-3	toluene	KE-33936
7732-18-5	water, distilled, conductivity or of similar purity	KE-35400

**· GHS 라벨 요소**

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

**· 그림문자**



GHS02 GHS08

**· 신호어 위험**

**· 상표상에명확히위험성이표시된성분:**

Methyl Alcohol

**· 유해.위험 문구**

고인화성 액체 및 증기  
 암을 일으킬 수 있음  
 태아 또는 생식능력에 손상을 일으킬 것으로 의심됨  
 신체 중에 손상을 일으킬 수 있음

(9 쪽에계속)

# 안전지침서

## 제31조의 1907/2006/EC에 따라

기압점: 2015.12.31

개정: 2015.12.31

**제품명: ETHYL ALCOHOL, DENATURED**

(8 쪽부터계속)

**· 예방조치 문구**

열·스파크·화염·고열로부터 멀리하시오 – 금연  
 폭발 방지용 전기·환기·조명·장비를 사용하시오.  
 (분진·흙·가스·미스트·증기·스프레이)를(을) 흡입하지 마시오.  
 피부(모발)에 접촉 시: 모든 오염된 옷을 즉시 벗으시오 피부를 물/샤워로 헹구시오.  
 잠금장치가 있는 저장장소에 저장하시오.  
 현지/지역/국가/국제 규정에 따라서 내용물/용기 노출

**· 국내규정:**

**· 사용제한에 대한 정보:**

노동자들은이러한예방준비하에암을유발시키는성분을함유한위험물을버리지말아야한다. 개별적인경우에관청은예외를허가할수있다.

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

### 16 그 밖의 참고사항

이보고는우리지식에대한오늘날의상태에대하여평가하고있다, 하지만이보고서는생산특성에관한보증은기술하지않았으며계약적인법률관계에기반을두고있지도않다

· **최초 작성일자:** 2015.12.31

· **개정 횟수 및 최종 개정일자:** 1 / 2015.12.31

**· 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  
 인화성 액체 구분2: Flammable liquids, Hazard Category 2  
 급성 독성(경구) 구분4: Acute toxicity, Hazard Category 4  
 피부 부식성/자극성 구분2: Skin corrosion/irritation, Hazard Category 2  
 심한 눈 손상/자극성 구분2: Serious eye damage/eye irritation, Hazard Category 2  
 발암성 구분1A: Carcinogenicity, Hazard Category 1A  
 생식 독성 구분2: Reproductive toxicity, Hazard Category 2  
 표적장기-1회노출 구분1: Specific target organ toxicity - Single exposure, Hazard Category 1  
 표적장기-1회노출 구분2: Specific target organ toxicity - Single exposure, Hazard Category 2  
 표적장기-1회노출 구분3: Specific target organ toxicity - Single exposure, Hazard Category 3  
 표적장기-반복노출 구분2: Specific target organ toxicity - Repeated exposure, Hazard Category 2  
 흡인 유해성 구분1: Aspiration hazard, Hazard Category 1  
 수생환경유해성-만성 구분2: Hazardous to the aquatic environment - Chronic Hazard, Category 2

# Ficha de datos de seguridad

## según 1907/2006/CE, Artículo 31

fecha de impresión 31.12.2015

Revisión: 31.12.2015

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

#### · 1.1 Identificador del producto

· **Nombre comercial:** ETHYL ALCOHOL, DENATURED

· **Número del artículo:** 15050, 15051

#### · 1.2 Usos pertinentes identificados de la sustancia o de la mezcla y usos desaconsejados

No existen más datos relevantes disponibles.

· **Utilización del producto / de la elaboración** Sustancias químicas de laboratorio

#### · 1.3 Datos del proveedor de la ficha de datos de seguridad

##### · **Fabricante/distribuidor:**

Electron Microscopy Sciences

1560 Industry Road

USA-Hatfield, PA 19440

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

email: sgkcck@aol.com

www.emsdiasum.com

##### Aname

C/ Perez Galdos no. 2

28693 Quijorna

Madrid, Spain

Tel: +34.91.816.89.50

Fax: +34.91.816.85.94

email: ventas@aname.es

· **Área de información:** Product safety department

#### · 1.4 Teléfono de emergencia:

ChemTrec 1-800-424-9300 Contract CCN7661

1-703-527-3887

### SECCIÓN 2: Identificación de los peligros

#### · 2.1 Clasificación de la sustancia o de la mezcla

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



GHS02 llama

Flam. Liq. 2 H225 Líquido y vapores muy inflamables.



GHS08 peligro para la salud

Carc. 1A H350 Puede provocar cáncer.

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

STOT SE 2 H371 Puede provocar daños en los órganos.



GHS07

Acute Tox. 4 H332 Nocivo en caso de inhalación.

