

# Safety Data Sheet

acc. to OSHA HCS

Printing date 04/26/2022

Reviewed on 04/26/2022

## 1 Identification

- **Product identifier**
- **Trade name:** CytoFix
- **Article number:** 22805-01, 22805-02
- **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

Substances and mixtures which, in contact with water, emit flammable gases 1

H260 In contact with water releases flammable gases, which may ignite spontaneously.



GHS08 Health hazard

Germ Cell Mutagenicity 1B  
Carcinogenicity 1A

H340 May cause genetic defects.

H350 May cause cancer.



GHS07

Eye Irritation 2A

H319 Causes serious eye irritation.

- **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:**  
Petroleum gases, liquefied, sweetened  
Ethyl alcohol

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- **Hazard statements**

*In contact with water releases flammable gases, which may ignite spontaneously.*

*Causes serious eye irritation.*

*May cause genetic defects.*

*May cause cancer.*

- **Precautionary statements**

*Obtain special instructions before use.*

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

*Do not allow contact with water.*

*Handle under inert gas. Protect from moisture.*

*Wash thoroughly after handling.*

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

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

*Continue rinsing.*

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

*Brush off loose particles from skin. Immerse in cool water/wrap in wet bandages.*

*If eye irritation persists: Get medical advice/attention.*

*In case of fire: Use CO<sub>2</sub>, sand, extinguishing powder to extinguish.*

*Store in a dry place. Store in a closed container.*

*Store locked up.*

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

- **Classification system:**

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



Health = 2

Fire = 0

Reactivity = 2

*The substance demonstrates unusual reactivity with water.*

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



Health = \*2

Fire = 0

Reactivity = 2

- **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:**

68476-86-8	Petroleum gases, liquefied, sweetened	>50-≤100%
64-17-5	Ethyl alcohol	>10-≤25%

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## 4 First-aid measures

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

## 5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:** Use fire fighting measures that suit the environment.
- **For safety reasons unsuitable extinguishing agents:** Water
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** No special measures required.

## 6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**  
Wear protective equipment. Keep unprotected persons away.
- **Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**  
Dispose contaminated material as waste according to item 13.  
Ensure adequate ventilation.  
Do not flush with water or aqueous cleansing agents
- **Reference to other sections**  
See Section 7 for information on safe handling.  
See Section 8 for information on personal protection equipment.  
See Section 13 for disposal information.
- **Protective Action Criteria for Chemicals**

· <b>PAC-1:</b>		
64-17-5	Ethyl alcohol	1,800 ppm
· <b>PAC-2:</b>		
64-17-5	Ethyl alcohol	3300* ppm
· <b>PAC-3:</b>		
64-17-5	Ethyl alcohol	15000* ppm

## 7 Handling and storage

- **Handling:**
- **Precautions for safe handling**  
Ensure good ventilation/exhaustion at the workplace.  
Open and handle receptacle with care.

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- **Information about protection against explosions and fires:**  
Keep ignition sources away - Do not smoke.  
Protect from heat.  
Keep respiratory protective device available.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:**  
Observe official regulations on storing packagings with pressurized containers.
- **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:**  
The following constituent is the only constituent of the product which has a PEL, TLV or other recommended exposure limit.  
At this time, the remaining constituent has no known exposure limits.

### 64-17-5 Ethyl alcohol

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: 1000 ppm
	A3

- **Additional information:** The lists that were valid during the creation were used as basis.
- **Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:**  
Keep away from foodstuffs, beverages and feed.  
Immediately remove all soiled and contaminated clothing.  
Wash hands before breaks and at the end of work.  
Store protective clothing separately.  
Avoid contact with the eyes.  
Avoid contact with the eyes and skin.
- **Breathing equipment:**  
In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.
- **Protection of hands:**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.  
Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

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

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- **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:** Clear

- **Odor:** Alcohol-like

- **Odor threshold:** Not determined.

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

- **Change in condition**

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

**Boiling point/Boiling range:** Not applicable, as aerosol.

- **Flash point:** Not applicable, as aerosol.

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

- **Ignition temperature:** 425 °C (797 °F)

- **Decomposition temperature:** Not determined.

- **Auto igniting:** Spontaneously flammable in air.

- **Danger of explosion:** Not determined.

- **Explosion limits:**

**Lower:** 3.5 Vol %

**Upper:** 15 Vol %

- **Vapor pressure at 20 °C (68 °F):** 59 hPa (44.3 mm Hg)

- **Density at 20 °C (68 °F):** 0.62554 g/cm<sup>3</sup> (5.22013 lbs/gal)

- **Relative density** Not determined.

- **Vapor density** Not determined.

- **Evaporation rate** Not applicable.

- **Solubility in / Miscibility with**

**Water:** Fully miscible.

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

- **Viscosity:**

**Dynamic:** Not determined.

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<b>Kinematic:</b>	Not determined.
<b>· Solvent content:</b>	
<b>Organic solvents:</b>	21.0 %
<b>Water:</b>	2.0 %
<b>VOC content:</b>	21.00 %
	133.0 g/l / 1.11 lb/gal
<b>Solids content:</b>	0.0 %
<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** Contact with water releases flammable gases.
- **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:**
- **Primary irritant effect:**
- **on the skin:** No irritant effect.
- **on the eye:** Irritating effect.
- **Sensitization:** No sensitizing effects known.
- **Additional toxicological information:**  
The product shows the following dangers according to internally approved calculation methods for preparations:  
Irritant  
Carcinogenic.  
The product can cause inheritable damage.

- **Carcinogenic categories**

· <b>IARC (International Agency for Research on Cancer)</b>	
64-17-5	Ethyl alcohol
	1
· <b>NTP (National Toxicology Program)</b>	
None of the ingredients is listed.	
· <b>OSHA-Ca (Occupational Safety Health Administration)</b>	
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.

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- **Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:**  
*Water hazard class 2 (Self-assessment): hazardous for water*  
*Do not allow product to reach ground water, water course or sewage system.*  
*Danger to drinking water if even small quantities leak into the ground.*
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

## 13 Disposal considerations

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

## 14 Transport information

<ul style="list-style-type: none"> <li>· <b>UN-Number</b></li> <li>· <b>DOT, ADR, IATA</b></li> <li>· <b>IMDG</b></li> </ul>	<p style="margin: 0;"><i>Void</i></p> <p style="margin: 0;"><i>UN1950</i></p>
<ul style="list-style-type: none"> <li>· <b>UN proper shipping name</b></li> <li>· <b>DOT, ADR, IATA</b></li> <li>· <b>IMDG</b></li> </ul>	<p style="margin: 0;"><i>Void</i></p> <p style="margin: 0;"><i>AEROSOLS</i></p>
<ul style="list-style-type: none"> <li>· <b>Transport hazard class(es)</b></li> <li>· <b>DOT, ADR, ADN, IATA</b></li> <li>· <b>Class</b></li> </ul>	<p style="margin: 0;"><i>Void</i></p>
<ul style="list-style-type: none"> <li>· <b>IMDG</b></li> </ul> <div style="text-align: center; margin: 10px 0;">  </div> <ul style="list-style-type: none"> <li>· <b>Class</b></li> <li>· <b>Label</b></li> </ul>	<p style="margin: 0;"><i>2.1 Gases</i></p> <p style="margin: 0;"><i>2.1</i></p>
<ul style="list-style-type: none"> <li>· <b>Packing group</b></li> <li>· <b>DOT, ADR, IATA</b></li> </ul>	<p style="margin: 0;"><i>Void</i></p>
<ul style="list-style-type: none"> <li>· <b>Environmental hazards:</b></li> </ul>	<p style="margin: 0;"><i>Not applicable.</i></p>
<ul style="list-style-type: none"> <li>· <b>Special precautions for user</b></li> <li>· <b>EMS Number:</b></li> </ul>	<p style="margin: 0;"><i>Not applicable.</i></p> <p style="margin: 0;"><i>F-D,S-U</i></p>

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<ul style="list-style-type: none"> <li>· <b>Stowage Code</b></li> <li>· <b>Segregation Code</b></li> </ul>	<p>SW1 Protected from sources of heat. SW22 For AEROSOLS with a maximum capacity of 1 litre: Category A. For AEROSOLS with a capacity above 1 litre: Category B. For WASTE AEROSOLS: Category C, Clear of living quarters.</p> <p>SG69 For AEROSOLS with a maximum capacity of 1 litre: Segregation as for class 9. Stow "separated from" class 1 except for division 1.4. For AEROSOLS with a capacity above 1 litre: Segregation as for the appropriate subdivision of class 2. For WASTE AEROSOLS: Segregation as for the appropriate subdivision of class 2.</p>
<ul style="list-style-type: none"> <li>· <b>Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code</b></li> </ul>	Not applicable.
<ul style="list-style-type: none"> <li>· <b>UN "Model Regulation":</b></li> </ul>	Void

## 15 Regulatory information

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

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

None of the ingredients is listed.

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

None of the ingredients is listed.

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

All components have the value ACTIVE.

- **Hazardous Air Pollutants**

None of the ingredients is listed.

- **Proposition 65**

- **Chemicals known to cause cancer:**

None of the ingredients is listed.

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

None of the ingredients is listed.

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

None of the ingredients is listed.

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

64-17-5 Ethyl alcohol

- **Carcinogenic categories**

- **EPA (Environmental Protection Agency)**

None of the ingredients is listed.

- **TLV (Threshold Limit Value)**

64-17-5 Ethyl alcohol

A3

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

None of the ingredients is listed.

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

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· **Hazard pictograms**



· **Signal word** *Danger*

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

*Petroleum gases, liquefied, sweetened*  
*Ethyl alcohol*

· **Hazard statements**

*In contact with water releases flammable gases, which may ignite spontaneously.*  
*Causes serious eye irritation.*  
*May cause genetic defects.*  
*May cause cancer.*

· **Precautionary statements**

*Obtain special instructions before use.*  
*Do not handle until all safety precautions have been read and understood.*  
*Do not allow contact with water.*  
*Handle under inert gas. Protect from moisture.*  
*Wash thoroughly after handling.*  
*Wear protective gloves/protective clothing/eye protection/face protection.*  
*If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.*  
*Continue rinsing.*  
*IF exposed or concerned: Get medical advice/attention.*  
*Brush off loose particles from skin. Immerse in cool water/wrap in wet bandages.*  
*If eye irritation persists: Get medical advice/attention.*  
*In case of fire: Use CO<sub>2</sub>, sand, extinguishing powder to extinguish.*  
*Store in a dry place. Store in a closed container.*  
*Store locked up.*  
*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.*

· **Contact:**

· **Date of preparation / last revision** 04/26/2022 / -

· **Abbreviations and acronyms:**

*ADR: Accord relatif au transport international 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*  
*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)*

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*HMIS: Hazardous Materials Identification System (USA)**VOC: Volatile Organic Compounds (USA, EU)**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******Substances and mixtures which, in contact with water, emit flammable gases 1: Substances and mixtures which in contact with water emit flammable gases – Category 1******Eye Irritation 2A: Serious eye damage/eye irritation – Category 2A******Germ Cell Mutagenicity 1B: Germ cell mutagenicity – Category 1B******Carcinogenicity 1A: Carcinogenicity – Category 1A***

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# Safety Data Sheet

## according to WHS Regulations

Printing date 26.04.2022

Revision: 26.04.2022

### 1 Identification

- **Product identifier**
- **Trade name:** CytoFix
- **Article number:** 22805-01, 22805-02
- **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](mailto:sgkcck@aol.com)  
[www.emsdiasum.com](http://www.emsdiasum.com)
- ProSciTech Pty Ltd  
11 Carlton Street, Kirwan QLD 4817 Australia  
Telephone Number: (07) 4773 9444 - 8:30am - 5:00pm, Monday to Friday (excluding Public Holidays)  
Emergency Contact: (07) 4773 9444 - 8:30am - 5:00pm, Monday to Friday (excluding Public Holidays)  
Website: [ems.proscitech.com](http://ems.proscitech.com)
- Emgrid Australia Pty. Ltd.  
P.O. Box 118  
The Patch VIC 3792  
Australia  
Tel: 03 9752 1785  
Fax: 03 9752 1784  
Website: [www.emgrid.com.au](http://www.emgrid.com.au)
- **Further information obtainable from:** Product safety department
- **Emergency telephone number:**  
ChemTrec 1-800-424-9300 Contract CCN7661  
1-703-527-3887

### 2 Hazard(s) Identification

- **Classification of the substance or mixture**



GHS02 flame

Water-react. 1 H260 In contact with water releases flammable gases which may ignite spontaneously.



GHS08 health hazard

Muta. 1B H340 May cause genetic defects.

Carc. 1A H350 May cause cancer.



GHS07

Eye Irritation 2A H319 Causes serious eye irritation.

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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:**  
*Petroleum gases, liquefied, sweetened*  
*Ethyl alcohol*
- **Hazard statements**  
*In contact with water releases flammable gases which may ignite spontaneously.*  
*Causes serious eye irritation.*  
*May cause genetic defects.*  
*May cause cancer.*
- **Precautionary statements**  
*Obtain special instructions before use.*  
*Do not handle until all safety precautions have been read and understood.*  
*Keep away from any possible contact with water, because of violent reaction and possible flash fire.*  
*Handle and store contents under inert gas. Protect from moisture.*  
*Wash thoroughly after handling.*  
*Wear protective gloves/protective clothing/eye protection/face protection.*  
*IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.*  
*Continue rinsing.*  
*IF exposed or concerned: Get medical advice/attention.*  
*Brush off loose particles from skin. Immerse in cool water/wrap in wet bandages.*  
*If eye irritation persists: Get medical advice/attention.*  
*In case of fire: Use CO<sub>2</sub>, sand, extinguishing powder for extinction.*  
*Store in a dry place. Store in a closed container.*  
*Store locked up.*  
*Dispose of contents/container in accordance with local/regional/national/international regulations.*
- **Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

### 3 Composition and Information on Ingredients

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

- **Dangerous components:**

68476-86-8	Petroleum gases, liquefied, sweetened	>50-≤100%
64-17-5	Ethyl alcohol	>10-≤25%

- **SVHC**

64-17-5	Ethyl alcohol	
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· **Additional information:** For the wording of the listed hazard phrases refer to section 16.

### 4 First Aid Measures

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

### 5 Fire Fighting Measures

- **Extinguishing media**
- **Suitable extinguishing agents:** Use fire extinguishing methods suitable to surrounding conditions.
- **For safety reasons unsuitable extinguishing agents:** Water
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** No special measures required.

### 6 Accidental Release Measures

- **Personal precautions, protective equipment and emergency procedures**  
Wear protective equipment. Keep unprotected persons away.
- **Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**  
Dispose contaminated material as waste according to item 13.  
Ensure adequate ventilation.  
Do not flush with water or aqueous cleansing agents
- **Reference to other sections**  
See Section 7 for information on safe handling.  
See Section 8 for information on personal protection equipment.  
See Section 13 for disposal information.

### 7 Handling and Storage

- **Handling:**
- **Precautions for safe handling**  
Ensure good ventilation/exhaustion at the workplace.  
Open and handle receptacle with care.
- **Information about fire - and explosion protection:**  
Keep ignition sources away - Do not smoke.  
Protect from heat.  
Keep respiratory protective device available.

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- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:**  
Observe official regulations on storing packagings with pressurised containers.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:**  
Keep container tightly sealed.  
Store in cool, dry conditions in well sealed receptacles.  
Protect from heat and direct sunlight.
- **Specific end use(s)** No further relevant information available.

### 8 Exposure controls and personal protection

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

· <b>Ingredients with limit values that require monitoring at the workplace:</b>
--

<b>64-17-5 Ethyl alcohol</b>
------------------------------

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

- **Additional information:** The lists valid during the making were used as basis.
- **Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:**  
Keep away from foodstuffs, beverages and feed.  
Immediately remove all soiled and contaminated clothing  
Wash hands before breaks and at the end of work.  
Store protective clothing separately.  
Avoid contact with the eyes.  
Avoid contact with the eyes and skin.
- **Respiratory protection:**  
In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.
- **Protection of hands:**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.  
Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.  
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

- **Material of gloves**

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

- **Penetration time of glove material**

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

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# Safety Data Sheet

## according to WHS Regulations

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Trade name: CytoFix

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· **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>	Clear
· <b>Odour:</b>	Alcohol-like
· <b>Odour threshold:</b>	Not determined.

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

· <b>Melting point/freezing point:</b>	Undetermined.
· <b>Initial boiling point and boiling range:</b>	Not applicable, as aerosol.

· **Flash point:** Not applicable, as aerosol.· **Flammability (solid, gas):** Not applicable.· **Ignition temperature:** 425 °C· **Decomposition temperature:** Not determined.· **Auto-ignition temperature:** Spontaneously flammable in air.· **Explosive properties:** Not determined.· **Explosion limits:**

· <b>Lower:</b>	3.5 Vol %
· <b>Upper:</b>	15 Vol %

· **Vapour pressure at 20 °C:** 59 hPa· **Density at 20 °C:** 0.62554 g/cm<sup>3</sup>· **Relative density:** Not determined.· **Vapour density:** Not determined.· **Evaporation rate:** Not applicable.· **Solubility in / Miscibility with water:**

Fully miscible.

