

# Safety Data Sheet

acc. to OSHA HCS

Printing date 05/10/2022

Reviewed on 05/10/2022

## 1 Identification

- **Product identifier**
- **Trade name:** MODIFIED MAYER'S HEMATOXYLIN
- **Article number:** 26043-18
- **Application of the substance / the mixture** Laboratory chemicals
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**  
 Electron Microscopy Sciences  
 1560 Industry Road  
 USA-Hatfield, PA 19440  
 Tel: 215-412-8400 Fax: 215-412-8450  
 email: info@emsdiasum.com  
 www.emsdiasum.com
- **Information department:** Product safety department
- **Emergency telephone number:**  
 ChemTrec 1-800-424-9300 Contract CCN7661  
 1-703-527-3887

## 2 Hazard(s) identification

- **Classification of the substance or mixture**



GHS06 Skull and crossbones

Acute Toxicity - Oral 1	H300	Fatal if swallowed.
Acute Toxicity - Dermal 3	H311	Toxic in contact with skin.
Acute Toxicity - Inhalation 2	H330	Fatal if inhaled.



GHS08 Health hazard

Sensitization - Respiratory 1B	H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
Germ Cell Mutagenicity 1B	H340	May cause genetic defects.
Toxic to Reproduction 2	H361-H362	Suspected of damaging fertility or the unborn child. May cause harm to breast-fed children.
Specific Target Organ Toxicity - Single Exposure 1	H370	Causes damage to organs.



GHS05 Corrosion

Corrosive to Metals 1	H290	May be corrosive to metals.
Skin Corrosion 1B	H314	Causes severe skin burns and eye damage.
Eye Damage 1	H318	Causes serious eye damage.

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

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**Trade name: MODIFIED MAYER'S HEMATOXYLIN**

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· **Hazard pictograms**



GHS05    GHS06    GHS08

· **Signal word** *Danger*

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

*chloral hydrate  
haematoxylin  
Citric acid*

· **Hazard statements**

*May be corrosive to metals.  
Fatal if swallowed or if inhaled.  
Toxic in contact with skin.  
Causes severe skin burns and eye damage.  
May cause allergy or asthma symptoms or breathing difficulties if inhaled.  
May cause genetic defects.  
Suspected of damaging fertility or the unborn child. May cause harm to breast-fed children.  
Causes damage to organs.*

· **Precautionary statements**

*Obtain special instructions before use.  
Do not handle until all safety precautions have been read and understood.  
Keep only in original container.  
Do not breathe dusts or mists.  
Avoid contact during pregnancy/while nursing.  
Wash thoroughly after handling.  
Do not eat, drink or smoke when using this product.  
Use only outdoors or in a well-ventilated area.  
Wear protective gloves/protective clothing/eye protection/face protection.  
[In case of inadequate ventilation] wear respiratory protection.  
If swallowed: Immediately call a poison center/doctor.  
If swallowed: Rinse mouth. Do NOT induce vomiting.  
If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.  
IF INHALED: Remove person to fresh air and keep comfortable for breathing.  
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
IF exposed or concerned: Get medical advice/attention.  
Call a poison center/doctor if you feel unwell.  
Specific treatment is urgent (see on this label).  
Take off immediately all contaminated clothing and wash it before reuse.  
If experiencing respiratory symptoms: Call a poison center/doctor.  
Absorb spillage to prevent material damage.  
Store in a well-ventilated place. Keep container tightly closed.  
Store locked up.  
Store in corrosive resistant container with a resistant inner liner.  
Dispose of contents/container in accordance with local/regional/national/international regulations.*

· **Classification system:**

· **NFPA ratings (scale 0 - 4)**



*Health = 3  
Fire = 0  
Reactivity = 0*

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· **HMIS-ratings (scale 0 - 4)**

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

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

### 3 Composition/information on ingredients

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

· **Dangerous components:**

302-17-0	chloral hydrate	>2.5-≤10%
517-28-2	haematoxylin	≤2.5%
77-92-9	Citric acid	≤2.5%

### 4 First-aid measures

- **Description of first aid measures**
- **General information:**  
Immediately remove any clothing soiled by the product.  
Remove breathing apparatus only after contaminated clothing have been completely removed.  
In case of irregular breathing or respiratory arrest provide artificial respiration.
- **After inhalation:**  
Supply fresh air or oxygen; call for doctor.  
In case of unconsciousness place patient stably in side position for transportation.
- **After skin contact:** Immediately wash with water and soap and rinse thoroughly.
- **After eye contact:** Rinse opened eye for several minutes under running water. Then consult a doctor.
- **After swallowing:**  
Do not induce vomiting; immediately call for medical help.  
Drink copious amounts of water and provide fresh air. Immediately call a doctor.
- **Information for doctor:**  
· **Most important symptoms and effects, both acute and delayed** No further relevant information available.  
· **Indication of any immediate medical attention and special treatment needed**  
No further relevant information available.

### 5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:** Use fire fighting measures that suit the environment.
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** Mouth respiratory protective device.

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## 6 Accidental release measures

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

Wear protective equipment. Keep unprotected persons away.

- **Environmental precautions:**

Inform respective authorities in case of seepage into water course or sewage system.

Dilute with plenty of water.

Do not allow to enter sewers/ surface or ground water.

- **Methods and material for containment and cleaning up:**

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

Use neutralizing agent.

Dispose contaminated material as waste according to item 13.

Ensure adequate ventilation.

- **Reference to other sections**

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

- **Protective Action Criteria for Chemicals**

- **PAC-1:**

302-17-0	chloral hydrate	2.5 mg/m <sup>3</sup>
7681-55-2	Sodium iodate	0.83 mg/m <sup>3</sup>

- **PAC-2:**

302-17-0	chloral hydrate	27 mg/m <sup>3</sup>
7681-55-2	Sodium iodate	9.1 mg/m <sup>3</sup>

- **PAC-3:**

302-17-0	chloral hydrate	95 mg/m <sup>3</sup>
7681-55-2	Sodium iodate	55 mg/m <sup>3</sup>

## 7 Handling and storage

- **Handling:**

- **Precautions for safe handling**

Ensure good ventilation/exhaustion at the workplace.

Open and handle receptacle with care.

Prevent formation of aerosols.

- **Information about protection against explosions and fires:** Keep respiratory protective device available.

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

- **Storage:**

· **Requirements to be met by storerooms and receptacles:** No special requirements.