#### · 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.

( se continua en página 2 )

# Ficha de datos de seguridad

## según 1907/2006/CE, Artículo 31

fecha de impresión 31.12.2015

Revisión: 31.12.2015

Nombre comercial: **ETHYL ALCOHOL, DENATURED**

( se continua en página 1 )

· **Pictogramas de peligro**

GHS02 GHS07 GHS08

· **Palabra de advertencia Peligro**· **Componentes peligrosos a indicar en el etiquetaje:**

metanol

· **Indicaciones de peligro**

H225 Líquido y vapores muy inflamables.

H332 Nocivo en caso de inhalación.

H350 Puede provocar cáncer.

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

H371 Puede provocar daños en los órganos.

· **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.

P260 No 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.

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

### SECCIÓN 3: Composición/información sobre los componentes

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

CAS: 64-17-5 EINECS: 200-578-6	etanol Flam. Liq. 2, H225	50-100%
CAS: 67-56-1 EINECS: 200-659-6	metanol Flam. Liq. 2, H225; STOT SE 1, H370; Acute Tox. 4, H302; Acute Tox. 4, H312; Acute Tox. 4, H332; Skin Irrit. 2, H315	2,5-10%
CAS: 110-54-3 EINECS: 203-777-6	n-hexano Flam. Liq. 2, H225; Repr. 2, H361f; STOT RE 2, H373; Asp. Tox. 1, H304; Aquatic Chronic 2, H411; Skin Irrit. 2, H315; STOT SE 3, H336	≤ 2,5%

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

( se continua en página 3 )

ES

# Ficha de datos de seguridad

## según 1907/2006/CE, Artículo 31

fecha de impresión 31.12.2015

Revisión: 31.12.2015

Nombre comercial: **ETHYL ALCOHOL, DENATURED**

( se continua en página 2 )

### 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; eventualmente hacer respiración artificial, calor. Si los trastornos persisten, consultar al médico.

Las personas desmayadas deben tenderse y transportarse de lado con la suficiente estabilidad.

##### · 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 un médico si los trastornos persisten.

#### · 4.2 Principales síntomas y efectos, agudos y retardados No existen más datos relevantes disponibles.

#### · 4.3 Indicación de toda atención médica y de los tratamientos especiales que deban dispensarse inmediatamente

No existen más datos relevantes disponibles.

### SECCIÓN 5: Medidas de lucha contra incendios

#### · 5.1 Medios de extinción

##### · Sustancias extintoras apropiadas:

CO<sub>2</sub>, polvo extintor o chorro de agua rociada. Combatir incendios mayores con chorro de agua rociada o espuma resistente al alcohol.

#### · 5.2 Peligros específicos derivados de la sustancia o la mezcla No existen más datos relevantes disponibles.

#### · 5.3 Recomendaciones para el personal de lucha contra incendios

##### · Equipo especial de protección: Colocarse la protección respiratoria.

### SECCIÓN 6: Medidas en caso de vertido accidental

#### · 6.1 Precauciones personales, equipo de protección y procedimientos de emergencia

Llevar puesto equipo de protección. Mantener alejadas las personas sin protección.

#### · 6.2 Precauciones relativas al medio ambiente:

Diluir con mucha agua.

Evitar que penetre en la canalización /aguas de superficie /agua subterráneas.

#### · 6.3 Métodos y material de contención y de limpieza:

Quitar con material absorbente (arena, kieselgur, aglutinante de ácidos, aglutinante universal, aserrín).

Desechar el material contaminado como vertido según ítem 13.

Asegurar suficiente ventilación.

#### · 6.4 Referencia a otras secciones

Ver capítulo 7 para mayor información sobre una manipulación segura.

Ver capítulo 8 para mayor información sobre el equipo personal de protección.

Para mayor información sobre cómo desechar el producto, ver capítulo 13.

### SECCIÓN 7: Manipulación y almacenamiento

#### · 7.1 Precauciones para una manipulación segura

Asegurar suficiente ventilación /aspiración en el puesto de trabajo.

Abrir y manejar el recipiente con cuidado.

Evitar la formación de aerosoles.

#### · Prevención de incendios y explosiones:

Mantener alejadas las fuentes de encendido. No fumar.

( se continua en página 4 )

# Ficha de datos de seguridad

## según 1907/2006/CE, Artículo 31

fecha de impresión 31.12.2015

Revisión: 31.12.2015

Nombre comercial: **ETHYL ALCOHOL, DENATURED**

( se continua en página 3 )

Proteger del calor.

Tomar medidas contra las cargas electrostáticas.

Tener preparados los aparatos respiratorios.

· **7.2 Condiciones de almacenamiento seguro, incluidas posibles incompatibilidades**

· **Almacenamiento:**

· **Exigencias con respecto al almacén y los recipientes:** Almacenar en un lugar fresco.

· **Normas en caso de un almacenamiento conjunto:** No es necesario.