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

· <b>Dynamic:</b>	Not determined.
· <b>Kinematic:</b>	Not determined.

· **Solvent content:**

· <b>Organic solvents:</b>	21.0 %
· <b>Water:</b>	2.0 %
· <b>VOC (EC)</b>	21.00 %

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<b>Solids content:</b>	0.0 %
<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** Contact with water releases flammable gases.
- **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**
- **Primary irritant effect:**
- **Skin corrosion/irritation** No irritant effect.
- **Serious eye damage/irritation** Irritating effect.
- **Respiratory or skin sensitisation** No sensitising effects known.
- **Additional toxicological information:**  
The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:  
Irritant  
Carcinogenic.  
The product can cause inheritable damage.
- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**  
Muta. 1B, Care. 1A

### 12 Ecological Information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behaviour in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:**  
Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water  
Do not allow product to reach ground water, water course or sewage system.  
Danger to drinking water if even small quantities leak into the ground.
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

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## according to WHS Regulations

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Trade name: CytoFix

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### 13 Disposal considerations

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

### 14 Transport information

<ul style="list-style-type: none"> <li>· <b>UN-Number</b></li> <li>· <b>ADG, IATA</b></li> <li>· <b>IMDG</b></li> </ul>	<p style="text-align: right;">not regulated UNI950</p>
<ul style="list-style-type: none"> <li>· <b>UN proper shipping name</b></li> <li>· <b>ADG, IATA</b></li> <li>· <b>IMDG</b></li> </ul>	<p style="text-align: right;">not regulated AEROSOLS</p>
<ul style="list-style-type: none"> <li>· <b>Transport hazard class(es)</b></li> <li>· <b>ADG, ADN, IATA</b></li> <li>· <b>Class</b></li> </ul>	<p style="text-align: right;">not regulated</p>
<ul style="list-style-type: none"> <li>· <b>IMDG</b></li> </ul> 	
<ul style="list-style-type: none"> <li>· <b>Class</b></li> <li>· <b>Label</b></li> </ul>	<p style="text-align: right;">2.1 Gases. 2.1</p>
<ul style="list-style-type: none"> <li>· <b>Packing group</b></li> <li>· <b>ADG, IATA</b></li> </ul>	<p style="text-align: right;">not regulated</p>
<ul style="list-style-type: none"> <li>· <b>Environmental hazards:</b></li> </ul>	<p style="text-align: right;">Not applicable.</p>
<ul style="list-style-type: none"> <li>· <b>Special precautions for user</b></li> <li>· <b>EMS Number:</b></li> <li>· <b>Stowage Code</b></li> </ul>	<p style="text-align: right;">Not applicable. F-D,S-U SW1 Protected from sources of heat. SW22 For AEROSOLS with a maximum capacity of 1 litre: Category A. For AEROSOLS with a capacity above 1 litre: Category B. For WASTE AEROSOLS: Category C, Clear of living quarters.</p>
<ul style="list-style-type: none"> <li>· <b>Segregation Code</b></li> </ul>	<p style="text-align: right;">SG69 For AEROSOLS with a maximum capacity of 1 litre: Segregation as for class 9. Stow "separated from" class 1 except for division 1.4. For AEROSOLS with a capacity above 1 litre: Segregation as for the appropriate subdivision of class 2. For WASTE AEROSOLS: Segregation as for the appropriate subdivision of class 2.</p>
<ul style="list-style-type: none"> <li>· <b>Transport in bulk according to Annex II of Marpol and the IBC Code</b></li> </ul>	<p style="text-align: right;">Not applicable.</p>

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Trade name: CytoFix

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· UN "Model Regulation": not regulated

### 15 Regulatory information

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

· Australian Inventory of Industrial Chemicals

All ingredients are listed.

· Standard for the Uniform Scheduling of Medicines and Poisons

None of the ingredients is listed.

· Australia: Priority Existing Chemicals

None of the ingredients is listed.

· 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:

Petroleum gases, liquefied, sweetened

Ethyl alcohol

· Hazard statements

In contact with water releases flammable gases which may ignite spontaneously.

Causes serious eye irritation.

May cause genetic defects.

May cause cancer.

· Precautionary statements

Obtain special instructions before use.

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

Keep away from any possible contact with water, because of violent reaction and possible flash fire.

Handle and store contents under inert gas. Protect from moisture.

Wash thoroughly after handling.

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

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

Continue rinsing.

IF exposed or concerned: Get medical advice/attention.

Brush off loose particles from skin. Immerse in cool water/wrap in wet bandages.

If eye irritation persists: Get medical advice/attention.

In case of fire: Use CO<sub>2</sub>, sand, extinguishing powder for extinction.

Store in a dry place. Store in a closed container.

Store locked up.

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

· Directive 2012/18/EU

· Named dangerous substances - ANNEX I None of the ingredients is listed.

· Seveso category O<sub>2</sub> Substances and mixtures which in contact with water emit flammable gases

· Qualifying quantity (tonnes) for the application of lower-tier requirements 100 t

· Qualifying quantity (tonnes) for the application of upper-tier requirements 500 t

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Trade name: **CytoFix**

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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.*

- **Other regulations, limitations and prohibitive regulations**

- **Substances of very high concern (SVHC) according to REACH, Article 57**

64-17-5	Ethyl alcohol
---------	---------------

- **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.*

- **Contact:**

- **Abbreviations and acronyms:**

*ADR: Accord relatif au transport international 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)*

*PBT: Persistent, Bioaccumulative and Toxic*

*SVHC: Substances of Very High Concern*

*vPvB: very Persistent and very Bioaccumulative*

*Water-react. 1: Substances and mixtures which in contact with water emit flammable gases – Category 1*

*Eye Irritation 2A: Serious eye damage/eye irritation – Category 2A*

*Muta. 1B: Germ cell mutagenicity – Category 1B*

*Carc. 1A: Carcinogenicity – Category 1A*

AU

# Safety Data Sheet

## according to HPR, Schedule 1

Printing date 04/26/2022

Reviewed on 04/26/2022

### 1 Identification

- **Product identifier**
- **Trade name:** CytoFix
- **Article number:** 22805-01, 22805-02
- **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 identification

- **Classification of the substance or mixture**



GHS02 Flame

Substances and Mixtures Which, in Contact with Water, *H260* In contact with water releases flammable gases  
Emit Flammable Gases - Category 1 which may ignite spontaneously.



GHS08 Health hazard

Germ Cell Mutagenicity - Category 1B *H340* May cause genetic defects.  
Carcinogenicity - Category 1A *H350* May cause cancer.



GHS07

Eye Irritation - Category 2A *H319* Causes serious eye irritation.

- **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:**  
Petroleum gases, liquefied, sweetened  
Ethyl alcohol

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# Safety Data Sheet

## according to HPR, Schedule 1

Printing date 04/26/2022

Reviewed on 04/26/2022

**Trade name: CytoFix**

(Contd. of page 1)

**· Hazard statements***In contact with water releases flammable gases which may ignite spontaneously.**Causes serious eye irritation.**May cause genetic defects.**May cause cancer.***· Precautionary statements***Obtain special instructions before use.**Do not handle until all safety precautions have been read and understood.**Do not allow contact with water.**Handle and store contents under inert gas. Protect from moisture.**Wash thoroughly after handling.**Wear protective gloves/protective clothing/eye protection/face protection.**IF ON SKIN: Brush off loose particles from skin. Immerse in cool water.**IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.**Continue rinsing.**IF exposed or concerned: Get medical advice/attention.**If eye irritation persists: Get medical advice/attention.**In case of fire: Use CO<sub>2</sub>, sand, extinguishing powder to extinguish.**Store in a dry place. Store in a closed container.**Store locked up.**Dispose of contents/container in accordance with local/regional/national/international regulations.***· Classification system:****· NFPA ratings (scale 0 - 4)**

Health = 2

Fire = 0

Reactivity = 2

*The substance demonstrates unusual reactivity with water.***· HMIS-ratings (scale 0 - 4)**

Health = \*2

Fire = 0

Reactivity = 2

### 3 Composition/Information on ingredients

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

68476-86-8	Petroleum gases, liquefied, sweetened	45-70% w/w *
64-17-5	Ethyl alcohol	10-30% w/w *

\* Actual concentration ranges are withheld as a trade secret.

### 4 First-aid measures

**· Description of first aid measures****· After inhalation:** *Supply fresh air; consult doctor in case of complaints.***· After skin contact:** *Generally the product does not irritate the skin.*

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## Safety Data Sheet according to HPR, Schedule 1

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Trade name: CytoFix

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

### 5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:** Use fire fighting measures that suit the environment.
- **For safety reasons unsuitable extinguishing agents:** Water
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** No special measures required.

### 6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**  
Wear protective equipment. Keep unprotected persons away.
- **Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**  
Dispose contaminated material as waste according to item 13.  
Ensure adequate ventilation.  
Do not flush with water or aqueous cleansing agents
- **Reference to other sections**  
See Section 7 for information on safe handling.  
See Section 8 for information on personal protection equipment.  
See Section 13 for disposal information.

### 7 Handling and storage

- **Handling:**
- **Precautions for safe handling**  
Ensure good ventilation/exhaustion at the workplace.  
Open and handle receptacle with care.
- **Information about protection against explosions and fires:**  
Keep ignition sources away - Do not smoke.  
Protect from heat.  
Keep respiratory protective device available.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:**  
Observe official regulations on storing packagings with pressurized containers.
- **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.

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# Safety Data Sheet

## according to HPR, Schedule 1

Printing date 04/26/2022

Reviewed on 04/26/2022

Trade name: CytoFix

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· **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

EL STEL: 1000 ppm

EV TWA: 1,900 mg/m<sup>3</sup>, 1,000 ppm· **Additional information:** The lists that were valid during the creation were used as basis.· **Exposure controls**· **Personal protective equipment:**· **General protective and hygienic measures:***Keep away from foodstuffs, beverages and feed.**Immediately remove all soiled and contaminated clothing.**Wash hands before breaks and at the end of work.**Store protective clothing separately.**Avoid contact with the eyes.**Avoid contact with the eyes and skin.*· **Breathing equipment:***In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.*· **Protection of hands:**

Protective gloves

*The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.**Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.**Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation*· **Material of gloves***The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.*· **Penetration time of glove material***The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.*· **Eye protection:**

Tightly sealed goggles

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## Safety Data Sheet according to HPR, Schedule 1

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Trade name: CytoFix

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### 9 Physical and chemical properties

· <b>Information on basic physical and chemical properties</b>	
· <b>General Information</b>	
· <b>Appearance:</b>	
<b>Form:</b>	Liquid
<b>Color:</b>	Clear
· <b>Odor:</b>	Alcohol-like
· <b>Odor threshold:</b>	Not determined.
· <b>pH-value:</b>	Not determined.
· <b>Change in condition</b>	
<b>Melting point/Melting range:</b>	Undetermined.
<b>Boiling point/Boiling range:</b>	Not applicable, as aerosol.
· <b>Flash point:</b>	Not applicable, as aerosol.
· <b>Flammability (solid, gaseous):</b>	Not flammable.
· <b>Ignition temperature:</b>	425 °C
· <b>Decomposition temperature:</b>	Not determined.
· <b>Auto igniting:</b>	Spontaneously flammable in air.
· <b>Danger of explosion:</b>	Not determined.
· <b>Explosion limits:</b>	
<b>Lower:</b>	3.5 Vol %
<b>Upper:</b>	15 Vol %
· <b>Vapor pressure at 20 °C:</b>	59 hPa
· <b>Density at 20 °C:</b>	0.62554 g/cm <sup>3</sup>
· <b>Relative density</b>	Not determined.
· <b>Vapor density</b>	Not determined.
· <b>Evaporation rate</b>	Not applicable.
· <b>Solubility in / Miscibility with</b>	
<b>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>	21.0 %
<b>Water:</b>	2.0 %
<b>Solids content:</b>	0.0 %
· <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.

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## Safety Data Sheet according to HPR, Schedule 1

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Reviewed on 04/26/2022

Trade name: CytoFix

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- **Possibility of hazardous reactions** Contact with water releases flammable gases.
- **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:**
- **Primary irritant effect:**
- **on the skin:** No irritant effect.
- **on the eye:** Irritating effect.
- **Sensitization:** No sensitizing effects known.
- **Additional toxicological information:**  
The product shows the following dangers according to internally approved calculation methods for preparations:  
Irritant  
Carcinogenic.  
The product can cause inheritable damage.
- **Carcinogenic categories**

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

64-17-5 Ethyl alcohol

1

- **NTP (National Toxicology Program)**

None of the ingredients is listed.

### 12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behavior in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:**  
Water hazard class 2 (Self-assessment): hazardous for water  
Do not allow product to reach ground water, water course or sewage system.  
Danger to drinking water if even small quantities leak into the ground.
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

### 13 Disposal considerations

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

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# Safety Data Sheet

## according to HPR, Schedule 1

Printing date 04/26/2022

Reviewed on 04/26/2022

Trade name: CytoFix

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### 15 Regulatory information

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

· **Sara**

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

None of the ingredients is listed.

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

None of the ingredients is listed.

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

All components have the value ACTIVE.

· **Canadian substance listings:**

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

All ingredients are listed.

· **Canadian Non-Domestic Substances List (NDSL)**

None of the ingredients is listed.

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

64-17-5 Ethyl alcohol

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

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:**

Petroleum gases, liquefied, sweetened

Ethyl alcohol

· **Hazard statements**

In contact with water releases flammable gases which may ignite spontaneously.

Causes serious eye irritation.

May cause genetic defects.

May cause cancer.

· **Precautionary statements**

Obtain special instructions before use.

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

Do not allow contact with water.

Handle and store contents under inert gas. Protect from moisture.

Wash thoroughly after handling.

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

IF ON SKIN: Brush off loose particles from skin. Immerse in cool water.

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

Continue rinsing.

IF exposed or concerned: Get medical advice/attention.

If eye irritation persists: Get medical advice/attention.

In case of fire: Use CO<sub>2</sub>, sand, extinguishing powder to extinguish.

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**Safety Data Sheet**  
according to HPR, Schedule 1

Printing date 04/26/2022

Reviewed on 04/26/2022

**Trade name: CytoFix**

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*Store in a dry place. Store in a closed container.**Store locked up.**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.*· **Contact:**· **Date of the latest revision of the safety data sheet** 04/26/2022 / -· **Abbreviations and acronyms:***IMDG: International Maritime Code for Dangerous Goods**DOT: US Department of Transportation**IATA: International Air Transport Association**EINECS: European Inventory of Existing Commercial Chemical Substances**ELINCS: European List of Notified Chemical Substances**CAS: Chemical Abstracts Service (division of the American Chemical Society)**NFPA: National Fire Protection Association (USA)**HMIS: Hazardous Materials Identification System (USA)**PBT: Persistent, Bioaccumulative and Toxic**vPvB: very Persistent and very Bioaccumulative*

CA

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

Printing date 26.04.2022

Revision: 26.04.2022

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

- **1.1 Product identifier**
- **Trade name:** CytoFix
- **Article number:** 22805-01, 22805-02
- **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](mailto:sgkcck@aol.com)  
[www.emsdiasum.com](http://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**



flame

Water-react. 1 H260 In contact with water releases flammable gases which may ignite spontaneously.



health hazard

Muta. 1B H340 May cause genetic defects.

Carc. 1A H350 May cause cancer.

Aerosol 3 H229 Pressurised container: May burst if heated.

- **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 GHS08

- **Signal word** Danger
- **Hazard-determining components of labelling:**  
Petroleum gases, liquefied, sweetened
- **Hazard statements**  
H229 Pressurised container: May burst if heated.  
H260 In contact with water releases flammable gases which may ignite spontaneously.

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*H340 May cause genetic defects.**H350 May cause cancer.***· Precautionary statements***P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.**P223 Do not allow contact with water.**P231+P232 Handle and store contents under inert gas. Protect from moisture.**P405 Store locked up.**P410+P412 Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F.**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: 68476-86-8	Petroleum gases, liquefied, sweetened	>50-≤100%
EINECS: 270-705-8	⚠ Flam. Gas 1, H220; ⚠ Muta. 1B, H340; Carc. 1A, H350; Press. Gas (Comp.), H280	
CAS: 64-17-5	Ethyl alcohol	>10-≤25%
EINECS: 200-578-6	⚠ Flam. Liq. 2, H225	

**· SVHC**

64-17-5	Ethyl alcohol	
---------	---------------	--

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

### SECTION 4: First aid measures

**· 4.1 Description of first aid measures****· After inhalation:** Supply fresh air; consult doctor in case of complaints.**· After skin contact:** Generally the product does not irritate the skin.**· After eye contact:***Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.***· After swallowing:** If symptoms persist consult doctor.**· 4.2 Most important symptoms and effects, both acute and delayed** No further relevant information available.**· 4.3 Indication of any immediate medical attention and special treatment needed**

No further relevant information available.