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

· **Further information about storage conditions:** Keep receptacle tightly sealed.

· **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.

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- **Control parameters**
- **Components with limit values that require monitoring at the workplace:**  
*The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.*
- **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

## 9 Physical and chemical properties

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

<b>Form:</b>	Liquid
<b>Color:</b>	According to product specification
- **Odor:** Characteristic
- **Odor threshold:** Not determined.
- **pH-value:** Not determined.

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· <b>Change in condition</b>	
Melting point/Melting range:	Undetermined.
Boiling point/Boiling range:	Undetermined.
· <b>Flash point:</b>	Not applicable.
· <b>Flammability (solid, gaseous):</b>	Not flammable.
· <b>Decomposition temperature:</b>	Not determined.
· <b>Auto igniting:</b>	Product is not selfigniting.
· <b>Danger of explosion:</b>	Product does not present an explosion hazard.
· <b>Explosion limits:</b>	
Lower:	Not determined.
Upper:	Not determined.
· <b>Vapor pressure at 20 °C (68 °F):</b>	23 hPa (17.3 mm Hg)
· <b>Density:</b>	Not determined.
· <b>Relative density</b>	Not determined.
· <b>Vapor density</b>	Not determined.
· <b>Evaporation rate</b>	Not determined.
· <b>Solubility in / Miscibility with</b>	
Water:	Fully miscible.
· <b>Partition coefficient (n-octanol/water):</b>	Not determined.
· <b>Viscosity:</b>	
Dynamic:	Not determined.
Kinematic:	Not determined.
· <b>Solvent content:</b>	
Water:	87.0 %
VOC content:	0.00 %
	0.0 g/l / 0.00 lb/gal
Solids content:	7.7 %
· <b>Other information</b>	No further relevant information available.

## 10 Stability and reactivity

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

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## 11 Toxicological information

- **Information on toxicological effects**

- **Acute toxicity:**

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

<b>302-17-0 chloral hydrate</b>		
Oral	LD50	479 mg/kg (rat)
Dermal	LD50	3,030 mg/kg (rat)
<b>77-92-9 Citric acid</b>		
Oral	LD50	5,040 mg/kg (mouse)

- **Primary irritant effect:**

- **on the skin:** Strong caustic effect on skin and mucous membranes.

- **on the eye:**

- Strong caustic effect.

- Strong irritant with the danger of severe eye injury.

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

- **Additional toxicological information:**

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

- Toxic

- Harmful

- Corrosive

- Irritant

- Very toxic

- Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of esophagus and stomach.

- The product can cause inheritable damage.

- **Carcinogenic categories**

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

302-17-0	chloral hydrate	2A
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- **NTP (National Toxicology Program)**

- None of the ingredients is listed.

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

- None of the ingredients is listed.

## 12 Ecological information

- **Toxicity**

- **Aquatic toxicity:** No further relevant information available.

- **Persistence and degradability** No further relevant information available.

- **Behavior in environmental systems:**

- **Bioaccumulative potential** No further relevant information available.

- **Mobility in soil** No further relevant information available.

- **Ecotoxicological effects:**

- **Remark:** Very toxic for fish

- **Additional ecological information:**

- **General notes:**

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

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

- Must not reach bodies of water or drainage ditch undiluted or unneutralized.

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

*Also poisonous for fish and plankton in water bodies.*

*Very toxic for aquatic organisms*

**· Results of PBT and vPvB assessment**

**· PBT:** Not applicable.

**· vPvB:** Not applicable.

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

## 13 Disposal considerations

**· Waste treatment methods**

**· Recommendation:**

*Must not be disposed of together with household garbage. Do not allow product to reach sewage system.*

**· Uncleaned packagings:**

**· Recommendation:** Disposal must be made according to official regulations.

**· Recommended cleansing agent:** Water, if necessary with cleansing agents.

## 14 Transport information

**· UN-Number**

**· DOT**

Void

**· ADR, IMDG, IATA**

UN3082

**· UN proper shipping name**

**· DOT**

Void

**· ADR**

3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.

**· IMDG**

ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S., MARINE POLLUTANT

**· IATA**

ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.

**· Transport hazard class(es)**

**· DOT**

**· Class**

Void

**· ADR, IMDG, IATA**



**· Class**

9 Miscellaneous dangerous substances and articles

**· Label**

9

**· Packing group**

**· DOT**

Void

**· ADR, IMDG, IATA**

III

**· Environmental hazards:**

**· Marine pollutant:**

Symbol (fish and tree)

**· Special marking (ADR):**

Symbol (fish and tree)

**· Special marking (IATA):**

Symbol (fish and tree)

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Trade name: **MODIFIED MAYER'S HEMATOXYLIN**

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· <b>Special precautions for user</b>	Warning: Miscellaneous dangerous substances and articles
· <b>Hazard identification number (Kemler code):</b> 90	
· <b>EMS Number:</b>	F-A,S-F
· <b>Stowage Category</b>	A
· <b>Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</b>	Not applicable.
· <b>Transport/Additional information:</b>	
· <b>ADR</b>	
· <b>Excepted quantities (EQ)</b>	Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
· <b>IMDG</b>	
· <b>Limited quantities (LQ)</b>	5L
· <b>Excepted quantities (EQ)</b>	Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
· <b>UN "Model Regulation":</b>	UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S., 9, III

## 15 Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**  
No further relevant information available.
- **Sara**

· <b>Section 355 (extremely hazardous substances):</b>
--

None of the ingredients is listed.
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· <b>Section 313 (Specific toxic chemical listings):</b>
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None of the ingredients is listed.
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· <b>TSCA (Toxic Substances Control Act):</b>
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7732-18-5	Deionized Water, Reagent Grade A.C.S.	ACTIVE
302-17-0	chloral hydrate	ACTIVE
517-28-2	haematoxylin	ACTIVE
77-92-9	Citric acid	ACTIVE
7681-55-2	Sodium iodate	ACTIVE

· <b>Hazardous Air Pollutants</b>
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None of the ingredients is listed.
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· <b>Proposition 65</b>
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· <b>Chemicals known to cause cancer:</b>
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302-17-0	chloral hydrate
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· <b>Chemicals known to cause reproductive toxicity for females:</b>
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None of the ingredients is listed.
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· <b>Chemicals known to cause reproductive toxicity for males:</b>
--

None of the ingredients is listed.
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Reviewed on 05/10/2022

**Trade name: MODIFIED MAYER'S HEMATOXYLIN**

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

None of the ingredients is listed.