· **Indicaciones adicionales sobre las condiciones de almacenamiento:**

Mantener el recipiente cerrado herméticamente.

Almacenarlo en envases bien cerrados en un lugar fresco y seco.

Proteger del calor y de la luz directa del sol.

· **7.3 Usos específicos finales** No existen más datos relevantes disponibles.

### SECCIÓN 8: Controles de exposición/protección individual

· **Instrucciones adicionales para el acondicionamiento de instalaciones técnicas:**

Sin datos adicionales, ver punto 7.

· **8.1 Parámetros de control**

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

**64-17-5 etanol**

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

**67-56-1 metanol**

LEP	Valor de larga duración: 266 mg/m <sup>3</sup> , 200 ppm
vía dérmica, VLB, VLI	

· **Componentes con valores límite biológicos:**

**67-56-1 metanol**

VLB	15 mg/l
Muestra:	orina
Momento de Muestero:	Final de la jornada laboral
Indicador Biológico:	Metanol

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

· **8.2 Controles de la exposición**

· **Equipo de protección individual:**

· **Medidas generales de protección e higiene:**

Mantener alejado de alimentos, bebidas y alimentos para animales.

Quitarse de inmediato la ropa ensuciada o impregnada.

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

Guardar la ropa protectora por separado.

· **Protección respiratoria:**

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

· **Protección de manos:**



Guantes de protección

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

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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:** Aromático

· **Umbral olfativo:** No determinado.

· **valor pH:** No determinado.

· **Cambio de estado**

· **Punto de fusión /campo de fusión:** Indeterminado.

· **Punto de ebullición /campo de ebullición:** 79 °C

· **Punto de inflamación:** 14 °C

· **Inflamabilidad (sólido, gaseiforme):** No aplicable.

· **Temperatura de ignición:** 425 °C

· **Temperatura de descomposición:** No determinado.

· **Autoinflamabilidad:** El producto no es autoinflamable.

· **Peligro de explosión:** El producto no es explosivo; sin embargo, pueden formarse mezclas explosivas de vapor / aire.

· **Límites de explosión:**

· **Inferior:** 3.5 Vol %

· **Superior:** 15.0 Vol %

· **Presión de vapor a 20 °C:** 59 hPa

· **Densidad a 20 °C:** 0.7905 g/cm<sup>3</sup>

· **Densidad relativa** No determinado.

· **Densidad de vapor** No determinado.

· **Velocidad de evaporación** No determinado.

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- |  |  |
|--|--|
| · <b>Solubilidad en / miscibilidad con agua:</b>   | Completamente mezclable.                     |
| · <b>Coefficiente de reparto (n-octanol/agua):</b> | No determinado.                              |
| · <b>Viscosidad:</b>                               |  |
| <b>Dinámica:</b>                                   | No determinado.                              |
| <b>Cinemática:</b>                                 | No determinado.                              |
| · <b>Concentración del disolvente:</b>             |  |
| <b>Disolventes orgánicos:</b>                      | 95,3 %                                       |
| <b>Agua:</b>                                       | 4,7 %  |
| <b>VOC (CE)</b>                                    | 95,33 %                                      |
| · <b>9.2 Otros datos</b>                           | No existen más datos relevantes disponibles. |

### SECCIÓN 10: Estabilidad y reactividad

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

### SECCIÓN 11: Información toxicológica

- **11.1 Información sobre los efectos toxicológicos**
- **Toxicidad aguda**  
Nocivo en caso de inhalación.

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

#### 67-56-1 metanol

Oral	LD50	5628 mg/kg (rat)
Dermal	LD50	15800 mg/kg (rabbit)

- **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**  
Puede provocar cáncer.
- **Toxicidad para la reproducción**  
Se sospecha que perjudica la fertilidad o daña al feto.
- **Toxicidad específica en determinados órganos (STOT) – exposición única**  
Puede provocar daños en los órganos.
- **Toxicidad específica en determinados órganos (STOT) – exposición repetida**  
A la vista de los datos disponibles, no se cumplen los criterios de clasificación.

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· **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.
- **Embalajes sin limpiar:**
- **Recomendación:** Eliminar conforme a las disposiciones oficiales.
- **Producto de limpieza recomendado:** Agua, eventualmente añadiendo productos de limpieza.