### SECTION 5: Firefighting measures

**· 5.1 Extinguishing media****· Suitable extinguishing agents:** Use fire extinguishing methods suitable to surrounding conditions.**· For safety reasons unsuitable extinguishing agents:** Water**· 5.2 Special hazards arising from the substance or mixture** No further relevant information available.

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

## SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**  
Wear protective equipment. Keep unprotected persons away.
- **6.2 Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
- **6.3 Methods and material for containment and cleaning up:**  
Dispose contaminated material as waste according to item 13.  
Ensure adequate ventilation.  
Do not flush with water or aqueous cleansing agents
- **6.4 Reference to other sections**  
See Section 7 for information on safe handling.  
See Section 8 for information on personal protection equipment.  
See Section 13 for disposal information.

## SECTION 7: Handling and storage

- **7.1 Precautions for safe handling**  
Ensure good ventilation/exhaustion at the workplace.  
Open and handle receptacle with care.
- **Information about fire - and explosion protection:**  
Keep ignition sources away - Do not smoke.  
Protect from heat.  
Keep respiratory protective device available.
- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:**  
Observe official regulations on storing packagings with pressurised containers.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:**  
Keep container tightly sealed.  
Store in cool, dry conditions in well sealed receptacles.  
Protect from heat and direct sunlight.
- **7.3 Specific end use(s)** No further relevant information available.

## SECTION 8: Exposure controls/personal protection

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

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

<b>64-17-5 Ethyl alcohol</b>
------------------------------

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

- **Additional information:** The lists valid during the making were used as basis.
- **8.2 Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:**  
Keep away from foodstuffs, beverages and feed.

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*Immediately remove all soiled and contaminated clothing*

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

*Store protective clothing separately.*

*Avoid contact with the eyes.*

*Avoid contact with the eyes and skin.*

· **Respiratory protection:**

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

· **Protection of hands:**



Protective gloves

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

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

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

· **Material of gloves**

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

· **Penetration time of glove material**

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

· **Eye protection:**



Tightly sealed goggles

### SECTION 9: Physical and chemical properties

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

· **General Information**

· **Appearance:**

**Form:** Liquid

**Colour:** Clear

· **Odour:** Alcohol-like

· **Odour threshold:** Not determined.

· **pH-value:** Not determined.

· **Change in condition**

**Melting point/freezing point:** Undetermined.

**Initial boiling point and boiling range:** Not applicable, as aerosol.

· **Flash point:** Not applicable, as aerosol.

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

· **Ignition temperature:** 425 °C

· **Decomposition temperature:** Not determined.

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· <b>Auto-ignition temperature:</b>	Spontaneously flammable in air.
· <b>Explosive properties:</b>	Not determined.
· <b>Explosion limits:</b>	
<b>Lower:</b>	3.5 Vol %
<b>Upper:</b>	15 Vol %
· <b>Vapour pressure at 20 °C:</b>	59 hPa
· <b>Density at 20 °C:</b>	0.62554 g/cm <sup>3</sup>
· <b>Relative density</b>	Not determined.
· <b>Vapour density</b>	Not determined.
· <b>Evaporation rate</b>	Not applicable.
· <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>	21.0 %
<b>Water:</b>	2.0 %
<b>VOC (EC)</b>	21.00 %
<b>Solids content:</b>	0.0 %
· <b>9.2 Other information</b>	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** Contact with water releases flammable gases.
- **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** Based on available data, the classification criteria are not met.
- **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.
- **Additional toxicological information:**
- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**
- **Germ cell mutagenicity**  
May cause genetic defects.

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- **Carcinogenicity**  
May cause cancer.
- **Reproductive toxicity** Based on available data, the classification criteria are not met.
- **STOT-single exposure** Based on available data, the classification criteria are not met.
- **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 2 (German Regulation) (Self-assessment): hazardous for water  
Do not allow product to reach ground water, water course or sewage system.  
Danger to drinking water if even small quantities leak into the ground.
- **12.5 Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **12.6 Other adverse effects** No further relevant information available.

### SECTION 13: Disposal considerations

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

### SECTION 14: Transport information

- |                                       |               |
|---------------------------------------|---------------|
| · <b>14.1 UN-Number</b>               |               |
| · <b>ADR, IATA</b>                    | not regulated |
| · <b>IMDG</b>                         | UN1950        |
| · <b>14.2 UN proper shipping name</b> |               |
| · <b>ADR, IATA</b>                    | not regulated |
| · <b>IMDG</b>                         | AEROSOLS      |

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GB

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· **14.3 Transport hazard class(es)**· **ADR, ADN, IATA**· **Class** not regulated· **IMDG**· **Class** 2.1 Gases.· **Label** 2.1· **14.4 Packing group**· **ADR, IATA** not regulated· **14.5 Environmental hazards:**

Not applicable.

· **14.6 Special precautions for user**

Not applicable.

· **EMS Number:**

F-D,S-U

· **Stowage Code**

SW1 Protected from sources of heat.

SW22 For AEROSOLS with a maximum capacity of 1 litre:

Category A. For AEROSOLS with a capacity above 1 litre:

Category B. For WASTE AEROSOLS: Category C, Clear of living quarters.

· **Segregation Code**

SG69 For AEROSOLS with a maximum capacity of 1 litre:

Segregation as for class 9. Stow "separated from" class 1 except for division 1.4.

For AEROSOLS with a capacity above 1 litre:

Segregation as for the appropriate subdivision of class 2.

For WASTE AEROSOLS:

Segregation as for the appropriate subdivision of class 2.

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

Not applicable.

· **UN "Model Regulation":**

not regulated

## SECTION 15: Regulatory information

· **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**· **Directive 2012/18/EU**· **Named dangerous substances - ANNEX I** None of the ingredients is listed.· **Seveso category O2** Substances and mixtures which in contact with water emit flammable gases· **Qualifying quantity (tonnes) for the application of lower-tier requirements** 100 t· **Qualifying quantity (tonnes) for the application of upper-tier requirements** 500 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.

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· **Other regulations, limitations and prohibitive regulations**· **Substances of very high concern (SVHC) according to REACH, Article 57**

64-17-5 Ethyl alcohol

· **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***H220 Extremely flammable gas.**H225 Highly flammable liquid and vapour.**H280 Contains gas under pressure; may explode if heated.**H340 May cause genetic defects.**H350 May cause cancer.*· **Abbreviations and acronyms:***ADR: Accord relatif au transport international 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)**PBT: Persistent, Bioaccumulative and Toxic**SVHC: Substances of Very High Concern**vPvB: very Persistent and very Bioaccumulative**Flam. Gas 1: Flammable gases – Category 1**Aerosol 3: Aerosols – Category 3**Press. Gas (Comp.): Gases under pressure – Compressed gas**Flam. Liq. 2: Flammable liquids – Category 2**Water-react. 1: Substances and mixtures which in contact with water emit flammable gases – Category 1**Muta. 1B: Germ cell mutagenicity – Category 1B**Carc. 1A: Carcinogenicity – Category 1A*

# Veiligheidsinformatieblad volgens 1907/2006/EG, Artikel 31

datum van de druk: 26.04.2022

Herziening van: 26.04.2022

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

- **1.1 Productidentificatie**
- **Handelsnaam:** CytoFix
- **Artikelnummer:** 22805-01, 22805-02
- **UFI:** 6F44-C0AX-700W-ERCW
- **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

Water-react. 1 H260 In contact met water komen ontvlambare gassen vrij die spontaan kunnen ontbranden.



GHS08 gezondheidsgevaar

Muta. 1B H340 Kan genetische schade veroorzaken.

Carc. 1A H350 Kan kanker veroorzaken.

Aerosol 3 H229 Houder onder druk: kan open barsten bij verhitting.

- **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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### · Gevarenpictogrammen



GHS02 GHS08

### · Signaalwoord Gevaar

#### · Gevaaraanduidende componenten voor de etikettering:

aardoliegassen, vloeibaar gemaakt, stankvrij gemaakt

#### · Gevarenaanduidingen

H229 Houder onder druk: kan open barsten bij verhitting.

H261 In contact met water komen ontvlambare gassen vrij die spontaan kunnen ontbranden.

H340 Kan genetische schade veroorzaken.

H350 Kan kanker veroorzaken.

#### · Veiligheidsaanbevelingen

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

P223 Contact met water vermijden.

P231+P232 Inhoud onder inert gas gebruiken en bewaren. Tegen vocht beschermen.

P405 Achter slot bewaren.

P410+P412 Tegen zonlicht beschermen. Niet blootstellen aan temperaturen boven 50 °C/122 °F.

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: 68476-86-8	aardoliegassen, vloeibaar gemaakt, stankvrij gemaakt	>50-≤100%
EINECS: 270-705-8	⚠ Flam. Gas 1A, H220; ⚠ Muta. 1B, H340; Carc. 1A, H350; Press. Gas (Comp.), H280	
CAS: 64-17-5	ethanol	>10-≤25%
EINECS: 200-578-6	⚠ Flam. Liq. 2, H225	

#### · SVHC

64-17-5 ethanol

#### · Aanvullende gegevens:

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

## RUBRIEK 4: Eerstehulpmaatregelen

### · 4.1 Beschrijving van de eerstehulpmaatregelen

· **Na het inademen:** Frisse lucht toedienen; bij klachten arts ontbieden.· **Na huidcontact:** Over het algemeen is het produkt niet prikkelend voor de huid

(Vervolg op blz. 3)

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- **Na oogcontact:**  
De ogen gedurende verscheidene minuten onder stromend water afspoelen terwijl de oogspleet geopend blijft. Bij aanhoudende klachten een dokter raadplegen.
- **Na inslikken:** Als de klachten niet minderen, een arts raadplegen
- **4.2 Belangrijkste acute en uitgestelde symptomen en effecten** Geen verdere relevante informatie verkrijgbaar.
- **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:** Brandblusmaatregelen op omgeving afstemmen.
- **Blusmiddelen die uit veiligheidsoogpunt niet geschikt zijn:** Water
- **5.2 Speciale gevaren die door de stof of het mengsel worden veroorzaakt**  
Geen verdere relevante informatie verkrijgbaar.
- **5.3 Advies voor brandweerlieden**
- **Speciale beschermende kleding:** Geen bijzondere maatregelen nodig.

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

- **6.1 Persoonlijke voorzorgsmaatregelen, beschermingsmiddelen en noodprocedures**  
Beschermende kleding aantrekken. Niet beschermde personen op afstand houden.
- **6.2 Milieuvoorzorgsmaatregelen:** Niet in de riolering/het oppervlaktewater/het grondwater laten terechtkomen.
- **6.3 Insluitings- en reinigingsmethoden en -materiaal:**  
Besmet materiaal zoals afval volgens punt 13 verwijderen.  
Voor voldoende ventilatie zorgen.  
Niet met water of waterachtige reinigingsmiddelen wegspoelen.
- **6.4 Verwijzing naar andere rubrieken**  
Informatie inzake veilig gebruik - zie hoofdstuk 7.  
Informatie inzake persoonlijke beschermingsuitrusting - zie hoofdstuk 8.  
Informatie inzake berging - zie hoofdstuk 13.

### RUBRIEK 7: Hantering en opslag

- **7.1 Voorzorgsmaatregelen voor het veilig hanteren van de stof of het mengsel**  
Voor goede ventilatie/afzuiging op de werkplaatsen zorgen.  
Tanks voorzichtig openen en behandelen.
- **Informatie m.b.t. brand- en ontploffingsgevaar:**  
Onststekingsbronnen op afstand houden - niet roken.  
Beschermen tegen hitte.  
Ademhalingsstoestellen gereedhouden.
- **7.2 Voorwaarden voor een veilige opslag, met inbegrip van incompatibele producten**
- **Opslag:**
- **Eisen ten opzichte van opslagruimte en tanks:**  
De overheidsbepalingen m.b.t. de opslag van drukkaspakkingen moeten in acht genomen worden.
- **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 zonnestralen beschermen.

(Vervolg op blz. 4)

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

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

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

· **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

- **Aanvullende gegevens:** Als basis dienden lijsten die bij opstelling geldig waren.
- **8.2 Maatregelen ter beheersing van blootstelling**
- **Persoonlijke beschermingsvoorzieningen:**
- **Algemene beschermings- en gezondheidsmaatregelen:**
  - Verwijderd houden van eet- en drinkwaren.
  - Verontreinigde kleding onmiddellijk uittrekken.
  - Vóór de pauze en aan het einde van werktijd handen wassen.
  - Beschermende kleding afzonderlijk bewaren.
  - Aanraking met de ogen vermijden.
  - Aanraking met de ogen en de huid vermijden.
- **Ademhalingsbescherming:**
  - Bij korte of geringe belasting ademfiltertoestel; bij intensieve resp. langdurige expositie een van de omringende lucht onafhankelijk ademhalingsstoestel gebruiken.
- **Handbescherming:**



Veiligheidshandschoenen

Het handschoenmateriaal moet ondoorlatend en bestand zijn tegen het product / de stof / de bereiding.  
Op grond van falende testen kan geen aanbeveling voor handschoenmateriaal voor het product / de bereiding / het chemicaliënmengsel afgegeven worden.  
Kies handschoenmateriaal rekening houdend met de penetratietijden, de permeatiegraden en de degradatie.

- **Handschoenmateriaal**
  - De keuze van een geschikte handschoen is niet alleen afhankelijk van het materiaal, maar ook van andere kwaliteitskenmerken en verschilt van fabrikant tot fabrikant. Aangezien het product uit meerdere stoffen is samengesteld, is de duurzaamheid van de handschoenmaterialen niet vooraf berekenbaar en moet derhalve vóór het gebruik worden getest.
- **Doordringingstijd van het handschoenmateriaal**
  - De precieze penetratietijd kunt u te weten komen bij de handschoenfabrikant; houd er rekening mee.
- **Oogbescherming:**



Nauw aansluitende veiligheidsbril

NL

(Vervolg op blz. 5)



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### RUBRIEK 9: Fysische en chemische eigenschappen

#### · 9.1 Informatie over fysische en chemische basiseigenschappen

##### · Algemene gegevens

##### · Voorkomen:

Vorm: Vloeistof

Kleur: Helder

· Geur: Alcoholachtig

· Geurdrempelwaarde: Niet bepaald.

· pH-waarde: Niet bepaald.

##### · Toestandsverandering

Smelt-/vriespunt: Niet bepaald.

Beginkookpunt en kooktraject: Vanwege aerosol niet bruikbaar.

· Vlampunt: Vanwege aerosol niet bruikbaar.

· Ontvlambaarheid (vast, gas): Niet bruikbaar.

· Ontstekingstemperatuur: 425 °C

· Ontledingstemperatuur: Niet bepaald.

· Zelfontbrandingstemperatuur: Spontaan ontvlambaar in lucht.

· Ontploffingseigenschappen: Niet bepaald.

##### · Ontploffingsgrenzen:

Onderste: 3,5 Vol %

Bovenste: 15 Vol %

· Dampspanning bij 20 °C: 59 hPa

· Dichtheid bij 20 °C: 0,62554 g/cm<sup>3</sup>

· Relatieve dichtheid: Niet bepaald.

· Dampdichtheid: Niet bepaald.

· Verdampingssnelheid: Niet bruikbaar.

##### · Oplosbaarheid in/mengbaarheid met

Water: Volledig mengbaar.

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

##### · Viscositeit

Dynamisch: Niet bepaald.

Kinematisch: Niet bepaald.

##### · Oplosmiddelgehalte:

Organisch oplosmiddel: 21,0 %

Water: 2,0 %

VOC (EG) 21,00 %

Gehalte aan vaste bestanddelen: 0,0 %

· 9.2 Overige informatie: Geen verdere relevante informatie verkrijgbaar.

### RUBRIEK 10: Stabiliteit en reactiviteit

· 10.1 Reactiviteit: Geen verdere relevante informatie verkrijgbaar.

(Vervolg op blz. 6)

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

### RUBRIEK 11: Toxicologische informatie

- **11.1 Informatie over toxicologische effecten**
- **Acute toxiciteit** Gebaseerd op beschikbare gegevens; aan de indelingscriteria is niet voldaan.
- **Primaire aandoening:**
- **Huidcorrosie/-irritatie** Gebaseerd op beschikbare gegevens; aan de indelingscriteria is niet voldaan.
- **Ernstig oogletsel/oogirritatie** Gebaseerd op beschikbare gegevens; aan de indelingscriteria is niet voldaan.
- **Sensibilisatie van de luchtwegen/de huid**  
Gebaseerd op beschikbare gegevens; aan de indelingscriteria is niet voldaan.
- **Aanvullende toxicologische informatie:**
- **CMR-effecten (kankerverwekkendheid, mutageniteit en giftigheid voor de voortplanting)**
- **Mutageniteit in geslachtscellen**  
Kan genetische schade veroorzaken.
- **Kankerverwekkendheid**  
Kan kanker veroorzaken.
- **Giftigheid voor de voortplanting** Gebaseerd op beschikbare gegevens; aan de indelingscriteria is niet voldaan.
- **STOT bij eenmalige blootstelling** Gebaseerd op beschikbare gegevens; aan de indelingscriteria is niet voldaan.
- **STOT bij herhaalde blootstelling** Gebaseerd op beschikbare gegevens; aan de indelingscriteria is niet voldaan.
- **Gevaar bij inademing** Gebaseerd op beschikbare gegevens; aan de indelingscriteria is niet voldaan.