· **Carcinogenic categories**

· **EPA (Environmental Protection Agency)**

302-17-0 | chloral hydrate

C, CBD

· **TLV (Threshold Limit Value)**

None of the ingredients is listed.

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

None of the ingredients is listed.

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

· **Hazard pictograms**



GHS05

GHS06

GHS08

· **Signal word** Danger

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

chloral hydrate

haematoxylin

Citric acid

· **Hazard statements**

May be corrosive to metals.

Fatal if swallowed or if inhaled.

Toxic in contact with skin.

Causes severe skin burns and eye damage.

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

May cause genetic defects.

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

Causes damage to organs.

· **Precautionary statements**

Obtain special instructions before use.

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

Keep only in original container.

Do not breathe dusts or mists.

Avoid contact during pregnancy/while nursing.

Wash thoroughly after handling.

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

Use only outdoors or in a well-ventilated area.

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

[In case of inadequate ventilation] wear respiratory protection.

If swallowed: Immediately call a poison center/doctor.

If swallowed: Rinse mouth. Do NOT induce vomiting.

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

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

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

Continue rinsing.

IF exposed or concerned: Get medical advice/attention.

Call a poison center/doctor if you feel unwell.

Specific treatment is urgent (see on this label).

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Take off immediately all contaminated clothing and wash it before reuse.  
 If experiencing respiratory symptoms: Call a poison center/doctor.  
 Absorb spillage to prevent material damage.  
 Store in a well-ventilated place. Keep container tightly closed.  
 Store locked up.  
 Store in corrosive resistant container with a resistant inner liner.  
 Dispose of contents/container in accordance with local/regional/national/international regulations.  
 · **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

### 16 Other information

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

· **Contact:**

· **Date of preparation / last revision** 05/10/2022 / -

· **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)

HMIS: Hazardous Materials Identification System (USA)

VOC: Volatile Organic Compounds (USA, EU)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

NIOSH: National Institute for Occupational Safety

OSHA: Occupational Safety **Health**

**TLV: Threshold Limit Value**

**PEL: Permissible Exposure Limit**

**REL: Recommended Exposure Limit**

**Corrosive to Metals 1: Corrosive to metals – Category 1**

**Acute Toxicity - Oral 1: Acute toxicity – Category 1**

**Acute Toxicity - Dermal 3: Acute toxicity – Category 3**

**Acute Toxicity - Inhalation 2: Acute toxicity – Category 2**

**Skin Corrosion 1B: Skin corrosion/irritation – Category 1B**

**Eye Damage 1: Serious eye damage/eye irritation – Category 1**

**Sensitization - Respiratory 1B: Respiratory sensitisation – Category 1B**

**Germ Cell Mutagenicity 1B: Germ cell mutagenicity – Category 1B**

**Toxic to Reproduction 2: Reproductive toxicity – Category 2**

**Specific Target Organ Toxicity - Single Exposure 1: Specific target organ toxicity (single exposure) – Category 1**

# Safety Data Sheet

## according to WHS Regulations

Printing date 10.05.2022

Revision: 10.05.2022

### 1 Identification

- **Product identifier**
- **Trade name:** MODIFIED MAYER'S HEMATOXYLIN
- **Article number:** 26043-18
- **Relevant identified uses of the substance or mixture and uses advised against**  
No further relevant information available.
- **Application of the substance / the mixture** Laboratory chemicals
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**  
Electron Microscopy Sciences  
1560 Industry Road  
USA-Hatfield, PA 19440  
Tel: 215-412-8400 Fax: 215-412-8450  
email: [info@emsdiasum.com](mailto:info@emsdiasum.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**



GHS06 skull and crossbones

Acute Tox. 1	H300	Fatal if swallowed.
Acute Tox. 3	H311	Toxic in contact with skin.
Acute Tox. 2	H330	Fatal if inhaled.



GHS08 health hazard

Resp. Sens. 1B	H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
Muta. 1B	H340	May cause genetic defects.
Repr. 2	H361-H362	Suspected of damaging fertility or the unborn child. May cause harm to breast-fed children.
STOT SE 1	H370	Causes damage to organs.

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# Safety Data Sheet

## according to WHS Regulations

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**Trade name: MODIFIED MAYER'S HEMATOXYLIN**

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GHS05 corrosion

Met. Corr.1	H290	May be corrosive to metals.
Skin Corr. 1B	H314	Causes severe skin burns and eye damage.
Eye Dam. 1	H318	Causes serious eye damage.

- **Label elements**

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

- **Hazard pictograms**



GHS05



GHS06



GHS08

- **Signal word** Danger

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

chloral hydrate

haematoxylin

Citric acid

- **Hazard statements**

May be corrosive to metals.

Fatal if swallowed.

Toxic in contact with skin.

Fatal if inhaled.

Causes severe skin burns and eye damage.

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

May cause genetic defects.

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

Causes damage to organs.

- **Precautionary statements**

Obtain special instructions before use.

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

Keep only in original container.

Do not breathe dusts or mists.

Avoid contact during pregnancy/while nursing.

Wash thoroughly after handling.

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

Use only outdoors or in a well-ventilated area.

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

Wear respiratory protection.

**IF SWALLOWED:** Immediately call a POISON CENTER/ doctor.

**IF SWALLOWED:** rinse mouth. Do NOT induce vomiting.

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

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

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

Continue rinsing.

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

Call a POISON CENTER/doctor if you feel unwell.

Specific treatment is urgent (see on this label).

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

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- If experiencing respiratory symptoms: Call a POISON CENTER/doctor.  
Absorb spillage to prevent material damage.  
Store in a well-ventilated place. Keep container tightly closed.  
Store locked up.  
Store in corrosive resistant container /container with a corrosion resistant inner liner.  
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.