### SECCIÓN 14: Información relativa al transporte

- **14.1 Número ONU**
- **ADR, IMDG, IATA** UN1170
- **14.2 Designación oficial de transporte de las Naciones Unidas**
- **ADR** 1170 ETANOL EN SOLUCIÓN (ALCOHOL ETÍLICO EN SOLUCIÓN)
- **IMDG** ETHANOL SOLUTION (ETHYL ALCOHOL SOLUTION)
- **IATA** Ethanol solutions
- **14.3 Clase(s) de peligro para el transporte**
- **ADR, IMDG, IATA**
- 
- **Clase** 3 Líquidos inflamables
- **Etiqueta** 3
- **14.4 Grupo de embalaje**
- **ADR, IMDG, IATA** II

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· <b>14.5 Peligros para el medio ambiente:</b>	No aplicable.
· <b>14.6 Precauciones particulares para los usuarios</b>	Atención: Líquidos inflamables
· <b>Número Kemler:</b>	33
· <b>Número EMS:</b>	F-E,S-D
· <b>Stowage Category</b>	A
· <b>14.7 Transporte a granel con arreglo al anexo II del Convenio MARPOL y el Código IBC</b>	No aplicable.
· <b>Transporte/datos adicionales:</b>	
· <b>ADR</b>	
· <b>Cantidades limitadas (LQ)</b>	1L
· <b>Cantidades exceptuadas (EQ)</b>	Código: E2 Cantidad neta máxima por envase interior: 30 ml Cantidad neta máxima por embalaje exterior: 500 ml
· <b>Categoría de transporte</b>	2
· <b>Código de restricción del túnel</b>	D/E
· <b>IMDG</b>	
· <b>Limited quantities (LQ)</b>	1L
· <b>Excepted quantities (EQ)</b>	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· <b>"Reglamentación Modelo" de la UNECE:</b>	UN 1170 ETANOL EN SOLUCIÓN (ALCOHOL ETÍLICO EN SOLUCIÓN), 3, II

### SECCIÓN 15: Información reglamentaria

- **15.1 Reglamentación y legislación en materia de seguridad, salud y medio ambiente específicas para la sustancia o la mezcla**
- **Directiva 2012/18/UE**
- **Sustancias peligrosas nominadas - ANEXO I metanol**
- **Categoría Seveso P5c LÍQUIDOS INFLAMABLES**
- **Cantidad umbral (toneladas) a efectos de aplicación de los requisitos de nivel inferior 5.000 t**
- **Cantidad umbral (toneladas) a efectos de aplicación de los requisitos de nivel superior 50.000 t**
- **Disposiciones nacionales:**
- **Indicaciones sobre las limitaciones de trabajo:**  
Los empleados no deben exponerse a las sustancias cancerígenas contenidas en el producto. En casos aislados las autoridades pueden hacer excepciones.
- **15.2 Evaluación de la seguridad química:** Una evaluación de la seguridad química no se ha llevado a cabo.

### SECCIÓN 16: Otra información

Los datos se fundan en el estado actual de nuestros conocimientos, pero no constituyen garantía alguna de cualidades del producto y no generan ninguna relación jurídica contractual.

- **Frasas relevantes**

H225 Líquido y vapores muy inflamables.

H302 Nocivo en caso de ingestión.

H304 Puede ser mortal en caso de ingestión y penetración en las vías respiratorias.

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*H312 Nocivo en contacto con la piel.**H315 Provoca irritación cutánea.**H332 Nocivo en caso de inhalación.**H336 Puede provocar somnolencia o vértigo.**H361f Se sospecha que perjudica a la fertilidad.**H370 Provoca daños en los órganos.**H373 Puede provocar daños en los órganos tras exposiciones prolongadas o repetidas.**H411 Tóxico para los organismos acuáticos, con efectos nocivos duraderos.***· Abreviaturas y acrónimos:***ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)**IMDG: International Maritime Code for Dangerous Goods**IATA: International Air Transport Association**GHS: Globally Harmonised System of Classification and Labelling of Chemicals**EINECS: European Inventory of Existing Commercial Chemical Substances**ELINCS: European List of Notified Chemical Substances**CAS: Chemical Abstracts Service (division of the American Chemical Society)**VOC: Volatile Organic Compounds (USA, EU)**LC50: Lethal concentration, 50 percent**LD50: Lethal dose, 50 percent**PBT: Persistent, Bioaccumulative and Toxic**vPvB: very Persistent and very Bioaccumulative**Flam. Liq. 2: Flammable liquids, Hazard Category 2**Acute Tox. 4: Acute toxicity, Hazard Category 4**Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2**Carc. 1A: Carcinogenicity, Hazard Category 1A**Repr. 2: Reproductive toxicity, Hazard Category 2**Repr. 2: Reproductive toxicity, Hazard Category 2**STOT SE 1: Specific target organ toxicity - Single exposure, Hazard Category 1**STOT SE 2: Specific target organ toxicity - Single exposure, Hazard Category 2**STOT SE 3: Specific target organ toxicity - Single exposure, Hazard Category 3**STOT RE 2: Specific target organ toxicity - Repeated exposure, Hazard Category 2**Asp. Tox. 1: Aspiration hazard, Hazard Category 1**Aquatic Chronic 2: Hazardous to the aquatic environment - Chronic Hazard, Category 2*