### RUBRIEK 12: Ecologische informatie

- **12.1 Toxiciteit**
- **Aquatische toxiciteit:** Geen verdere relevante informatie verkrijgbaar.
- **12.2 Persistentie en afbreekbaarheid** Geen verdere relevante informatie verkrijgbaar.
- **12.3 Bioaccumulatie** Geen verdere relevante informatie verkrijgbaar.
- **12.4 Mobiliteit in de bodem** Geen verdere relevante informatie verkrijgbaar.
- **Verdere ecologische informatie:**
- **Algemene informatie:**  
Waterbezwaarlijkheid (NL): Z(1) niet afbreekbare stoffen met gevaarlijke eigenschappen voor mens en milieu (carcinogeniteit/mutageniteit/ reprotoxiciteit/bioaccumulerend vermogen/ toxiciteit of persistentie)  
Gevaar voor water klasse 2 (D) (Zelfclassificatie): gevaar voor water  
Niet lozen in grondwater, in oppervlaktewater of in riolering.  
Gevaar voor drinkwater zelfs bij uitlopen van geringe hoeveelheden in de ondergrond.
- **12.5 Resultaten van PBT- en zPzB-beoordeling**
- **PBT:** Niet bruikbaar.
- **zPzB:** Niet bruikbaar.
- **12.6 Andere schadelijke effecten** Geen verdere relevante informatie verkrijgbaar.

### RUBRIEK 13: Instructies voor verwijdering

- **13.1 Afvalverwerkingsmethoden**
- **Aanbeveling:** Mag niet tesamen met huisvuil gestort worden of in de riolering terechtkomen.

(Vervolg op blz. 7)

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- **Niet gereinigde verpakkingen:**
- **Aanbeveling:** Afvalverwijdering volgens overheidsbepalingen.
- **Aanbevolen reinigingsmiddel:** Water, eventueel met toevoeging van reinigingsmiddelen.

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

· **14.1 VN-nummer**· **ADR, IATA**

Niet van toepassing

· **IMDG**

UN1950

· **14.2 Juiste ladingnaam overeenkomstig de modelreglementen van de VN**· **ADR, IATA**

Niet van toepassing

· **IMDG**

AEROSOLS

· **14.3 Transportgevaarklasse(n)**· **ADR, ADN, IATA**· **klasse**

Niet van toepassing

· **IMDG**· **Class**

2.1 Gassen

· **Label**

2.1

· **14.4 Verpakkingsgroep:**· **ADR, IATA**

Niet van toepassing

· **14.5 Milieugevaar:**

Niet bruikbaar.

· **14.6 Bijzondere voorzorgen voor de gebruiker**

Niet bruikbaar.

· **EMS-nummer:**

F-D,S-U

· **Stowage Code**

SW1 Protected from sources of heat.

SW22 For AEROSOLS with a maximum capacity of 1 litre:  
 Category A. For AEROSOLS with a capacity above 1 litre:  
 Category B. For WASTE AEROSOLS: Category C, Clear of  
 living quarters.

· **Segregation Code**

SG69 For AEROSOLS with a maximum capacity of 1 litre:  
 Segregation as for class 9. Stow "separated from" class 1  
 except for division 1.4.  
 For AEROSOLS with a capacity above 1 litre:  
 Segregation as for the appropriate subdivision of class 2.  
 For WASTE AEROSOLS:  
 Segregation as for the appropriate subdivision of class 2.

· **14.7 Vervoer in bulk overeenkomstig bijlage II bij****Marpol en de IBC-code**

Niet bruikbaar.

· **VN "Model Regulation":**

Niet van toepassing

(Vervolg op blz. 8)

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### RUBRIEK 15: Regelgeving

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

· **SZW-lijst van kankerverwekkende stoffen**

68476-86-8	aardoliegassen, vloeibaar gemaakt, stankvrij gemaakt
64-17-5	ethanol

· **SZW-lijst van mutagene stoffen**

68476-86-8	aardoliegassen, vloeibaar gemaakt, stankvrij gemaakt
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· **NIET-limitatieve lijst van voor de voortplanting giftige stoffen - Vruchtbaarheid**

64-17-5	ethanol	IA
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· **NIET-limitatieve lijst van voor de voortplanting giftige stoffen - Ontwikkeling**

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

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

64-17-5	ethanol	x
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· **Lijst Zeer Zorgwekkende Stoffen (ZZS)**

68476-86-8	aardoliegassen, vloeibaar gemaakt, stankvrij gemaakt
------------	--

· **Lijst van Potentieel Zeer Zorgwekkende Stoffen**

geen der bestanddelen staat op de lijst.	
--	--

· **Richtlijn 2012/18/EU**

· **Gevaarlijke stoffen die met naam genoemd worden - BIJLAGE I** geen der bestanddelen staat op de lijst.

· **Seveso-categorie O2** Stoffen en mengsels die in contact met water ontvlambare gassen ontwikkelen

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

· **Drempelwaarde (ton) voor toepassing van voorschriften voor hogedrempelinrichtingen** 500 t

· **Verordening (EG) nr. 1907/2006 BIJLAGE XVII** Beperkingsvoorwaarden: 3, 28, 29, 40

· **Richtlijn 2011/65/EU betreffende beperking van het gebruik van bepaalde gevaarlijke stoffen in elektrische en elektronische apparatuur - Bijlage II**

geen der bestanddelen staat op de lijst.	
--	--

· **VERORDENING (EU) 2019/1148**

· **Bijlage I - PRECURSOREN VOOR EXPLOSIEVEN WAARVOOR EEN BEPERKING GELDT (Bovengrenswaarde ten behoeve van vergunningverlening op grond van artikel 5, lid 3)**

geen der bestanddelen staat op de lijst.	
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· **Bijlage II - PRECURSOREN VOOR EXPLOSIEVEN DIE MOETEN WORDEN GEMELD**

geen der bestanddelen staat op de lijst.	
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· **Verordening (EG) nr. 273/2004 inzake drugsprecursoren**

geen der bestanddelen staat op de lijst.	
--	--

· **Verordening (EG) Nr. 111/2005 houdende voorschriften voor het toezicht op de handel tussen de Gemeenschap en derde landen in drugsprecursoren**

geen der bestanddelen staat op de lijst.	
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· **Nationale voorschriften:**

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

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

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- **Gevaarklasse v. water:**

*Waterbezwaarlijkheid (NL): Z(1) niet afbreekbare stoffen met gevaarlijke eigenschappen voor mens en milieu (carcinogeniteit/mutageniteit/ reprotoxiciteit/bioacumulerend vermogen/ toxiciteit of persistentie)*

- **Aanvullende voorschriften, beperkingen en verbodsverordeningen**

- **Zeer zorgwekkende stoffen (SVHC) volgens REACH, artikel 57**

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

- **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**

*H220 Zeer licht ontvlambaar gas.*

*H225 Licht ontvlambare vloeistof en damp.*

*H280 Bevat gas onder druk; kan ontploffen bij verwarming.*

*H340 Kan genetische schade veroorzaken.*

*H350 Kan kanker veroorzaken.*

- **Afkortingen en acroniemen:**

*ADR: Accord relatif au transport international 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)*

*PBT: Persistent, Bioaccumulative and Toxic*

*SVHC: Substances of Very High Concern*

*vPvB: very Persistent and very Bioaccumulative*

*Flam. Gas 1A: Ontvlambare gassen – Categorie 1A*

*Aerosol 3: Aerosolen – Categorie 3*

*Press. Gas (Comp.): Gassen onder druk – Samengeperst gas*

*Flam. Liq. 2: Ontvlambare vloeistoffen – Categorie 2*

*Water-react. 1: Stoffen en mengsels die in contact met water ontvlambare gassen ontwikkelen – Categorie 1*

*Muta. 1B: Mutageniteit in geslachtscellen – Categorie 1B*

*Carc. 1A: Kankerverwekkendheid – Categorie 1A*

# 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:** CytoFix
- **Code du produit:** 22805-01, 22805-02
- **UFI:** 6F44-C0AX-700W-ERCW
- **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: [sgkcek@aol.com](mailto:sgkcek@aol.com)  
[www.emsdiasum.com](http://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

Water-react. 1 H260 Dégage au contact de l'eau des gaz inflammables qui peuvent s'enflammer spontanément.



GHS08 danger pour la santé

Muta. 1B H340 Peut induire des anomalies génétiques.

Carc. 1A H350 Peut provoquer le cancer.

Aerosol 3 H229 Récipient sous pression: peut éclater sous l'effet de la chaleur.

- **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



GHS08

- **Mention d'avertissement** Danger
- **Composants dangereux déterminants pour l'étiquetage:**  
gaz de pétrole liquéfiés adoucis
- **Mentions de danger**  
H229 Récipient sous pression: peut éclater sous l'effet de la chaleur.  
H260 Dégage au contact de l'eau des gaz inflammables qui peuvent s'enflammer spontanément.

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H340 Peut induire des anomalies génétiques.

H350 Peut provoquer le cancer.

- **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.

P223 Éviter tout contact avec l'eau.

P231+P232 Manipuler et stocker le contenu sous gaz inerte. Protéger de l'humidité.

P405 Garder sous clef.

P410+P412 Protéger du rayonnement solaire. Ne pas exposer à une température supérieure à 50 °C/122 °F.

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: 68476-86-8	gaz de pétrole liquéfiés adoucis	>50-≤100%
EINECS: 270-705-8	⚠ Flam. Gas 1A, H220; ⚠ Muta. 1B, H340; Carc. 1A, H350; Press. Gas (Comp.), H280	
CAS: 64-17-5	éthanol	>10-≤25%
EINECS: 200-578-6	⚠ Flam. Liq. 2, H225	

- **SVHC**

64-17-5 éthanol

- **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**

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

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

- **Après contact avec les yeux:**

Rincer les yeux, pendant plusieurs minutes, sous l'eau courante en écartant bien les paupières. Si les troubles persistent, consulter un médecin.

- **Après ingestion:** Si les troubles persistent, consulter un médecin.

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

- **4.3 Indication des éventuels soins médicaux immédiats et traitements particuliers nécessaires**

Pas d'autres informations importantes disponibles.

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

- **5.1 Moyens d'extinction**

- **Moyens d'extinction:** Adapter les mesures d'extinction d'incendie à l'environnement.

- **Produits extincteurs déconseillés pour des raisons de sécurité:** Eau

- **5.2 Dangers particuliers résultant de la substance ou du mélange**

Pas d'autres informations importantes disponibles.

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

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

- **6.1 Précautions individuelles, équipement de protection et procédures d'urgence**  
Porter un équipement de sécurité. Eloigner les personnes non protégées.
- **6.2 Précautions pour la protection de l'environnement:**  
Ne pas rejeter dans les canalisations, dans les eaux de surface et dans les nappes d'eau souterraines.
- **6.3 Méthodes et matériel de confinement et de nettoyage:**  
Evacuer les matériaux contaminés en tant que déchets conformément au point 13.  
Assurer une aération suffisante.  
Ne pas rincer à l'eau ou aux produits nettoyants aqueux.
- **6.4 Référence à d'autres rubriques**  
Afin d'obtenir des informations pour une manipulation sûre, consulter le chapitre 7.  
Afin d'obtenir des informations sur les équipements de protection personnels, consulter le chapitre 8.  
Afin d'obtenir des informations sur l'élimination, consulter le chapitre 13.

### RUBRIQUE 7: Manipulation et stockage

- **7.1 Précautions à prendre pour une manipulation sans danger**  
Veiller à une bonne ventilation/aspiration du poste de travail.  
Ouvrir et manipuler les récipients avec précaution.
- **Préventions des incendies et des explosions:**  
Tenir à l'abri des sources d'inflammation - ne pas fumer.  
Tenir à l'abri de la chaleur.  
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:**  
Respecter les prescriptions légales pour le stockage des emballages sous pression.
- **Indications concernant le stockage commun:** Pas nécessaire.
- **Autres indications sur les conditions de stockage:**  
Tenir les emballages hermétiquement fermés.  
Stocker au frais et au sec dans des fûts bien fermés.  
Protéger de la forte chaleur et du rayonnement direct du soleil.
- **7.3 Utilisation(s) finale(s) particulière(s)** Pas d'autres informations importantes disponibles.

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

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

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

#### 64-17-5 éthanol

<b>VLEP</b>	Valeur momentané: 9500 mg/m <sup>3</sup> , 5000 ppm
	Valeur à long terme: 1900 mg/m <sup>3</sup> , 1000 ppm

- **Remarques supplémentaires:**  
Le présent document s'appuie sur les listes en vigueur au moment de son élaboration.

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### · 8.2 Contrôles de l'exposition

#### · **Equipement de protection individuel:**

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

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

Retirer immédiatement les vêtements souillés ou humectés.

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

Conserver à part les vêtements de protection.

Eviter tout contact avec les yeux.

Eviter tout contact avec les yeux et avec la peau.

#### · **Protection respiratoire:**

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

#### · **Protection des mains:**



Gants de protection

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

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

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

#### · **Matériau des gants**

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

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

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

#### · **Protection des yeux:**



Lunettes de protection hermétiques

## RUBRIQUE 9: Propriétés physiques et chimiques

### · 9.1 Informations sur les propriétés physiques et chimiques essentielles

#### · **Indications générales**

#### · **Aspect:**

**Forme:** Liquide

**Couleur:** Transparent

· **Odeur:** Genre alcool

· **Seuil olfactif:** Non déterminé.

· **valeur du pH:** Non déterminé.

#### · **Changement d'état**

**Point de fusion/point de congélation:** Non déterminé.

**Point initial d'ébullition et intervalle d'ébullition:** Non applicable, s'agissant d'un aérosol.

· **Point d'éclair** Non applicable, s'agissant d'un aérosol.

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· <b>Inflammabilité (solide, gaz):</b>	<i>Non applicable.</i>
· <b>Température d'inflammation:</b>	<i>425 °C</i>
· <b>Température de décomposition:</b>	<i>Non déterminé.</i>
· <b>Température d'auto-inflammabilité:</b>	<i>Spontanément inflammable à l'air.</i>
· <b>Propriétés explosives:</b>	<i>Non déterminé.</i>
· <b>Limites d'explosion:</b>	
<b>Inférieure:</b>	<i>3,5 Vol %</i>
<b>Supérieure:</b>	<i>15 Vol %</i>
· <b>Pression de vapeur à 20 °C:</b>	<i>59 hPa</i>
· <b>Densité à 20 °C:</b>	<i>0,62554 g/cm<sup>3</sup></i>
· <b>Densité relative</b>	<i>Non déterminé.</i>
· <b>Densité de vapeur:</b>	<i>Non déterminé.</i>
· <b>Taux d'évaporation:</b>	<i>Non applicable.</i>
· <b>Solubilité dans/miscibilité avec l'eau:</b>	<i>Entièrement miscible</i>
· <b>Coefficient de partage: n-octanol/eau:</b>	<i>Non déterminé.</i>
· <b>Viscosité:</b>	
<b>Dynamique:</b>	<i>Non déterminé.</i>
<b>Cinématique:</b>	<i>Non déterminé.</i>
· <b>Teneur en solvants:</b>	
<b>Solvants organiques:</b>	<i>21,0 %</i>
<b>Eau:</b>	<i>2,0 %</i>
<b>VOC (CE)</b>	<i>21,00 %</i>
<b>Teneur en substances solides:</b>	<i>0,0 %</i>
· <b>9.2 Autres informations</b>	<i>Pas d'autres informations importantes disponibles.</i>

### 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** *Un contact avec l'eau provoque la libération de gaz combustibles.*
- **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** *Compte tenu des données disponibles, les critères de classification ne sont pas remplis.*
- **Effet primaire d'irritation:**
- **Corrosion cutanée/irritation cutanée**  
*Compte tenu des données disponibles, les critères de classification ne sont pas remplis.*

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- **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.
- **Indications toxicologiques complémentaires:**
- **Effets CMR (cancérogène, mutagène et toxique pour la reproduction)**
- **Mutagenicité sur les cellules germinales**  
Peut induire des anomalies génétiques.
- **Cancérogénicité**  
Peut provoquer le cancer.
- **Toxicité pour la reproduction**  
Compte tenu des données disponibles, les critères de classification ne sont pas remplis.
- **Toxicité spécifique pour certains organes cibles - exposition unique**  
Compte tenu des données disponibles, les critères de classification ne sont pas remplis.
- **Toxicité spécifique pour certains organes cibles - exposition répétée**  
Compte tenu des données disponibles, les critères de classification ne sont pas remplis.
- **Danger par aspiration** Compte tenu des données disponibles, les critères de classification ne sont pas remplis.