· <b>Dangerous components:</b>		
302-17-0	chloral hydrate	>2.5-≤10%
517-28-2	haematoxylin	≤2.5%
77-92-9	Citric acid	≤2.5%

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

### 4 First Aid Measures

- **Description of first aid measures**
- **General information:**  
*Immediately remove any clothing soiled by the product.  
Remove breathing equipment only after contaminated clothing have been completely removed.  
In case of irregular breathing or respiratory arrest provide artificial respiration.*
- **After inhalation:**  
*Supply fresh air or oxygen; call for doctor.  
In case of unconsciousness place patient stably in side position for transportation.*
- **After skin contact:** *Immediately wash with water and soap and rinse thoroughly.*
- **After eye contact:** *Rinse opened eye for several minutes under running water. Then consult a doctor.*
- **After swallowing:**  
*Do not induce vomiting; call for medical help immediately.  
Drink plenty of water and provide fresh air. Call for a doctor immediately.*
- **Information for doctor:**
- **Most important symptoms and effects, both acute and delayed** *No further relevant information available.*
- **Indication of any immediate medical attention and special treatment needed**  
*No further relevant information available.*

### 5 Fire Fighting Measures

- **Extinguishing media**
- **Suitable extinguishing agents:** *Use fire extinguishing methods suitable to surrounding conditions.*
- **Special hazards arising from the substance or mixture** *No further relevant information available.*
- **Advice for firefighters**
- **Protective equipment:** *Mouth respiratory protective device.*

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### 6 Accidental Release Measures

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

### 7 Handling and Storage

- **Handling:**
- **Precautions for safe handling**  
Ensure good ventilation/exhaustion at the workplace.  
Open and handle receptacle with care.  
Prevent formation of aerosols.
- **Information about fire - and explosion protection:** Keep respiratory protective device available.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** Keep container tightly sealed.
- **Specific end use(s)** No further relevant information available.

### 8 Exposure controls and personal protection

- **Additional information about design of technical facilities:** No further data; see item 7.
- **Control parameters**
- **Ingredients with limit values that require monitoring at the workplace:**  
The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
- **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.

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- **Respiratory protection:**

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

- **Protection of hands:**



Protective gloves

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

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

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

- **Material of gloves**

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

- **Penetration time of glove material**

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

- **Eye protection:**



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>	According to product specification
<b>Odour:</b>	Characteristic
<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>	Undetermined.

- **Flash point:** Not applicable.

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

- **Decomposition temperature:** Not determined.

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

- **Explosive properties:** Product does not present an explosion hazard.

- **Explosion limits:**

<b>Lower:</b>	Not determined.
<b>Upper:</b>	Not determined.

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· <b>Vapour pressure at 20 °C:</b>	23 hPa
· <b>Density:</b>	Not determined.
· <b>Relative density</b>	Not determined.
· <b>Vapour density</b>	Not determined.
· <b>Evaporation rate</b>	Not determined.
· <b>Solubility in / Miscibility with water:</b>	Fully miscible.
· <b>Partition coefficient: n-octanol/water:</b>	Not determined.
· <b>Viscosity:</b>	
<b>Dynamic:</b>	Not determined.
<b>Kinematic:</b>	Not determined.
· <b>Solvent content:</b>	
<b>Water:</b>	87.0 %
<b>VOC (EC)</b>	0.00 %
<b>Solids content:</b>	7.7 %
· <b>Other information</b>	No further relevant information available.

### 10 Stability and Reactivity

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

### 11 Toxicological Information

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

· <b>LD/LC50 values relevant for classification:</b>		
<b>302-17-0 chloral hydrate</b>		
Oral	LD50	479 mg/kg (rat)
Dermal	LD50	3,030 mg/kg (rat)
<b>77-92-9 Citric acid</b>		
Oral	LD50	5,040 mg/kg (mouse)

- **Primary irritant effect:**
- **Skin corrosion/irritation** Strong caustic effect on skin and mucous membranes.
- **Serious eye damage/irritation**  
Strong caustic effect.  
Strong irritant with the danger of severe eye injury.
- **Respiratory or skin sensitisation** Sensitisation possible through inhalation.
- **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:

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Toxic

Harmful

Corrosive

Irritant

Very toxic

Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of esophagus and stomach.

The product can cause inheritable damage.

- **CMR effects (carcinogenity, mutagenicity and toxicity for reproduction)**  
Muta. 1B, Repr. 2

### 12 Ecological Information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behaviour in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Ecotoxicological effects:**
- **Remark:** Very toxic for fish
- **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.  
Must not reach sewage water or drainage ditch undiluted or unneutralised.  
Danger to drinking water if even small quantities leak into the ground.  
Also poisonous for fish and plankton in water bodies.  
Very toxic for aquatic organisms
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

### 13 Disposal considerations

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

### 14 Transport information

- **UN-Number**
- **ADG, IMDG, IATA** UN3082

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<ul style="list-style-type: none"> <li>· <b>UN proper shipping name</b></li> <li>· <b>ADG</b></li> <li>· <b>IMDG</b></li> <li>· <b>IATA</b></li> </ul>	<p>3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.</p> <p>ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S., MARINE POLLUTANT</p> <p>ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.</p>
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<ul style="list-style-type: none"> <li>· <b>Transport hazard class(es)</b></li> <li>· <b>ADG, IMDG, IATA</b></li> </ul>	<p>9 Miscellaneous dangerous substances and articles.</p> <p>9</p>
---	--

<ul style="list-style-type: none"> <li>· <b>Class</b></li> <li>· <b>Label</b></li> </ul>	<p>9 Miscellaneous dangerous substances and articles.</p> <p>9</p>
--	--

<ul style="list-style-type: none"> <li>· <b>Packing group</b></li> <li>· <b>ADG, IMDG, IATA</b></li> </ul>	<p>III</p>
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<ul style="list-style-type: none"> <li>· <b>Environmental hazards:</b></li> <li>· <b>Marine pollutant:</b></li> <li>· <b>Special marking (ADG):</b></li> <li>· <b>Special marking (IATA):</b></li> </ul>	<p>Symbol (fish and tree)</p> <p>Symbol (fish and tree)</p> <p>Symbol (fish and tree)</p>
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<ul style="list-style-type: none"> <li>· <b>Special precautions for user</b></li> <li>· <b>Hazard identification number (Kemler code):</b></li> <li>· <b>EMS Number:</b></li> <li>· <b>Stowage Category</b></li> </ul>	<p>Warning: Miscellaneous dangerous substances and articles.</p> <p>90</p> <p>F-A,S-F</p> <p>A</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>Not applicable.</p>
---	------------------------