### RUBRIQUE 12: Informations écologiques

- **12.1 Toxicité**
- **Toxicité aquatique:** Pas d'autres informations importantes disponibles.
- **12.2 Persistance et dégradabilité** Pas d'autres informations importantes disponibles.
- **12.3 Potentiel de bioaccumulation** Pas d'autres informations importantes disponibles.
- **12.4 Mobilité dans le sol** Pas d'autres informations importantes disponibles.
- **Autres indications écologiques:**
- **Indications générales:**  
Catégorie de pollution des eaux 2 (D) (Classification propre): polluant  
Ne pas laisser pénétrer dans la nappe phréatique, les eaux ou les canalisations.  
Danger pour l'eau potable dès fuite d'une petite quantité dans le sous-sol.
- **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

- |  |        |
|--|--------|
| · <b>14.1 Numéro ONU</b>                                   |        |
| · <b>ADR, IATA</b>   | néant  |
| · <b>IMDG</b>  | UN1950 |
| · <b>14.2 Désignation officielle de transport de l'ONU</b> |        |
| · <b>ADR, IATA</b>   | néant  |

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· <b>IMDG</b>	AEROSOLS
· <b>14.3 Classe(s) de danger pour le transport</b>	
· <b>ADR, ADN, IATA</b>	
· <b>Classe</b>	néant
· <b>IMDG</b>	
	
· <b>Class</b>	2.1 Gaz.
· <b>Label</b>	2.1
· <b>14.4 Groupe d'emballage</b>	
· <b>ADR, IATA</b>	néant
· <b>14.5 Dangers pour l'environnement:</b>	Non applicable.
· <b>14.6 Précautions particulières à prendre par l'utilisateur</b>	Non applicable.
· <b>No EMS:</b>	F-D,S-U
· <b>Stowage Code</b>	SW1 Protected from sources of heat. SW22 For AEROSOLS with a maximum capacity of 1 litre: Category A. For AEROSOLS with a capacity above 1 litre: Category B. For WASTE AEROSOLS: Category C, Clear of living quarters.
· <b>Segregation Code</b>	SG69 For AEROSOLS with a maximum capacity of 1 litre: Segregation as for class 9. Stow "separated from" class 1 except for division 1.4. For AEROSOLS with a capacity above 1 litre: Segregation as for the appropriate subdivision of class 2. For WASTE AEROSOLS: Segregation as for the appropriate subdivision of class 2.
· <b>14.7 Transport en vrac conformément à l'annexe II de la convention Marpol et au recueil IBC</b>	Non applicable.
· <b>"Règlement type" de l'ONU:</b>	néant

### RUBRIQUE 15: Informations relatives à la réglementation

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

· **Directive 2012/18/UE**

· **Substances dangereuses désignées - ANNEXE I** Aucun des composants n'est compris.

· **Catégorie SEVESO O2** Substances et mélanges qui, au contact de l'eau, dégagent des gaz inflammables

· **Quantité seuil (tonnes) pour l'application des exigences relatives au seuil bas** 100 t

· **Quantité seuil (tonnes) pour l'application des exigences relatives au seuil haut** 500 t

· **RÈGLEMENT (CE) N° 1907/2006 ANNEXE XVII** Conditions de limitation: 3, 28, 29, 40

· **Directive 2011/65/UE relative à la limitation de l'utilisation de certaines substances dangereuses dans les équipements électriques et électroniques – Annexe II**

Aucun des composants n'est compris.

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· **RÈGLEMENT (UE) 2019/1148**

· **Annexe I - PRÉCURSEURS D'EXPLOSIFS FAISANT L'OBJET DE RESTRICTIONS (Valeur limite maximale aux fins de l'octroi d'une licence en vertu de l'article 5, paragraphe 3)**

Aucun des composants n'est compris.

· **Annexe II - PRÉCURSEURS D'EXPLOSIFS DEVANT FAIRE L'OBJET D'UN SIGNALEMENT**

Aucun des composants n'est compris.

· **Règlement (CE) n° 273/2004 relatif aux précurseurs de drogues**

Aucun des composants n'est compris.

· **Règlement (CE) n° 111/2005 fixant des règles pour la surveillance du commerce des précurseurs des drogues entre la Communauté et les pays tiers**

Aucun des composants n'est compris.

· **Prescriptions nationales:**

· **Indications sur les restrictions de travail:**

Le personnel ne doit pas être exposé aux substances dangereuses cancérogènes contenues dans cette préparation. Les autorités peuvent autoriser des exceptions dans des cas particuliers.

· **Autres prescriptions, restrictions et règlements d'interdiction**

· **Substances extrêmement préoccupantes (SVHC) selon REACH, article 57**

64-17-5 éthanol

· **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**

H220 Gaz extrêmement inflammable.

H225 Liquide et vapeurs très inflammables.

H280 Contient un gaz sous pression; peut exploser sous l'effet de la chaleur.

H340 Peut induire des anomalies génétiques.

H350 Peut provoquer le cancer.

· **Acronymes et abréviations:**

ADR: Accord relatif au transport international 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)

PBT: Persistent, Bioaccumulative and Toxic

SVHC: Substances of Very High Concern

vPvB: very Persistent and very Bioaccumulative

Flam. Gas 1A: Gaz inflammables – Catégorie 1A

Aerosol 3: Aérosols – Catégorie 3

Press. Gas (Comp.): Gaz sous pression – Gaz comprimé

Flam. Liq. 2: Liquides inflammables – Catégorie 2

Water-react. 1: Substances et mélanges qui, au contact de l'eau, dégagent des gaz inflammables – Catégorie 1

Muta. 1B: Mutagénicité sur les cellules germinales – Catégorie 1B

Carc. 1A: Cancérogénicité – Catégorie 1A

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

- **1.1 Produktidentifikator**
- **Handelsname:** CytoFix
- **Artikelnummer:** 22805-01, 22805-02
- **UFI:** 6F44-C0AX-700W-ERCW
- **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](mailto:sgkcck@aol.com)  
[www.emsdiasum.com](http://www.emsdiasum.com)  
  
Science Services GmbH  
Unterhachinger Str. 75  
81737 München Germany  
  
Tel: +49(0)89 18 93 668-0  
[safety@scienceservices.de](mailto:safety@scienceservices.de)  
  
Deutschland: +49 (0)89 19240, 24h Giftnotruf Munchen, [www.toxinfo.org](http://www.toxinfo.org)  
Osterreich: +43 1406 43 43, Gesundheit Osterreich GmbH, 24 h
- **Auskunftgebender Bereich:** Product safety department
- **1.4 Notrufnummer:**  
ChemTrec 1-800-424-9300 Contract CCN7661  
1-703-527-3887

### ABSCHNITT 2: Mögliche Gefahren

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



GHS02 Flamme

Water-react. 1 H260 In Berührung mit Wasser entstehen entzündbare Gase, die sich spontan entzünden können.



GHS08 Gesundheitsgefahr

Muta. 1B H340 Kann genetische Defekte verursachen.

Carc. 1A H350 Kann Krebs erzeugen.

Aerosol 3 H229 Behälter steht unter Druck: kann bei Erwärmung bersten.

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

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· **Gefahrenpiktogramme**

GHS02 GHS08

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

Erdölgase, verflüssigt, gesüßt

· **Gefahrenhinweise**

H229 Behälter steht unter Druck: kann bei Erwärmung bersten.

H260 In Berührung mit Wasser entstehen entzündbare Gase, die sich spontan entzünden können.

H340 Kann genetische Defekte verursachen.

H350 Kann Krebs erzeugen.

· **Sicherheitshinweise**

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

P223 Keinen Kontakt mit Wasser zulassen.

P231+P232 Inhalt unter inertem Gas handhaben und aufbewahren. Vor Feuchtigkeit schützen.

P405 Unter Verschluss aufbewahren.

P410+P412 Vor Sonnenbestrahlung schützen. Nicht Temperaturen über 50 °C/122 °F aussetzen.

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: 68476-86-8 EINECS: 270-705-8	Erdölgase, verflüssigt, gesüßt ⚠ Flam. Gas 1A, H220; ⚠ Muta. 1B, H340; Carc. 1A, H350; Press. Gas (Comp.), H280	>50-≤100%
CAS: 64-17-5 EINECS: 200-578-6	Ethanol ⚠ Flam. Liq. 2, H225	>10-≤25%

· **SVHC**

64-17-5 Ethanol

· **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**· **Nach Einatmen:** Frischluftzufuhr, bei Beschwerden Arzt aufsuchen.· **Nach Hautkontakt:** Im allgemeinen ist das Produkt nicht hautreizend.

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- **Nach Augenkontakt:**  
*Augen mehrere Minuten bei geöffnetem Lidspalt unter fließendem Wasser spülen. Bei anhaltenden Beschwerden Arzt konsultieren.*
- **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:** *Feuerlöschmaßnahmen auf die Umgebung abstimmen.*
- **Aus Sicherheitsgründen ungeeignete Löschmittel:** *Wasser*
- **5.2 Besondere vom Stoff oder Gemisch ausgehende Gefahren**  
*Keine weiteren relevanten Informationen verfügbar.*
- **5.3 Hinweise für die Brandbekämpfung**
- **Besondere Schutzausrüstung:** *Keine besonderen Maßnahmen erforderlich.*

### ABSCHNITT 6: Maßnahmen bei unbeabsichtigter Freisetzung

- **6.1 Personenbezogene Vorsichtsmaßnahmen, Schutzausrüstungen und in Notfällen anzuwendende Verfahren**  
*Schutzausrüstung tragen. Ungeschützte Personen fernhalten.*
- **6.2 Umweltschutzmaßnahmen:** *Nicht in die Kanalisation/Oberflächenwasser/Grundwasser gelangen lassen.*
- **6.3 Methoden und Material für Rückhaltung und Reinigung:**  
*Kontaminiertes Material als Abfall nach Abschnitt 13 entsorgen.*  
*Für ausreichende Lüftung sorgen.*  
*Nicht mit Wasser oder wässrigen Reinigungsmitteln wegspülen.*
- **6.4 Verweis auf andere Abschnitte**  
*Informationen zur sicheren Handhabung siehe Abschnitt 7.*  
*Informationen zur persönlichen Schutzausrüstung siehe Abschnitt 8.*  
*Informationen zur Entsorgung siehe Abschnitt 13.*

### ABSCHNITT 7: Handhabung und Lagerung

- **7.1 Schutzmaßnahmen zur sicheren Handhabung**  
*Für gute Belüftung/Absaugung am Arbeitsplatz sorgen.*  
*Behälter mit Vorsicht öffnen und handhaben.*
- **Hinweise zum Brand- und Explosionsschutz:**  
*Zündquellen fernhalten - nicht rauchen.*  
*Vor Hitze schützen.*  
*Atemschutzgeräte bereithalten.*
- **7.2 Bedingungen zur sicheren Lagerung unter Berücksichtigung von Unverträglichkeiten**
- **Lagerung:**
- **Anforderung an Lagerräume und Behälter:**  
*Die behördlichen Vorschriften für das Lagern von Druckgaspackungen sind zu beachten.*
- **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.*

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- **Lagerklasse:**
- **Klassifizierung nach Betriebssicherheitsverordnung (BetrSichV):** -
- **7.3 Spezifische Endanwendungen** Keine weiteren relevanten Informationen verfügbar.

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

- **8.1 Zu überwachende Parameter**
- **Zusätzliche Hinweise zur Gestaltung technischer Anlagen:** Keine weiteren Angaben, siehe Abschnitt 7.

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

#### 64-17-5 Ethanol

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

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

#### · 8.2 Begrenzung und Überwachung der Exposition

##### · **Persönliche Schutzausrüstung:**

##### · **Allgemeine Schutz- und Hygienemaßnahmen:**

Von Nahrungsmitteln, Getränken und Futtermitteln fernhalten.

Beschmutzte, getränkte Kleidung sofort ausziehen.

Vor den Pausen und bei Arbeitsende Hände waschen.

Getrennte Aufbewahrung der Schutzkleidung.

Berührung mit den Augen vermeiden.

Berührung mit den Augen und der Haut vermeiden.

##### · **Atemschutz:**

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

##### · **Handschutz:**



Schutzhandschuhe

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

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

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

##### · **Handschuhmaterial**

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

##### · **Durchdringungszeit des Handschuhmaterials**

Die genaue Durchbruchzeit ist beim Schutzhandschuhhersteller zu erfahren und einzuhalten.

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# Sicherheitsdatenblatt

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**· 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:** Klar**· Geruch:** Alkoholartig**· Geruchsschwelle:** Nicht bestimmt.**· pH-Wert:** Nicht bestimmt.**· Zustandsänderung****Schmelzpunkt/Gefrierpunkt:** Nicht bestimmt.**Siedebeginn und Siedebereich:** Nicht anwendbar, da Aerosol.**· Flammpunkt:** Nicht anwendbar, da Aerosol.**· Entzündbarkeit (fest, gasförmig):** Nicht anwendbar.**· Zündtemperatur:** 425 °C**· Zersetzungstemperatur:** Nicht bestimmt.**· Selbstentzündungstemperatur:** Selbstentzündlich an der Luft.**· Explosive Eigenschaften:** Nicht bestimmt.**· Explosionsgrenzen:****Untere:** 3,5 Vol %**Obere:** 15 Vol %**· Dampfdruck bei 20 °C:** 59 hPa**· Dichte bei 20 °C:** 0,62554 g/cm<sup>3</sup>**· Relative Dichte:** Nicht bestimmt.**· Dampfdichte:** Nicht bestimmt.**· Verdampfungsgeschwindigkeit:** Nicht anwendbar.**· Löslichkeit in / Mischbarkeit mit****Wasser:** Vollständig mischbar.**· Verteilungskoeffizient: n-Octanol/Wasser:** Nicht bestimmt.**· Viskosität:****Dynamisch:** Nicht bestimmt.**Kinematisch:** Nicht bestimmt.**· Lösemittelgehalt:****Organische Lösemittel:** 21,0 %**Wasser:** 2,0 %**VOC (EU)** 21,00 %

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<b>Festkörpergehalt:</b>	0,0 %
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<b>· 9.2 Sonstige Angaben</b>	Keine weiteren relevanten Informationen verfügbar.
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### 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** Kontakt mit Wasser setzt brennbare Gase frei.
- **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** Aufgrund der verfügbaren Daten sind die Einstufungskriterien nicht erfüllt.
- **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.
- **Zusätzliche toxikologische Hinweise:**
- **CMR-Wirkungen (krebserzeugende, erbgutverändernde und fortpflanzungsgefährdende Wirkung)**
- **Keimzell-Mutagenität**  
Kann genetische Defekte verursachen.
- **Karzinogenität**  
Kann Krebs erzeugen.
- **Reproduktionstoxizität** Aufgrund der verfügbaren Daten sind die Einstufungskriterien nicht erfüllt.
- **Spezifische Zielorgan-Toxizität bei einmaliger Exposition**  
Aufgrund der verfügbaren Daten sind die Einstufungskriterien nicht erfüllt.
- **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 2 (Selbsteinstufung): deutlich wassergefährdend  
Nicht in das Grundwasser, in Gewässer oder in die Kanalisation gelangen lassen.  
Trinkwassergefährdung bereits beim Auslaufen geringer Mengen in den Untergrund.
- **12.5 Ergebnisse der PBT- und vPvB-Beurteilung**
- **PBT:** Nicht anwendbar.

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- **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

- **14.1 UN-Nummer**
- **ADR, IATA** entfällt
- **IMDG** UN1950

- **14.2 Ordnungsgemäße UN-Versandbezeichnung**
- **ADR, IATA** entfällt
- **IMDG** AEROSOLS

- **14.3 Transportgefahrenklassen**
- **ADR, ADN, IATA**
- **Klasse** entfällt

- **IMDG**



- **Class** 2.1 Gase
- **Label** 2.1

- **14.4 Verpackungsgruppe**
- **ADR, IATA** entfällt

- **14.5 Umweltgefahren:** Nicht anwendbar.

- **14.6 Besondere Vorsichtsmaßnahmen für den Verwender** Nicht anwendbar.
- **EMS-Nummer:** F-D,S-U
- **Stowage Code** SW1 Protected from sources of heat.  
SW22 For AEROSOLS with a maximum capacity of 1 litre:  
Category A. For AEROSOLS with a capacity above 1 litre:  
Category B. For WASTE AEROSOLS: Category C, Clear of living quarters.