- **Transport/Additional information:**

<ul style="list-style-type: none"> <li>· <b>ADG</b></li> <li>· <b>Limited quantities (LQ)</b></li> <li>· <b>Excepted quantities (EQ)</b></li> </ul>	<p>5L</p> <p>Code: E1</p> <p>Maximum net quantity per inner packaging: 30 ml</p> <p>Maximum net quantity per outer packaging: 1000 ml</p>
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<ul style="list-style-type: none"> <li>· <b>Transport category</b></li> <li>· <b>Tunnel restriction code</b></li> </ul>	<p>3</p> <p>(-)</p>
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<ul style="list-style-type: none"> <li>· <b>IMDG</b></li> <li>· <b>Limited quantities (LQ)</b></li> <li>· <b>Excepted quantities (EQ)</b></li> </ul>	<p>5L</p> <p>Code: E1</p> <p>Maximum net quantity per inner packaging: 30 ml</p> <p>Maximum net quantity per outer packaging: 1000 ml</p>
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<ul style="list-style-type: none"> <li>· <b>UN "Model Regulation":</b></li> </ul>	<p>UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S., 9, III</p>
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Trade name: **MODIFIED MAYER'S HEMATOXYLIN**

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### 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**

302-17-0 chloral hydrate

S4

· **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**



GHS05

GHS06

GHS08

· **Signal word** *Danger*

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

chloral hydrate

haematoxylin

Citric acid

· **Hazard statements**

May be corrosive to metals.

Fatal if swallowed.

Toxic in contact with skin.

Fatal if inhaled.

Causes severe skin burns and eye damage.

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

May cause genetic defects.

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

Causes damage to organs.

· **Precautionary statements**

Obtain special instructions before use.

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

Keep only in original container.

Do not breathe dusts or mists.

Avoid contact during pregnancy/while nursing.

Wash thoroughly after handling.

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

Use only outdoors or in a well-ventilated area.

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

Wear respiratory protection.

IF SWALLOWED: Immediately call a POISON CENTER/ doctor.

IF SWALLOWED: rinse mouth. Do NOT induce vomiting.

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

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

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

Continue rinsing.

IF exposed or concerned: Get medical advice/attention.

Call a POISON CENTER/doctor if you feel unwell.

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Specific treatment is urgent (see on this label).  
 Take off immediately all contaminated clothing and wash it before reuse.  
 If experiencing respiratory symptoms: Call a POISON CENTER/doctor.  
 Absorb spillage to prevent material damage.  
 Store in a well-ventilated place. Keep container tightly closed.  
 Store locked up.  
 Store in corrosive resistant container /container with a corrosion resistant inner liner.  
 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**  
*H1 ACUTE TOXIC*  
*E1 Hazardous to the Aquatic Environment*
- **Qualifying quantity (tonnes) for the application of lower-tier requirements** 5 t
- **Qualifying quantity (tonnes) for the application of upper-tier requirements** 20 t
- **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

### 16 Other information

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

- **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)*  
*LC50: Lethal concentration, 50 percent*  
*LD50: Lethal dose, 50 percent*  
*PBT: Persistent, Bioaccumulative and Toxic*  
*vPvB: very Persistent and very Bioaccumulative*  
*Met. Corr. 1: Corrosive to metals – Category 1*  
*Acute Tox. 1: Acute toxicity – Category 1*  
*Acute Tox. 3: Acute toxicity – Category 3*  
*Acute Tox. 2: Acute toxicity – Category 2*  
*Skin Corr. 1B: Skin corrosion/irritation – Category 1B*  
*Eye Dam. 1: Serious eye damage/eye irritation – Category 1*  
*Resp. Sens. 1B: Respiratory sensitisation – Category 1B*  
*Muta. 1B: Germ cell mutagenicity – Category 1B*  
*Repr. 2: Reproductive toxicity – Category 2*  
*STOT SE 1: Specific target organ toxicity (single exposure) – Category 1*

-AU-

# Safety Data Sheet

## according to HPR, Schedule 1

Printing date 05/10/2022

Reviewed on 05/10/2022

### 1 Identification

- **Product identifier**
- **Trade name:** MODIFIED MAYER'S HEMATOXYLIN
- **Article number:** 26043-18
- **Application of the substance / the mixture** Laboratory chemicals
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**  
 Electron Microscopy Sciences  
 1560 Industry Road  
 USA-Hatfield, PA 19440  
 Tel: 215-412-8400 Fax: 215-412-8450  
 email: info@emsdiasum.com  
 www.emsdiasum.com
- **Information department:** Product safety department
- **Emergency telephone number:**  
 ChemTrec 1-800-424-9300 Contract CCN7661  
 1-703-527-3887

### 2 Hazard identification

- **Classification of the substance or mixture**



GHS06 Skull and crossbones

Acute Toxicity (Oral) - Category 1	H300	Fatal if swallowed.
Acute Toxicity (Dermal) – Category 3	H311	Toxic in contact with skin.
Acute Toxicity (Inhalation) - Category 2	H330	Fatal if inhaled.



GHS08 Health hazard

Respiratory Sensitizer - Category 1B	H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
Germ Cell Mutagenicity - Category 1B	H340	May cause genetic defects.
Reproductive Toxicity - Category 2	H361-H362	Suspected of damaging fertility or the unborn child. May cause harm to breast-fed children.
Specific Target Organ Toxicity - Single Exposure - Category 1	H370	Causes damage to organs.



GHS05 Corrosion

Corrosive to Metals - Category 1	H290	May be corrosive to metals.
Skin Corrosion - Category 1B	H314	Causes severe skin burns and eye damage.
Serious Eye Damage - Category 1	H318	Causes serious eye damage.