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- |   |   |
|---|---|
| · <b>Segregation Code</b>   | SG69 For AEROSOLS with a maximum capacity of 1 litre:<br>Segregation as for class 9. Stow "separated from" class 1 except for division 1.4.<br>For AEROSOLS with a capacity above 1 litre:<br>Segregation as for the appropriate subdivision of class 2.<br>For WASTE AEROSOLS:<br>Segregation as for the appropriate subdivision of class 2. |
| · <b>14.7 Massengutbeförderung gemäß Anhang II des MARPOL-Übereinkommens und gemäß IBC-Code</b> | Nicht anwendbar.  |
| · <b>UN "Model Regulation":</b>   | entfällt  |

### ABSCHNITT 15: Rechtsvorschriften

- **15.1 Vorschriften zu Sicherheit, Gesundheits- und Umweltschutz/spezifische Rechtsvorschriften für den Stoff oder das Gemisch**
- Richtlinie 2012/18/EU
- **Namentlich aufgeführte gefährliche Stoffe - ANHANG I** Keiner der Inhaltsstoffe ist enthalten.
- **Seveso-Kategorie O2** Stoffe und Gemische, die bei Berührung mit Wasser entzündbare Gase entwickeln
- **Mengenschwelle (in Tonnen) für die Anwendung in Betrieben der unteren Klasse** 100 t
- **Mengenschwelle (in Tonnen) für die Anwendung in Betrieben der oberen Klasse** 500 t
- **VERORDNUNG (EG) Nr. 1907/2006 ANHANG XVII** Beschränkungsbedingungen: 3, 28, 29, 40

- **Richtlinie 2011/65/EU zur Beschränkung der Verwendung bestimmter gefährlicher Stoffe in Elektro- und Elektronikgeräten – Anhang II**

Keiner der Inhaltsstoffe ist enthalten.

- **VERORDNUNG (EU) 2019/1148**

- **Anhang I - BESCHRÄNKTE AUSGANGSSTOFFE FÜR EXPLOSIVSTOFFE (Oberer Konzentrationsgrenzwert für eine Genehmigung nach Artikel 5 Absatz 3)**

Keiner der Inhaltsstoffe ist enthalten.

- **Anhang II - MELDEPFLICHTIGE AUSGANGSSTOFFE FÜR EXPLOSIVSTOFFE**

Keiner der Inhaltsstoffe ist enthalten.

- **Verordnung (EG) Nr. 273/2004 betreffend Drogenausgangsstoffe**

Keiner der Inhaltsstoffe ist enthalten.

- **Verordnung (EG) Nr. 111/2005 zur Festlegung von Vorschriften für die Überwachung des Handels mit Drogenaustauschstoffen zwischen der Gemeinschaft und Drittländern**

Keiner der Inhaltsstoffe ist enthalten.

- **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	2,0
NK	21,0

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

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· **Sonstige Vorschriften, Beschränkungen und Verbotsverordnungen**

Das Produkt unterliegt der Anlage 2 der Chemikalienverbotsverordnung (ChemVerbotsV) - Anforderungen in Bezug auf die Abgabe

· **Besonders besorgniserregende Stoffe (SVHC) gemäß REACH, Artikel 57**

64-17-5	Ethanol
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· **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**

H220 Extrem entzündbares Gas.

H225 Flüssigkeit und Dampf leicht entzündbar.

H280 Enthält Gas unter Druck; kann bei Erwärmung explodieren.

H340 Kann genetische Defekte verursachen.

H350 Kann Krebs erzeugen.

· **Abkürzungen und Akronyme:**

ADR: Accord relatif au transport international 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)

PBT: Persistent, Bioaccumulative and Toxic

SVHC: Substances of Very High Concern

vPvB: very Persistent and very Bioaccumulative

Flam. Gas 1A: Entzündbare Gase – Kategorie 1A

Aerosol 3: Aerosole – Kategorie 3

Press. Gas (Comp.): Gase unter Druck – verdichtetes Gas

Flam. Liq. 2: Entzündbare Flüssigkeiten – Kategorie 2

Water-react. 1: Stoffe und Gemische, die in Berührung mit Wasser entzündbare Gase entwickeln – Kategorie 1

Muta. 1B: Keimzellmutagenität – Kategorie 1B

Carc. 1A: Karzinogenität – Kategorie 1A

**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:** CytoFix

· **Articolo numero:** 22805-01, 22805-02

· **UFI:** 6F44-C0AX-700W-ERCW

· **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: [sgkceck@aol.com](mailto:sgkceck@aol.com)

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

Societa Italiana Chimici

Via Rio Nell Ellba 140

00138 Rome, Italy

Tel: 39 06 8800211

Fax: 39 30 06 8815313

Web: [www.sichim.com](http://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

Water-react. 1 H260 A contatto con l'acqua libera gas infiammabili che possono infiammarsi spontaneamente.



GHS08 pericolo per la salute

Muta. 1B H340 Può provocare alterazioni genetiche.

Carc. 1A H350 Può provocare il cancro.

Aerosol 3 H229 Contenitore pressurizzato: può esplodere se riscaldato.

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

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**Pittogrammi di pericolo**

GHS02 GHS08

**Avvertenza Pericolo****Componenti pericolosi che ne determinano l'etichettatura:**

gas di petrolio, liquefatti, addolciti

**Indicazioni di pericolo**

H229 Contenitore pressurizzato: può esplodere se riscaldato.

H260 A contatto con l'acqua libera gas infiammabili che possono infiammarsi spontaneamente.

H340 Può provocare alterazioni genetiche.

H350 Può provocare il cancro.

**Consigli di prudenza**

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

P223 Evitare qualunque contatto con l'acqua.

P231+P232 Manipolare e conservare in atmosfera di gas inerte. Tenere al riparo dall'umidità.

P405 Conservare sotto chiave.

P410+P412 Proteggere dai raggi solari. Non esporre a temperature superiori a 50 °C/122 °F.

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: 68476-86-8	gas di petrolio, liquefatti, addolciti	>50-≤100%
EINECS: 270-705-8	⚠ Flam. Gas 1A, H220; ⚠ Muta. 1B, H340; Carc. 1A, H350; Press. Gas (Comp.), H280	
CAS: 64-17-5	etanolo	>10-≤25%
EINECS: 200-578-6	⚠ Flam. Liq. 2, H225	

**SVHC**

64-17-5	etanolo
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**Ulteriori indicazioni:** Il testo dell'avvertenza dei pericoli citati può essere appreso dal capitolo 16

### SEZIONE 4: Misure di primo soccorso

**4.1 Descrizione delle misure di primo soccorso****Inalazione:** Portare in zona ben areata, in caso di disturbi consultare il medico.**Contatto con la pelle:** Generalmente il prodotto non è irritante per la pelle.

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- **Contatto con gli occhi:**  
Lavare con acqua corrente per diversi minuti tenendo le palpebre ben aperte. Se persiste il dolore consultare il medico.
- **Ingestione:** Se il dolore persiste consultare il medico.
- **4.2 Principali sintomi ed effetti, sia acuti che ritardati** Non sono disponibili altre informazioni.
- **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:** Adottare provvedimenti antiincendio nei dintorni della zona colpita.
- **Mezzi di estinzione inadatti per motivi di sicurezza:** Acqua
- **5.2 Pericoli speciali derivanti dalla sostanza o dalla miscela** Non sono disponibili altre informazioni.
- **5.3 Raccomandazioni per gli addetti all'estinzione degli incendi**
- **Mezzi protettivi specifici:** Non sono richiesti provvedimenti particolari.

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

- **6.1 Precauzioni personali, dispositivi di protezione e procedure in caso di emergenza**  
Indossare equipaggiamento protettivo. Allontanare le persone non equipaggiate.
- **6.2 Precauzioni ambientali:** Impedire infiltrazioni nella fognatura/nelle acque superficiali/nelle acque freatiche.
- **6.3 Metodi e materiali per il contenimento e per la bonifica:**  
Smaltimento del materiale contaminato conformemente al punto 13.  
Provvedere ad una sufficiente areazione.  
Non dilavare con acqua o detergenti liquidi.
- **6.4 Riferimento ad altre sezioni**  
Per informazioni relative ad 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.
- **Indicazioni in caso di incendio ed esplosione:**  
Tenere lontano da fonti di calore, non fumare.  
Proteggere dal calore.  
Tener pronto il respiratore.
- **7.2 Condizioni per lo stoccaggio sicuro, comprese eventuali incompatibilità**
- **Stoccaggio:**
- **Requisiti dei magazzini e dei recipienti:**  
Osservare le disposizioni amministrative relative allo stoccaggio di spray.
- **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.

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· **7.3 Usi finali particolari** Non sono disponibili altre informazioni.

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

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

· **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	

· **Ulteriori indicazioni:** Le liste valide alla data di compilazione sono state usate come base.· **8.2 Controlli dell'esposizione**· **Mezzi protettivi individuali:**· **Norme generali protettive e di igiene del lavoro:**

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

· **Maschera protettiva:**

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

· **Guanti protettivi:**

Guanti protettivi

*Il materiale dei guanti deve essere impermeabile e stabile contro il prodotto/ la sostanza/ la formulazione.*

*A causa della mancanza di tests non può essere consigliato alcun tipo di materiale per i guanti con cui manipolare il prodotto / la formulazione / la miscela di sostanze chimiche.*

*Scelta del materiale dei guanti in considerazione dei tempi di passaggio, dei tassi di permeazione e della degradazione.*

· **Materiale dei guanti**

*La scelta dei guanti adatti non dipende soltanto dal materiale bensì anche da altre caratteristiche di qualità variabili da un produttore a un altro. Poiché il prodotto rappresenta una formulazione di più sostanze, la stabilità dei materiali dei guanti non è calcolabile in anticipo e deve essere testata prima dell'impiego*

· **Tempo di permeazione del materiale dei guanti**

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

· **Occhiali protettivi:**

Occhiali protettivi a tenuta

IT

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### SEZIONE 9: Proprietà fisiche e chimiche

#### · 9.1 Informazioni sulle proprietà fisiche e chimiche fondamentali

##### · Indicazioni generali

##### · Aspetto:

**Forma:** Liquido

**Colore:** Chiaro

· **Odore:** Simile all'alcool

· **Soglia olfattiva:** Non definito.

· **valori di pH:** Non definito.

##### · Cambiamento di stato

**Punto di fusione/punto di congelamento:** Non definito.

**Punto di ebollizione iniziale e intervallo di ebollizione:** Non applicabile a causa di aerosol.

· **Punto di infiammabilità:** Non applicabile a causa di aerosol.

· **Infiammabilità (solidi, gas):** Non applicabile.

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

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

· **Temperatura di autoaccensione:** Spontaneamente infiammabile all'aria.

· **Proprietà esplosive:** Non definito.

##### · Limiti di infiammabilità:

**Inferiore:** 3,5 Vol %

**Superiore:** 15 Vol %

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

· **Densità a 20 °C:** 0,62554 g/cm<sup>3</sup>

· **Densità relativa:** Non definito.

· **Densità di vapore:** Non definito.

· **Velocità di evaporazione:** Non applicabile.

##### · Solubilità in/Miscibilità con acqua:

Completamente miscibile.

· **Coefficiente di ripartizione: n-ottanolo/acqua:** Non definito.

##### · Viscosità:

**Dinamica:** Non definito.

**Cinematica:** Non definito.

##### · Tenore del solvente:

**Solventi organici:** 21,0 %

**Acqua:** 2,0 %

**VOC (CE)** 21,00 %

**Contenuto solido:** 0,0 %

· **9.2 Altre informazioni** Non sono disponibili altre informazioni.

### SEZIONE 10: Stabilità e reattività

· **10.1 Reattività** Non sono disponibili altre informazioni.

(continua a pagina 6)

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

Stampato il: 26.04.2022

Revisione: 26.04.2022

**Denominazione commerciale:** CytoFix

(Segue da pagina 5)

- **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** Il contatto con acqua libera gas infiammabili.
- **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** Basandosi sui dati disponibili i criteri di classificazione non sono soddisfatti.
- **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.
- **Ulteriori dati tossicologici:**
- **Effetti CMR (cancerogenicità, mutagenicità e tossicità per la riproduzione)**
- **Mutagenicità delle cellule germinali**  
Può provocare alterazioni genetiche.
- **Cancerogenicità**  
Può provocare il cancro.
- **Tossicità per la riproduzione** Basandosi sui dati disponibili i criteri di classificazione non sono soddisfatti.
- **Tossicità specifica per organi bersaglio (STOT) - esposizione singola**  
Basandosi sui dati disponibili i criteri di classificazione non sono soddisfatti.
- **Tossicità specifica per organi bersaglio (STOT) - esposizione ripetuta**  
Basandosi sui dati disponibili i criteri di classificazione non sono soddisfatti.
- **Pericolo in caso di aspirazione** Basandosi sui dati disponibili i criteri di classificazione non sono soddisfatti.

### SEZIONE 12: Informazioni ecologiche

- **12.1 Tossicità**
- **Tossicità acquatica:** Non sono disponibili altre informazioni.
- **12.2 Persistenza e degradabilità** Non sono disponibili altre informazioni.
- **12.3 Potenziale di bioaccumulo** Non sono disponibili altre informazioni.
- **12.4 Mobilità nel suolo** Non sono disponibili altre informazioni.
- **Ulteriori indicazioni in materia ambientale:**
- **Ulteriori indicazioni:**  
Pericolosità per le acque classe 2 (D) (Autoclassificazione): pericoloso  
Non immettere nelle acque freatiche, nei corsi d'acqua o nelle fognature.  
Pericolo per le acque potabili anche in caso di perdite nel sottosuolo di piccole quantità di prodotto.
- **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.

(continua a pagina 7)

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

Stampato il: 26.04.2022

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Denominazione commerciale: **CytoFix**

(Segue da pagina 6)

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

### SEZIONE 14: Informazioni sul trasporto

· **14.1 Numero ONU**

- **ADR, IATA** non applicabile
- **IMDG** UN1950

· **14.2 Nome di spedizione dell'ONU**

- **ADR, IATA** non applicabile
- **IMDG** AEROSOLS

· **14.3 Classi di pericolo connesso al trasporto**

- **ADR, ADN, IATA**
- **Classe** non applicabile

· **IMDG**



- **Class** 2.1 Gas
- **Label** 2.1

· **14.4 Gruppo di imballaggio**

- **ADR, IATA** non applicabile

· **14.5 Pericoli per l'ambiente:**

Non applicabile.

· **14.6 Precauzioni speciali per gli utilizzatori**

- **Numero EMS:** Non applicabile.
- **Stowage Code** F-D,S-U
- **Segregation Code** SW1 Protected from sources of heat.  
SW22 For AEROSOLS with a maximum capacity of 1 litre: Category A. For AEROSOLS with a capacity above 1 litre: Category B. For WASTE AEROSOLS: Category C, Clear of living quarters.  
SG69 For AEROSOLS with a maximum capacity of 1 litre: Segregation as for class 9. Stow "separated from" class 1 except for division 1.4.  
For AEROSOLS with a capacity above 1 litre: Segregation as for the appropriate subdivision of class 2.  
For WASTE AEROSOLS: Segregation as for the appropriate subdivision of class 2.

· **14.7 Trasporto di rinfuse secondo l'allegato II di**

**MARPOL ed il codice IBC** Non applicabile.

· **UN "Model Regulation":**

non applicabile

(continua a pagina 8)

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

Stampato il: 26.04.2022

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Denominazione commerciale: CytoFix

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### SEZIONE 15: Informazioni sulla regolamentazione

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

· **Direttiva 2012/18/UE**

· **Sostanze pericolose specificate - ALLEGATO I** Nessuno dei componenti è contenuto.

· **Categoria Seveso O2** Sostanze e miscele che, a contatto con l'acqua, liberano gas infiammabili, categoria I

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

· **Quantità limite (tonnellate) ai fini dell'applicazione dei requisiti di soglia superiore** 500 t

· **REGOLAMENTO (CE) n. 1907/2006 ALLEGATO XVII** Restrizioni: 3, 28, 29, 40

· **Direttiva 2011/65/UE sulla restrizione dell'uso di determinate sostanze pericolose nelle apparecchiature elettriche ed elettroniche - Allegato II**

Nessuno dei componenti è contenuto.

· **REGOLAMENTO (UE) 2019/1148**

· **Allegato I - PRECURSORI DI ESPLOSIVI SOGGETTI A RESTRIZIONI (Valore limite superiore ai fini della concessione di licenze a norma dell'articolo 5, paragrafo 3)**

Nessuno dei componenti è contenuto.

· **Allegato II - PRECURSORI DI ESPLOSIVI SOGGETTI A SEGNALAZIONE**

Nessuno dei componenti è contenuto.

· **Regolamento (CE) n. 273/2004 relativo ai precursori di droghe**

Nessuno dei componenti è contenuto.

· **Regolamento (CE) N. 111/2005 recante norme per il controllo del commercio dei precursori di droghe tra la Comunità e i paesi terzi**

Nessuno dei componenti è contenuto.

· **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	21,0

· **Ulteriori disposizioni, limitazioni e decreti proibitivi**

· **Sostanze estremamente preoccupanti (SVHC) ai sensi della regolamento REACH, articolo 57**

64-17-5 | etanolo

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

### SEZIONE 16: Altre informazioni

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

· **Fraasi rilevanti**

H220 Gas altamente infiammabile.

H225 Liquido e vapori facilmente infiammabili.

H280 Contiene gas sotto pressione; può esplodere se riscaldato.

H340 Può provocare alterazioni genetiche.