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

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# Safety Data Sheet

## according to HPR, Schedule 1

Printing date 05/10/2022

Reviewed on 05/10/2022

Trade name: **MODIFIED MAYER'S HEMATOXYLIN**

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· **Hazard pictograms**

GHS05   GHS06   GHS08

· **Signal word** *Danger*· **Hazard-determining components of labeling:**

*chloral hydrate*  
*haematoxylin*  
*Citric acid*

· **Hazard statements**

*May be corrosive to metals.*  
*Fatal if swallowed or if inhaled.*  
*Toxic in contact with skin.*  
*Causes severe skin burns and eye damage.*  
*May cause allergy or asthma symptoms or breathing difficulties if inhaled.*  
*May cause genetic defects.*  
*Suspected of damaging fertility or the unborn child. May cause harm to breast-fed children.*  
*Causes damage to organs.*

· **Precautionary statements**

*Obtain special instructions before use.*  
*Do not handle until all safety precautions have been read and understood.*  
*Keep only in original packaging.*  
*Do not breathe dust/fume/gas/mist/vapours/spray.*  
*Avoid contact during pregnancy and while nursing.*  
*Wash thoroughly after handling.*  
*Do not eat, drink or smoke when using this product.*  
*Use only outdoors or in a well-ventilated area.*  
*Wear protective gloves/protective clothing/eye protection/face protection.*  
*[In case of inadequate ventilation] wear respiratory protection.*  
*If swallowed: Immediately call a poison center/doctor.*  
*IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.*  
*IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].*  
*IF INHALED: Remove person to fresh air and keep comfortable for breathing.*  
*IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.*  
*IF exposed or concerned: Get medical advice/attention.*  
*Call a poison center/doctor if you feel unwell.*  
*Specific treatment is urgent (see on this label).*  
*If experiencing respiratory symptoms: Call a poison center/doctor.*  
*Wash contaminated clothing before reuse.*  
*Absorb spillage to prevent material-damage.*  
*Store in a well-ventilated place. Keep container tightly closed.*  
*Store locked up.*  
*Dispose of contents/container in accordance with local/regional/national/international regulations.*

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

*Health = 3*  
*Fire = 0*  
*Reactivity = 0*

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-CA-



# Safety Data Sheet

## according to HPR, Schedule 1

Printing date 05/10/2022

Reviewed on 05/10/2022

Trade name: **MODIFIED MAYER'S HEMATOXYLIN**

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· **HMIS-ratings (scale 0 - 4)**

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

### 3 Composition/Information on ingredients

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

· **Dangerous components:**

302-17-0	chloral hydrate	5-10% w/w *
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\* Actual concentration ranges are withheld as a trade secret.

### 4 First-aid measures

- **Description of first aid measures**
- **General information:**  
Immediately remove any clothing soiled by the product.  
Remove breathing apparatus only after contaminated clothing have been completely removed.  
In case of irregular breathing or respiratory arrest provide artificial respiration.
- **After inhalation:**  
Supply fresh air or oxygen; call for doctor.  
In case of unconsciousness place patient stably in side position for transportation.
- **After skin contact:** Immediately wash with water and soap and rinse thoroughly.
- **After eye contact:** Rinse opened eye for several minutes under running water. Then consult a doctor.
- **After swallowing:**  
Do not induce vomiting; immediately call for medical help.  
Drink copious amounts of water and provide fresh air. Immediately call a doctor.
- **Information for doctor:**  
· **Most important symptoms and effects, both acute and delayed** No further relevant information available.  
· **Indication of any immediate medical attention and special treatment needed**  
No further relevant information available.

### 5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:** Use fire fighting measures that suit the environment.
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** Mouth respiratory protective device.

### 6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**  
Wear protective equipment. Keep unprotected persons away.
- **Environmental precautions:**  
Inform respective authorities in case of seepage into water course or sewage system.  
Dilute with plenty of water.

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# Safety Data Sheet

## according to HPR, Schedule 1

Printing date 05/10/2022

Reviewed on 05/10/2022

**Trade name: MODIFIED MAYER'S HEMATOXYLIN**

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- Do not allow to enter sewers/ surface or ground water.*
- **Methods and material for containment and cleaning up:**  
*Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).  
 Use neutralizing agent.  
 Dispose contaminated material as waste according to item 13.  
 Ensure adequate ventilation.*
- **Reference to other sections**  
*See Section 7 for information on safe handling.  
 See Section 8 for information on personal protection equipment.  
 See Section 13 for disposal information.*

### 7 Handling and storage

- **Handling:**
- **Precautions for safe handling**  
*Ensure good ventilation/exhaustion at the workplace.  
 Open and handle receptacle with care.  
 Prevent formation of aerosols.*
- **Information about protection against explosions and fires:** *Keep respiratory protective device available.*
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** *No special requirements.*
- **Information about storage in one common storage facility:** *Not required.*
- **Further information about storage conditions:** *Keep receptacle tightly sealed.*
- **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 product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.*
- **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.*

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## according to HPR, Schedule 1

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Trade name: **MODIFIED MAYER'S HEMATOXYLIN**

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· **Protection of hands:**

Protective gloves

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

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

· **Material of gloves**

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

· **Penetration time of glove material**

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

· **Eye protection:**

Tightly sealed goggles

## 9 Physical and chemical properties

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

<b>Form:</b>	Liquid
<b>Color:</b>	According to product specification
<b>Odor:</b>	Characteristic
<b>Odor threshold:</b>	Not determined.

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

<b>Melting point/Melting range:</b>	Undetermined.
<b>Boiling point/Boiling range:</b>	Undetermined.

· **Flash point:** Not applicable.· **Flammability (solid, gaseous):** Not flammable.· **Decomposition temperature:** Not determined.· **Auto igniting:** Product is not selfigniting.· **Danger of explosion:** Product does not present an explosion hazard.· **Explosion limits:**

<b>Lower:</b>	Not determined.
<b>Upper:</b>	Not determined.

· **Vapor pressure at 20 °C:** 23 hPa· **Density:** Not determined.· **Relative density:** Not determined.

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· <b>Vapor density</b>	Not determined.
· <b>Evaporation rate</b>	Not determined.
· <b>Solubility in / Miscibility with Water:</b>	Fully miscible.
· <b>Partition coefficient (n-octanol/water):</b>	Not determined.
· <b>Viscosity:</b>	
<b>Dynamic:</b>	Not determined.
<b>Kinematic:</b>	Not determined.
· <b>Solvent content:</b>	
<b>Water:</b>	87.0 %
<b>Solids content:</b>	7.7 %
· <b>Other information</b>	No further relevant information available.

### 10 Stability and reactivity

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

### 11 Toxicological information

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

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

**302-17-0 chloral hydrate**

Oral	LD50	479 mg/kg (rat)
Dermal	LD50	3,030 mg/kg (rat)

**77-92-9 Citric acid**

Oral	LD50	5,040 mg/kg (mouse)
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- **Primary irritant effect:**
- **on the skin:** Strong caustic effect on skin and mucous membranes.
- **on the eye:**  
Strong caustic effect.  
Strong irritant with the danger of severe eye injury.
- **Sensitization:** Sensitization possible through inhalation.
- **Additional toxicological information:**  
The product shows the following dangers according to internally approved calculation methods for preparations:  
Toxic  
Harmful  
Corrosive  
Irritant  
Very toxic

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Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of esophagus and stomach.