H350 Può provocare il cancro.

(continua a pagina 9)

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

Stampato il: 26.04.2022

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**Denominazione commerciale: CytoFix**

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**· Abbreviazioni e acronimi:**

*ADR: Accord relatif au transport international 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)*

*PBT: Persistent, Bioaccumulative and Toxic*

*SVHC: Substances of Very High Concern*

*vPvB: very Persistent and very Bioaccumulative*

*Flam. Gas 1A: Gas infiammabili – Categoria 1A*

*Aerosol 3: Aerosol – Categoria 3*

*Press. Gas (Comp.): Gas sotto pressione – Gas compresso*

*Flam. Liq. 2: Liquidi infiammabili – Categoria 2*

*Water-react. 1: Sostanze e miscele che, a contatto con l'acqua, sviluppano gas infiammabili – Categoria 1*

*Muta. 1B: Mutagenicità sulle cellule germinali – Categoria 1B*

*Carc. 1A: Cancerogenicità – Categoria 1A*

IT

물질안전보건자료  
GHS에 따라

인쇄일자: 2022.04.26

개정: 2022.04.26

**1 화학제품과 회사에 관한 정보**

- 제품 식별자
- 제품명: **CytoFix**
- 상품번호: 22805-01, 22805-02
- 해당 순물질이나 혼합물의 관련 하위용도 및 사용금지용도
- 제품의 권고 용도와 사용상의 제한: CytoFix
- 제품의 권고 용도와 사용상의 제한: 실험실 화학품
- 안전데이터표(Safety Data Sheet)내 공급업체 관련 상세 정보
- 제조자/수입자/유통업자 정보:  
Electron Microscopy Sciences  
1560 Industry Road  
USA-Hatfield, PA 19440  
Tel: 215-412-8400 Fax: 215-412-8450  
email: sgkcck@aol.com  
www.emsdiasum.com
- Samchang Commercial Co., Ltd.  
Yeo Eui Do  
PO Box 1110  
Seoul, Korea  
Tel: 82 2 703 3040  
Fax: 82 2 717 3298

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- Daedok Science, Co. Ltd.  
34141 E10 Korea Advanced Institute of Science  
Guseong-Dong, Yuseong-gu, Daejeon,  
Korea  
Phone: 82 42 710 2091  
Fax: 82 42 367 0005  
Website: www.labsmro.com
- 추가적인 정보 획득 가능: Product safety department
- 비상연락 전화번호:  
ChemTrec 1-800-424-9300 Contract CCN7661  
1-703-527-3887

**2 유해성·위험성**

- 순물질 또는 혼합물의 분류



화염

물반응성 물질 및 혼합물 – 구분1 H260 물과 접촉 시 자연발화 가능성이 있는 인화성 가스를 발생시킴



건강에 위험

생식세포 변이원성 – 구분1B H340 유전적인 결함을 일으킬 수 있음  
발암성 – 구분1A H350 암을 일으킬 수 있음



(2 쪽에 계속)



# 물질안전보건자료 GHS에 따라

인쇄일자: 2022.04.26

개정: 2022.04.26

**제품명: CytoFix**

(1 쪽부터 계속)

심한 눈 손상성/눈 자극성 – 구분 2 H319 눈에 심한 자극을 일으킴

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



- 신호어 위험
- 상표상에 명확히 위험성이 표시된 성분: Petroleum gases, liquefied, sweetened
- 유해·위험문구
  - 물과 접촉 시 자연발화 가능성이 있는 인화성 가스를 발생시킴
  - 눈에 심한 자극을 일으킴
  - 유전적인 결함을 일으킬 수 있음
  - 암을 일으킬 수 있음
- 예방조치문구
  - 격렬한 반응 및 화재의 가능성이 있으므로 물과 접촉하지 않게 하시오.
  - 불활성 기체 하에서 취급하고, 습기를 방지하십시오.
  - 보호장갑·보호의·보안경·안면보호구를 착용하십시오.
  - 눈에 묻으면 몇 분간 물로 조심해서 씻으십시오. 가능하면 콘택트렌즈를 제거하십시오. 계속 씻으십시오.
  - 밀봉하여 저장하십시오.
  - (지방/지역/국가/국제 규정에 따라) 에 내용물/용기를 폐기하십시오.
- 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 점 가 물 이 함유된 아래에 열 거 된 물 질 로 만 들 어 진 혼 합 물.

· 위험 요소:

68476-86-8	Petroleum gases, liquefied, sweetened ⚠ 인화성 가스 – 구분1, H220; ⚠ 고압가스- 압축가스, H280; ⚠ 생식세포 변이원성- 구분1B, H340; 발암성 – 구분1A, H350	>50-≤100%
64-17-5	Ethyl alcohol ⚠ 인화성 액체 – 구분2, H225	>10-≤25%

### 4 응급조치 요령

- 응급조치요령 내용
- 흡입했을 때: 신선한 공기를 쐬고, 통증이 있을 때는 의료진의 도움을 구한다.
- 피부에 접촉했을 때: 일반적으로 이 제품은 피부에 자극적이지 않다.
- 눈에 들어갔을 때: 흐르는 물에 눈을 몇분동안 씻어내고나서, 증상이 지속될 경우에는 의사와 상담한다
- 먹었을 때: 증상이 지속될 경우에는 의사와 상담한다.
- 기타 의사의 주의사항:
- 가장 중요한 급·만성 증상 및 영향 추가적인 정보가 존재하지 않습니다.

(3 쪽에 계속)

# 물질안전보건자료 GHS에 따라

인쇄일자: 2022.04.26

개정: 2022.04.26

제품명: CytoFix

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

(2 쪽부터계속)

## 5 폭발·화재시 대처방법

- 소화제
- 적절한 소화제: 주 변 환 경에 맞는 화 재 진 화방법을 사용한다.
- 부적절한 소화제: 물
- 본 화학물질이나 혼합물에서 발생하는 특별 유해성 추가적인 정보가 존재하지 않습니다.
- 소방관에 대한 권고사항
- 화재 진압 시 착용할 보호구 및 예방조치: 특 별 한 조 치 가 필요없음.

## 6 누출 사고 시 대처방법

- 개인적 예방조치, 보호장비 및 응급처치 절차 안 전 장 비 착용하고, 무 방 비 의 사 람 은 격 리 시킨다.
- 환경 관련 예방조치: 하수도망/해수면위의물/지하수로도달하지않게한다.
- 밀폐 및 정화 방법과 소재:
  - 항목 13에 따라 오염된 물질을 쓰레기로 처분한다.
  - 충분한 환기가 되도록 한다.
  - 물 이 나 묽 은 세 척 제 로 씻 어 내지 마 십시 오
- 타 섹션 참조
  - 안 전 관 리 에 대 한 정보 는 제 7 장 을 참고하시오.
  - 개 인 보 호 장 비 에 대 한 정보 는 제 8 장 을 참고하시오.
  - 쓰 레 기 처 리 에 대 한 정보 는 제 13 장 을 참고하시오.

## 7 취급 및 저장방법

- 취급:
  - 안전 취급을 위한 예방조치
    - 작업장에서는통풍이잘되고/습기제거가잘되게주의한다.
    - 조심스럽게용기를개봉하거나취급한다.
  - 화재 및 폭발 사고 예방대책에 관한 정보:
    - 발 화 요 소 는 멀 리 둔 다-금 연.
    - 열로부터보호한다.
    - 호흡보호장비를항상비치한다.
  - 혼합위험성 등 안전 저장 조건
- 보관:
  - 안전한 저장 방법: 압력가스상자보관에관한관청의지시에주의해야한다.
  - 하나의 공동 보관 시설에 대한 보관 관련 정보: 필 요없음
  - 보 관 조 건 에 관 한 추가적인 정보:
    - 용기를새지않게밀폐한채보관한다.
    - 밀폐된 용기속에서늘 하고 건 조 하 게 보 관 한 다.
    - 열이나직사광선으로부터보호한다.
  - 구체적 최종 사용자 추가적인 정보가 존재하지 않습니다.

## 8 노출방지 및 개인보호구

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

(4 쪽에계속)

# 물질안전보건자료 GHS에 따라

인쇄일자: 2022.04.26

개정: 2022.04.26

**제품명: CytoFix**

(3 쪽부터계속)

· 통제 변수

· 화학물질의 노출기준, 생물학적 노출기준 등:

**64-17-5 Ethyl alcohol**

OELV (KR)	장기간의값: 1000 ppm 발암성 1A
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: 1000 ppm A3

· 추가 정보: 제조할 당시에 유효한 목록을 기초로 사용했다.

· 노출 통제

· 개인 보호구

· 일반적보호조치및위생조치:

- 식료품, 음료수나 사료로부터 멀리 떨어져 놓는다.
- 더러워지거나 음료수 가문은 옷은 즉시 탈의한다.
- 휴식 전 이나 작업이 끝날때마다 손을 씻는다.
- 방호복은 따로 보관한다.
- 눈과의 접촉을 피한다.
- 눈과 피부와의 접촉을 피한다.

· 호흡기 보호:

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

· 손 보호:



보호용 장갑

장갑재질은제품 / 원료 / 조제를투과시키지않아야하고, 내구성이있어야한다.  
테스트를하지 않았기 때문에 제품 / 조제 / 화학 혼합물에 적합한 장갑재질에 대한 추천이 없다.  
투과 시간, 침투율과 저하를 고려해서 장갑 재료를 선택한다.

· 장갑의재료

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

· 장갑 재료의 투과 시간 정확한관통시간은보호장갑제조자에의하여인지되고, 준수되어야한다.

· 눈 보호:



꼭조이는보안경

## 9 물리화학적 특성

· 기본 물리 및 화학적 특성에 대한 정보

· 일반정보

· 외형

물리적 상태: 액체  
색: 밝은

(5 쪽에계속)

물질안전보건자료  
GHS에 따라

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(4 쪽부터계속)

·냄새:	알코올종류의
·후각역치	알맞지않다.
·pH:	알맞지않다.
·상태변화	
·녹는점/어는점:	맞지않는
·초기 끓는점과 끓는점 범위:	연 무 질 이 기 때 문 에 해당 사항없음.
·인화점:	연 무 질 이 기 에 해당사항 없음.
·인화성(고체, 기체):	해당사항 없음.
·점화온도:	425 °C
·분해 온도:	알맞지않다.
·자기점화:	공기중에서자연발화하는
·폭발위험:	알맞지않다.
·인화 또는 폭발 범위의 상한/하한	
·아래로:	3.5 Vol %
·위로:	15 Vol %
·증기압 의경우 20 °C:	59 hPa
·밀도 의경우 20 °C:	0.62554 g/cm <sup>3</sup>
·비중:	알맞지않다.
·증기밀도:	알맞지않다.
·증발 속도:	해당사항 없음.
·용해도:	
·물:	완전히혼합할수있는
·n 옥탄올/물 분배계수:	알맞지않다.
·점도:	
·역학성:	알맞지않다.
·동점성:	알맞지않다.
·용매내용물	
·유기용매:	21.0 %
·물:	2.0 %
·VOC (EU)	21.00 %
·고체의 함량:	0.0 %
·기타 정보	추가적인 정보가 존재하지 않습니다.

**10 안정성 및 반응성**

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

(6 쪽에계속)

# 물질안전보건자료 GHS에 따라

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(5 쪽부터 계속)

· **유해분해물질:** 위험성 있는 분해물들은 알려지지 않았다.

## 11 독성에 관한 정보

· **독성학적 영향에 대한 정보**

· **급성 독성:**

· **일차적 자극 효과:**

· **피부 부식성 또는 자극성:** 무자극

· **심한 눈 손상 또는 자극성:** 자극

· **감각화:** 민감한 영향이 없는 것으로 알려져 있다.

· **추 가 적 인 독성에 관한 정보:**

이 제품은 유럽 공동체의 공동 분류 원칙의 합법적인 절차에 근거하여 최근에 발효된 원고에서 아래 위험들의 사전 준비에 대하여 제시하고 있다.

자극적인

암을 유발하는

이 제품은 유전적 장애를 유발할 수 있다.

· **다음 종류의 잠재적인 효과에 대한 정보**

· **CMR-효과 (암 유발, 돌연변이성 그리고 생식 독성)**

생식세포 변이원성- 구분1B, 발암성 - 구분1A

## 12 환경에 미치는 영향

· **독성**

· **수생독성:** 추가적인 정보가 존재하지 않습니다.

· **지속성 및 분해성** 추가적인 정보가 존재하지 않습니다.

· **환 경 시 스템 에 서 의 행 동:**

· **생물농축 잠재성** 추가적인 정보가 존재하지 않습니다.

· **토양내 이동성** 추가적인 정보가 존재하지 않습니다.

· **추가적인 생태학 정보:**

· **일반 특징:**

수질오염등급 2 (자체등급분류): 수질오염이된

지하수나, 하천으로 또는 하수도망에도 달하지 않게 한다.

지하수로 경미한 양이 유입되었을 경우 엔이미식수오염 상태이다

· **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:** 생활쓰레기와 함께 처리되어서는 안 된다. 하수도망으로 유입되어서는 안 된다.

· **비위생적 포장:**

· **권고:** 당국의 지침에 입각한 쓰레기 처리.

· **추 천 세 정 제:** 경우에 따라서 세제가 첨가된 물

KR

(7 쪽에 계속)

# 물질안전보건자료 GHS에 따라


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(6 쪽부터계속)

## 14 운송에 필요한 정보

<ul style="list-style-type: none"> <li>· 유엔 번호</li> <li>· ADR, IATA</li> <li>· IMDG</li> </ul>	<p style="text-align: right;">누락되다 UN1950</p>
<ul style="list-style-type: none"> <li>· UN 적정 선적명</li> <li>· ADR, IATA</li> <li>· IMDG</li> </ul>	<p style="text-align: right;">누락되다 AEROSOLS</p>
<ul style="list-style-type: none"> <li>· 교통 위험 클래스</li> <li>· ADR, ADN, IATA</li> <li>· 등급</li> </ul>	<p style="text-align: right;">누락되다</p>
<ul style="list-style-type: none"> <li>· IMDG</li> </ul> <div style="text-align: center; margin: 10px 0;">  </div> <ul style="list-style-type: none"> <li>· Class</li> <li>· Label</li> </ul>	<p style="text-align: right;">2.1 가스 2.1</p>
<ul style="list-style-type: none"> <li>· 용기등급</li> <li>· ADR, IATA</li> </ul>	<p style="text-align: right;">누락되다</p>
<ul style="list-style-type: none"> <li>· 환경적 유해물질:</li> </ul>	<p style="text-align: right;">해당사항 없음.</p>
<ul style="list-style-type: none"> <li>· 이용자 특별 예방조치</li> <li>· EMS-번호:</li> <li>· Stowage Code</li>    <li>· Segregation Code</li> </ul>	<p style="text-align: right;">해당사항 없음. F-D,S-U SW1 Protected from sources of heat. SW22 For AEROSOLS with a maximum capacity of 1 litre: Category A. For AEROSOLS with a capacity above 1 litre: Category B. For WASTE AEROSOLS: Category C, Clear of living quarters. SG69 For AEROSOLS with a maximum capacity of 1 litre: Segregation as for class 9. Stow "separated from" class 1 except for division 1.4. For AEROSOLS with a capacity above 1 litre: Segregation as for the appropriate subdivision of class 2. For WASTE AEROSOLS: Segregation as for the appropriate subdivision of class 2.</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 style="text-align: right;">해당사항 없음.</p>
<ul style="list-style-type: none"> <li>· UN "모범 규제":</li> </ul>	<p style="text-align: right;">누락되다</p>

## 15 법적 규제현황

<ul style="list-style-type: none"> <li>· 산업안전보건법에 의한 규제:</li> </ul>	
<ul style="list-style-type: none"> <li>· 제조 등 금지물질:</li> </ul>	<p>어떠한내용물도목록화되어있지않다</p>

(8 쪽에계속)

# 물질안전보건자료 GHS에 따라

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(7 쪽부터계속)

**· 허가대상물질:**

어떠한내용물도목록화되어있지않다

**· 관리대상유해물질:**

어떠한내용물도목록화되어있지않다

**· 작업환경측정 대상 유해인자**

어떠한내용물도목록화되어있지않다

**· 특수건강진단 대상 유해인자**

어떠한내용물도목록화되어있지않다

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

**· Korean Existing Chemical Inventory**

68476-86-8	Petroleum gases, liquefied, sweetened	KE-28192
64-17-5	Ethyl alcohol	KE-13217
7732-18-5	물	KE-35400

**· 화학물질관리법**

**· 사고대비물질**

어떠한내용물도목록화되어있지않다

**· 금지물질**

어떠한내용물도목록화되어있지않다

**· 제한물질**

어떠한내용물도목록화되어있지않다

**· 유독물질**

어떠한내용물도목록화되어있지않다

**· 허가물질**

어떠한내용물도목록화되어있지않다

**· 위험물안전관리법 (위험물 및 지정수량) 제 4: 400 리터**

**· 등록 또는 신고 면제대상 화학물질**

7732-18-5 | 물

**· '21년까지 등록하여야 할 암, 돌연변이, 생식능력 이상을 일으키거나 일으킬 우려가 있는 기존화학물질**

어떠한내용물도목록화되어있지않다

**· 중점관리물질의 지정**

**· 표1 중점관리물질(제2조 관련)**

어떠한내용물도목록화되어있지않다

**· 표2 중점관리물질(제2조 관련)**

어떠한내용물도목록화되어있지않다

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

**· GHS 그림문자**



GHS02    GHS07    GHS08

**· 신호어 위험**

**· 상표상에명확히위험성이표시된성분:**

Petroleum gases, liquefied, sweetened

(9 쪽에계속)

# 물질안전보건자료 GHS에 따라

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(8 쪽부터 계속)

**· 유해·위험문구**

- 물과 접촉 시 자연발화 가능성이 있는 인화성 가스를 발생시킴
- 눈에 심한 자극을 일으킴
- 유전적인 결함을 일으킬 수 있음
- 암을 일으킬 수 있음

**· 예방조치문구**

- 격렬한 반응 및 화재의 가능성이 있으므로 물과 접촉하지 않게 하시오.
- 불활성 기체 하에서 취급하고, 습기를 방지하십시오.
- 보호장갑·보호의·보안경·안면보호구를 착용하십시오.
- 눈에 묻으면 몇 분간 물로 조심해서 씻으시오. 가능하면 콘택트렌즈를 제거하십시오. 계속 씻으시오.
- 밀봉하여 저장하십시오.
- (지방/지역/국가/국제 규정에 따라) 에 내용물/용기를 폐기하십시오.

**· 국내규정:**

**· 사용제한에 대한 정보:**

- 노동자들은이러한예방준비하에암을유발시키는성분을함유한위험물을버리지말아야한다
- 개별적인경우에관청은예외를허가할수있다.

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

## 16 그 밖의 참고사항

이 보고서는 우리 지식에 대한 오늘날의 상태에 대하여 평가하고 있다  
 하지만 이 보고서는 생산 특성에 관한 보증은 기술하지 않았으며 계약적인 법률 관계에 기반을 두고 있지 않다

**· 담당자:**

**· 최초 작성일자:** 2022.04.26

**· 개정 횟수 및 최종 개정일자:** 1 / 2022.04.26

**· 약어와 두문자어:**

- ADR: Accord relatif au transport international 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)
- PBT: Persistent, Bioaccumulative and Toxic
- vPvB: very Persistent and very Bioaccumulative



# Ficha de datos de seguridad

## según 1907/2006/CE, Artículo 31

fecha de impresión 26.04.2022

Revisión: 26.04.2022

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

#### · 1.1 Identificador del producto

· **Nombre comercial:** CytoFix

· **Número del artículo:** 22805-01, 22805-02

· **UFI:** 6F44-C0AX-700W-ERCW

#### · 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: [sgkceck@aol.com](mailto:sgkceck@aol.com)

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

Water-react. 1 H260 En contacto con el agua desprende gases inflamables que pueden inflamarse espontáneamente.



GHS08 peligro para la salud

Muta. 1B H340 Puede provocar defectos genéticos.

Carc. 1A H350 Puede provocar cáncer.

Aerosol 3 H229 Recipiente a presión: Puede reventar si se calienta.

#### · 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.

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· **Pictogramas de peligro**

GHS02 GHS08

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

gases del petróleo, licuados, desazufrados

· **Indicaciones de peligro**

H229 Recipiente a presión: Puede reventar si se calienta.

H260 En contacto con el agua desprende gases inflamables que pueden inflamarse espontáneamente.

H340 Puede provocar defectos genéticos.

H350 Puede provocar cáncer.

· **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.

P223 Evitar el contacto con el agua.

P231+P232 Manipular y almacenar el contenido en un medio de gas inerte. Proteger de la humedad.

P405 Guardar bajo llave.

P410+P412 Proteger de la luz del sol. No exponer a temperaturas superiores a 50 °C/122 °F.

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: 68476-86-8	gases del petróleo, licuados, desazufrados	>50-≤100%
EINECS: 270-705-8	⚠ Flam. Gas 1A, H220; ⚠ Muta. 1B, H340; Carc. 1A, H350; Press. Gas (Comp.), H280	
CAS: 64-17-5	etanol	>10-≤25%
EINECS: 200-578-6	⚠ Flam. Liq. 2, H225	

· **SVHC**

64-17-5	etanol
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· **Indicaciones adicionales:** El texto de los posibles riesgos aquí indicados se puede consultar en el capítulo 16.

### SECCIÓN 4: Primeros auxilios

· **4.1 Descripción de los primeros auxilios**· **En caso de inhalación del producto:** Suministrar aire fresco. En caso de trastornos, consultar al médico.· **En caso de contacto con la piel:** Por regla general, el producto no irrita la piel.

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- **En caso de con los ojos:**  
Limpiar los ojos abiertos durante varios minutos con agua corriente. En caso de trastornos persistentes consultar un médico.
- **En caso de ingestión:** Consultar un médico si los trastornos persisten.
- **4.2 Principales síntomas y efectos, agudos y retardados** No existen más datos relevantes disponibles.
- **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:** Combatir los incendios con medidas adaptados al ambiente circundante.
- **Sustancias extintoras inapropiadas por razones de seguridad:** Agua
- **5.2 Peligros específicos derivados de la sustancia o la mezcla** No existen más datos relevantes disponibles.
- **5.3 Recomendaciones para el personal de lucha contra incendios**
- **Equipo especial de protección:** No se requieren medidas especiales.

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

- **6.1 Precauciones personales, equipo de protección y procedimientos de emergencia**  
Llevar puesto equipo de protección. Mantener alejadas las personas sin protección.
- **6.2 Precauciones relativas al medio ambiente:**  
Evitar que penetre en la canalización /aguas de superficie /agua subterráneas.
- **6.3 Métodos y material de contención y de limpieza:**  
Desechar el material contaminado como vertido según item 13.  
Asegurar suficiente ventilación.  
No enjuagar con agua ni productos de limpieza acuosos.
- **6.4 Referencia a otras secciones**  
Ver capítulo 7 para mayor información sobre una manipulación segura.  
Ver capítulo 8 para mayor información sobre el equipo personal de protección.  
Para mayor información sobre cómo desechar el producto, ver capítulo 13.

### SECCIÓN 7: Manipulación y almacenamiento

- **7.1 Precauciones para una manipulación segura**  
Asegurar suficiente ventilación /aspiración en el puesto de trabajo.  
Abrir y manejar el recipiente con cuidado.
- **Prevención de incendios y explosiones:**  
Mantener alejadas las fuentes de encendido. No fumar.  
Proteger del calor.  
Tener preparados los aparatos respiratorios.
- **7.2 Condiciones de almacenamiento seguro, incluidas posibles incompatibilidades**
- **Almacenamiento:**
- **Exigencias con respecto al almacén y los recipientes:**  
Observar las prescripciones vigentes para el almacenamiento de envases con gas comprimido.
- **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.

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

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

· **8.1 Parámetros de control**· **Instrucciones adicionales para el acondicionamiento de instalaciones técnicas:**

Sin datos adicionales, ver punto 7.

· **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	

· **Indicaciones adicionales:** Como base se han utilizado las listas vigentes en el momento de la elaboración.· **8.2 Controles de la exposición**· **Equipo de protección individual:**· **Medidas generales de protección e higiene:**

Mantener alejado de alimentos, bebidas y alimentos para animales.

Quitarse de inmediato la ropa ensuciada o impregnada.

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

Guardar la ropa protectora por separado.

Evitar el contacto con los ojos.

Evitar el contacto con los ojos y la piel.

· **Protección respiratoria:**

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

· **Protección de manos:**

Guantes de protección

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

Ante la ausencia de tests específicos, no se puede recomendar ningún material específico para guantes de protección contra el producto / preparado / mezcla de sustancias químicas.

Selección del material de los guantes en función de los tiempos de rotura, grado de permeabilidad y degradación.

· **Material de los guantes**

La elección del guante adecuado no depende únicamente del material, sino también de otras características de calidad, que pueden variar de un fabricante a otro. Teniendo en cuenta que el producto está fabricado a partir de diferentes materiales, su calidad no puede ser evaluada de antemano, de modo que los guantes deberán ser controlados antes de su utilización.

· **Tiempo de penetración del material de los guantes**

El tiempo de resistencia a la penetración exacto deberá ser pedido al fabricante de los guantes. Este tiempo debe ser respetado.

· **Protección de ojos:**

Gafas de protección herméticas

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### SECCIÓN 9: Propiedades físicas y químicas

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

##### · Datos generales

##### · Aspecto:

Forma:

Líquido

Color:

Claro

##### · Olor:

Similar al del alcohol

##### · Umbral olfativo:

No determinado.

##### · valor pH:

No determinado.

##### · Cambio de estado

Punto de fusión/punto de congelación:

Indeterminado.

Punto inicial de ebullición e intervalo de ebullición: No aplicable, ya que se trata de un aerosol.

##### · Punto de inflamación:

No aplicable, ya que se trata de un aerosol.

##### · Inflamabilidad (sólido, gas):

No aplicable.

##### · Temperatura de ignición:

425 °C

##### · Temperatura de descomposición:

No determinado.

##### · Temperatura de auto-inflamación:

Se inflama espontáneamente en contacto con el aire.

##### · Propiedades explosivas:

No determinado.

##### · Límites de explosión:

Inferior:

3,5 Vol %

Superior:

15 Vol %

##### · Presión de vapor a 20 °C:

59 hPa

##### · Densidad a 20 °C:

0,62554 g/cm<sup>3</sup>

##### · Densidad relativa

No determinado.

##### · Densidad de vapor

No determinado.

##### · Tasa de evaporación:

No aplicable.

##### · Solubilidad en / miscibilidad con agua:

Completamente mezclable.

##### · Coeficiente de reparto: n-octanol/agua:

No determinado.

##### · Viscosidad:

Dinámica:

No determinado.

Cinemática:

No determinado.

##### · Concentración del disolvente:

Disolventes orgánicos:

21,0 %

Agua:

2,0 %

VOC (CE)

21,00 %

##### · Contenido de cuerpos sólidos:

0,0 %

##### · 9.2 Otros datos

No existen más datos relevantes disponibles.

### SECCIÓN 10: Estabilidad y reactividad

#### · 10.1 Reactividad No existen más datos relevantes disponibles.

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- **10.2 Estabilidad química**
- **Descomposición térmica / condiciones que deben evitarse:** No se descompone al emplearse adecuadamente.
- **10.3 Posibilidad de reacciones peligrosas** Al entrar en contacto con agua se liberan gases inflamables.
- **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** A la vista de los datos disponibles, no se cumplen los criterios de clasificación.
- **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.
- **Indicaciones toxicológicas adicionales:**
- **Efectos CMR (carcinogenicidad, mutagenicidad y toxicidad para la reproducción)**
- **Mutagenicidad en células germinales**  
Puede provocar defectos genéticos.
- **Carcinogenicidad**  
Puede provocar cáncer.
- **Toxicidad para la reproducción** A la vista de los datos disponibles, no se cumplen los criterios de clasificación.
- **Toxicidad específica en determinados órganos (STOT) – exposición única**  
A la vista de los datos disponibles, no se cumplen los criterios de clasificación.
- **Toxicidad específica en determinados órganos (STOT) – exposición repetida**  
A la vista de los datos disponibles, no se cumplen los criterios de clasificación.
- **Peligro de aspiración** A la vista de los datos disponibles, no se cumplen los criterios de clasificación.

### SECCIÓN 12: Información ecológica

- **12.1 Toxicidad**
- **Toxicidad acuática:** No existen más datos relevantes disponibles.
- **12.2 Persistencia y degradabilidad** No existen más datos relevantes disponibles.
- **12.3 Potencial de bioacumulación** No existen más datos relevantes disponibles.
- **12.4 Movilidad en el suelo** No existen más datos relevantes disponibles.
- **Indicaciones medioambientales adicionales:**
- **Indicaciones generales:**  
Nivel de riesgo para el agua 2 (autoclasiificación): peligroso para el agua  
No dejar que se infiltre en aguas subterráneas, aguas superficiales o en alcantarillados.  
Una cantidad mínima vertida en el subsuelo ya representa un peligro para el agua potable.
- **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.

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- **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, IATA** suprimido
- **IMDG** UN1950

· **14.2 Designación oficial de transporte de las Naciones Unidas**

- **ADR, IATA** suprimido
- **IMDG** AEROSOLS

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

- **ADR, ADN, IATA**
- **Clase** suprimido

· **IMDG**



- **Class** 2.1 Gases
- **Label** 2.1

· **14.4 Grupo de embalaje**

- **ADR, IATA** suprimido

· **14.5 Peligros para el medio ambiente:** No aplicable.

· **14.6 Precauciones particulares para los usuarios** No aplicable.

- **Número EMS:** F-D,S-U
- **Stowage Code** SW1 Protected from sources of heat.  
SW22 For AEROSOLS with a maximum capacity of 1 litre:  
Category A. For AEROSOLS with a capacity above 1 litre:  
Category B. For WASTE AEROSOLS: Category C, Clear  
of living quarters.
- **Segregation Code** SG69 For AEROSOLS with a maximum capacity of 1 litre:  
Segregation as for class 9. Stow "separated from" class 1  
except for division 1.4.  
For AEROSOLS with a capacity above 1 litre:  
Segregation as for the appropriate subdivision of class 2.  
For WASTE AEROSOLS:  
Segregation as for the appropriate subdivision of class 2.

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

No aplicable.

· **"Reglamentación Modelo" de la UNECE:**

suprimido

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### SECCIÓN 15: Información reglamentaria

- **15.1 Reglamentación y legislación en materia de seguridad, salud y medio ambiente específicas para la sustancia o la mezcla**
- **Directiva 2012/18/UE**
- **Sustancias peligrosas nominadas - ANEXO I** ninguno de los componentes está incluido en una lista
- **Categoría Seveso O2** Sustancias y mezclas que, en contacto con el agua, desprenden gases inflamables
- **Cantidad umbral (toneladas) a efectos de aplicación de los requisitos de nivel inferior** 100 t
- **Cantidad umbral (toneladas) a efectos de aplicación de los requisitos de nivel superior** 500 t
- **REGLAMENTO (CE) n° 1907/2006 ANEXO XVII** Restricciones: 3, 28, 29, 40

- **Directiva 2011/65/UE sobre restricciones a la utilización de determinadas sustancias peligrosas en aparatos eléctricos y electrónicos - Anexo II**

ninguno de los componentes está incluido en una lista

- **REGLAMENTO (UE) 2019/1148**

- **Anexo I - PRECURSORES DE EXPLOSIVOS RESTRINGIDOS (Valor límite superior a efectos de la concesión de licencias con arreglo al artículo 5, apartado 3)**

ninguno de los componentes está incluido en una lista

- **Anexo II - PRECURSORES DE EXPLOSIVOS NOTIFICABLES**

ninguno de los componentes está incluido en una lista

- **Reglamento (CE) no 273/2004 sobre precursores de drogas**

ninguno de los componentes está incluido en una lista

- **Reglamento (CE) N o 111/2005 por el que establecen normas para la vigilancia del comercio de precursores de drogas entre la Comunidad y terceros países**

ninguno de los componentes está incluido en una lista

- **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.

- **Demás disposiciones, limitaciones y decretos prohibitivos**

- **Sustancias altamente preocupantes (SVHC) según REACH, artículo 57**

64-17-5 | etanol

- **15.2 Evaluación de la seguridad química:** Una evaluación de la seguridad química no se ha llevado a cabo.

### SECCIÓN 16: Otra información

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

- **Frases relevantes**

H220 Gas extremadamente inflamable.

H225 Líquido y vapores muy inflamables.

H280 Contiene gas a presión; peligro de explosión en caso de calentamiento.

H340 Puede provocar defectos genéticos.

H350 Puede provocar cáncer.

- **Abreviaturas y acrónimos:**

ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

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*GHS: Globally Harmonised System of Classification and Labelling of Chemicals**EINECS: European Inventory of Existing Commercial Chemical Substances**ELINCS: European List of Notified Chemical Substances**CAS: Chemical Abstracts Service (division of the American Chemical Society)**VOC: Volatile Organic Compounds (USA, EU)**PBT: Persistent, Bioaccumulative and Toxic**SVHC: Substances of Very High Concern**vPvB: very Persistent and very Bioaccumulative**Flam. Gas 1A: Gases inflamables – Categoría 1A**Aerosol 3: Aerosoles – Categoría 3**Press. Gas (Comp.): Gases a presión – Gas comprimido**Flam. Liq. 2: Líquidos inflamables – Categoría 2**Water-react. 1: Sustancias y mezclas que, en contacto con el agua, desprenden gases inflamables – Categoría 1**Muta. 1B: Mutagenicidad en células germinales – Categoría 1B**Carc. 1A: Carcinogenicidad – Categoría 1A*

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