The product can cause inheritable damage.

· **Carcinogenic categories**

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

302-17-0	chloral hydrate	2A
----------	-----------------	----

· **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.

· **Ecotoxicological effects:**

· **Remark:** Very toxic for fish

· **Additional ecological information:**

· **General notes:**

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

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

Must not reach bodies of water or drainage ditch undiluted or unneutralized.

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

Also poisonous for fish and plankton in water bodies.

Very toxic for aquatic organisms

· **Results of PBT and vPvB assessment**

· **PBT:** Not applicable.

· **vPvB:** Not applicable.

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

### 13 Disposal considerations

· **Waste treatment methods**

· **Recommendation:**

Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

· **Uncleaned packagings:**

· **Recommendation:** Disposal must be made according to official regulations.

· **Recommended cleansing agent:** Water, if necessary with cleansing agents.

### 14 Transport information

· **UN-Number**

· **DOT/TDG**

· **ADR, IMDG, IATA**

Void

UN3082

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· <b>UN proper shipping name</b>	
· <b>DOT/TDG</b>	Void
· <b>ADR</b>	3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
· <b>IMDG</b>	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S., MARINE POLLUTANT
· <b>IATA</b>	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.

· <b>Transport hazard class(es)</b>	
· <b>DOT/TDG (Transport dangerous goods):</b>	
· <b>Class</b>	Void

· **ADR, IMDG, IATA**

· <b>Class</b>	9 Miscellaneous dangerous substances and articles
· <b>Label</b>	9

· <b>Packing group</b>	
· <b>DOT/TDG</b>	Void
· <b>ADR, IMDG, IATA</b>	III

· <b>Environmental hazards:</b>	
· <b>Marine pollutant:</b>	Symbol (fish and tree)
· <b>Special marking (ADR):</b>	Symbol (fish and tree)
· <b>Special marking (IATA):</b>	Symbol (fish and tree)

· <b>Special precautions for user</b>	Warning: Miscellaneous dangerous substances and articles
· <b>Hazard identification number (Kemler code):</b>	90
· <b>EMS Number:</b>	F-A,S-F
· <b>Stowage Category</b>	A

· <b>Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code</b>	Not applicable.
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· **Transport/Additional information:**

· <b>ADR</b>	
· <b>Excepted quantities (EQ)</b>	Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml

· <b>IMDG</b>	
· <b>Limited quantities (LQ)</b>	5L
· <b>Excepted quantities (EQ)</b>	Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml

· <b>UN "Model Regulation":</b>	UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S., 9, III
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## 15 Regulatory information

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

No further relevant information available.

· **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):**

7732-18-5	Deionized Water, Reagent Grade A.C.S.	ACTIVE
302-17-0	chloral hydrate	ACTIVE
517-28-2	haematoxylin	ACTIVE
77-92-9	Citric acid	ACTIVE
7681-55-2	Sodium iodate	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%)**

None of the ingredients is listed.

· **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**



GHS05

GHS06

GHS08

· **Signal word** *Danger*

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

chloral hydrate

haematoxylin

Citric acid

· **Hazard statements**

May be corrosive to metals.

Fatal if swallowed or if inhaled.

Toxic in contact with skin.

Causes severe skin burns and eye damage.

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

May cause genetic defects.

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

Causes damage to organs.

· **Precautionary statements**

Obtain special instructions before use.

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Do not handle until all safety precautions have been read and understood.  
 Keep only in original packaging.  
 Do not breathe dust/fume/gas/mist/vapours/spray.  
 Avoid contact during pregnancy and while nursing.  
 Wash thoroughly after handling.  
 Do not eat, drink or smoke when using this product.  
 Use only outdoors or in a well-ventilated area.  
 Wear protective gloves/protective clothing/eye protection/face protection.  
 [In case of inadequate ventilation] wear respiratory protection.  
 If swallowed: Immediately call a poison center/doctor.  
 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.  
 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].  
 IF INHALED: Remove person to fresh air and keep comfortable for breathing.  
 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.  
 Continue rinsing.  
 IF exposed or concerned: Get medical advice/attention.  
 Call a poison center/doctor if you feel unwell.  
 Specific treatment is urgent (see on this label).  
 If experiencing respiratory symptoms: Call a poison center/doctor.  
 Wash contaminated clothing before reuse.  
 Absorb spillage to prevent material-damage.  
 Store in a well-ventilated place. Keep container tightly closed.  
 Store locked up.  
 Dispose of contents/container in accordance with local/regional/national/international regulations.

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

### 16 Other information

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

- **Contact:**
- **Date of the latest revision of the safety data sheet** 05/10/2022 / -
- **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)  
 LC50: Lethal concentration, 50 percent  
 LD50: Lethal dose, 50 percent  
 PBT: Persistent, Bioaccumulative and Toxic  
 vPvB: very Persistent and very Bioaccumulative

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

Printing date 10.05.2022

Revision: 10.05.2022

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

- **1.1 Product identifier**
- **Trade name:** MODIFIED MAYER'S HEMATOXYLIN
- **Article number:** 26043-18
- **1.2 Relevant identified uses of the substance or mixture and uses advised against**  
No further relevant information available.
- **Application of the substance / the mixture** Laboratory chemicals
- **1.3 Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**  
Electron Microscopy Sciences  
1560 Industry Road  
USA-Hatfield, PA 19440  
Tel: 215-412-8400 Fax: 215-412-8450  
email: [info@emsdiasum.com](mailto:info@emsdiasum.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**



skull and crossbones

Acute Tox. 1	H300	Fatal if swallowed.
Acute Tox. 3	H311	Toxic in contact with skin.
Acute Tox. 2	H330	Fatal if inhaled.



health hazard

Resp. Sens. 1B	H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
Muta. 1B	H340	May cause genetic defects.
Repr. 2	H361-H362	Suspected of damaging fertility or the unborn child. May cause harm to breast-fed children.
STOT SE 1	H370	Causes damage to organs.



corrosion

Met. Corr.1	H290	May be corrosive to metals.
Skin Corr. 1B	H314	Causes severe skin burns and eye damage.
Eye Dam. 1	H318	Causes serious eye damage.



environment

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Aquatic Acute 1 H400      Very toxic to aquatic life.

**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**

GHS05    GHS06    GHS08    GHS09

**Signal word** Danger**Hazard-determining components of labelling:**

chloral hydrate

Citric acid

**Hazard statements**

H290      May be corrosive to metals.

H300+H330 Fatal if swallowed or if inhaled.

H311      Toxic in contact with skin.

H314      Causes severe skin burns and eye damage.

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

H340      May cause genetic defects.

H361-H362 Suspected of damaging fertility or the unborn child. May cause harm to breast-fed children.

H370      Causes damage to organs.

H400      Very toxic to aquatic life.

**Precautionary statements**

P263      Avoid contact during pregnancy and while nursing.

P301+P310 IF SWALLOWED: Immediately call a POISON CENTER/ doctor.

P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P320      Specific treatment is urgent (see on this label).

P361+P364 Take off immediately all contaminated clothing and wash it before reuse.

P405      Store locked up.

P501      Dispose of contents/container in accordance with local/regional/national/international regulations.

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

### SECTION 3: Composition/information on ingredients

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

CAS: 302-17-0 EINECS: 206-117-5	chloral hydrate ☠ Acute Tox. 3, H301; ☠ Skin Irrit. 2, H315; Eye Irrit. 2, H319	>2.5-≤10%
CAS: 77-92-9 EINECS: 201-069-1	Citric acid ☠ Acute Tox. 1, H310; ☠ Acute Tox. 4, H332	≤2.5%

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

### SECTION 4: First aid measures

· **4.1 Description of first aid measures**

· **General information:**

Immediately remove any clothing soiled by the product.

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

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

· **After inhalation:**

Supply fresh air or oxygen; call for doctor.

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

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

· **After eye contact:** Rinse opened eye for several minutes under running water. Then consult a doctor.

· **After swallowing:**

Do not induce vomiting; call for medical help immediately.

Drink plenty of water and provide fresh air. Call for a doctor immediately.

· **4.2 Most important symptoms and effects, both acute and delayed** No further relevant information available.

· **4.3 Indication of any immediate medical attention and special treatment needed**

No further relevant information available.

### SECTION 5: Firefighting measures

· **5.1 Extinguishing media**

· **Suitable extinguishing agents:** Use fire extinguishing methods suitable to surrounding conditions.

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

· **5.3 Advice for firefighters**

· **Protective equipment:** Mouth respiratory protective device.

### SECTION 6: Accidental release measures

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

Wear protective equipment. Keep unprotected persons away.

· **6.2 Environmental precautions:**

Inform respective authorities in case of seepage into water course or sewage system.

Dilute with plenty of water.

Do not allow to enter sewers/ surface or ground water.

· **6.3 Methods and material for containment and cleaning up:**

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

Use neutralising agent.

Dispose contaminated material as waste according to item 13.

Ensure adequate ventilation.

· **6.4 Reference to other sections**

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

### SECTION 7: Handling and storage

· **7.1 Precautions for safe handling**

Ensure good ventilation/exhaustion at the workplace.

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- Open and handle receptacle with care.
- Prevent formation of aerosols.
- **Information about fire - and explosion protection:** Keep respiratory protective device available.
- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** Keep container tightly sealed.
- **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:**  
The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
- **Additional information:** The lists valid during the making were used as basis.
- **8.2 Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:**  
Keep away from foodstuffs, beverages and feed.  
Immediately remove all soiled and contaminated clothing  
Wash hands before breaks and at the end of work.  
Store protective clothing separately.  
Avoid contact with the eyes.  
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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· **Eye protection:**

Tightly sealed goggles

### SECTION 9: Physical and chemical properties

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

##### · General Information

##### · Appearance:

· <b>Form:</b>	Liquid
· <b>Colour:</b>	According to product specification
· <b>Odour:</b>	Characteristic
· <b>Odour threshold:</b>	Not determined.

· <b>pH-value:</b>	Not determined.
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##### · Change in condition

· <b>Melting point/freezing point:</b>	Undetermined.
· <b>Initial boiling point and boiling range:</b>	Undetermined.

· <b>Flash point:</b>	Not applicable.
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· <b>Flammability (solid, gas):</b>	Not applicable.
-------------------------------------	-----------------

· <b>Decomposition temperature:</b>	Not determined.
-------------------------------------	-----------------

· <b>Auto-ignition temperature:</b>	Product is not selfigniting.
-------------------------------------	------------------------------

· <b>Explosive properties:</b>	Product does not present an explosion hazard.
--------------------------------	---

##### · Explosion limits:

· <b>Lower:</b>	Not determined.
· <b>Upper:</b>	Not determined.

· <b>Vapour pressure at 20 °C:</b>	23 hPa
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· <b>Density:</b>	Not determined.
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· <b>Relative density</b>	Not determined.
---------------------------	-----------------

· <b>Vapour density</b>	Not determined.
-------------------------	-----------------

· <b>Evaporation rate</b>	Not determined.
---------------------------	-----------------

##### · Solubility in / Miscibility with water:

Fully miscible.

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

##### · Viscosity:

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

##### · Solvent content:

· <b>Water:</b>	87.0 %
· <b>VOC (EC)</b>	0.00 %

· <b>Solids content:</b>	7.7 %
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· **9.2 Other information**

No further relevant information available.

**SECTION 10: Stability and reactivity**

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

**SECTION 11: Toxicological information**· **11.1 Information on toxicological effects**· **Acute toxicity**

Fatal if swallowed or if inhaled.

Toxic in contact with skin.

· **LD/LC50 values relevant for classification:****302-17-0 chloral hydrate**

Oral LD50 479 mg/kg (rat)

Dermal LD50 3,030 mg/kg (rat)

**77-92-9 Citric acid**

Oral LD50 5,040 mg/kg (mouse)

· **Primary irritant effect:**· **Skin corrosion/irritation**

Causes severe skin burns and eye damage.

· **Serious eye damage/irritation**

Causes serious eye damage.

· **Respiratory or skin sensitisation**

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

· **Additional toxicological information:**· **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**· **Germ cell mutagenicity**

May cause genetic defects.

· **Carcinogenicity** Based on available data, the classification criteria are not met.· **Reproductive toxicity**

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

· **STOT-single exposure**

Causes damage to organs.

· **STOT-repeated exposure** Based on available data, the classification criteria are not met.· **Aspiration hazard** Based on available data, the classification criteria are not met.**SECTION 12: Ecological information**· **12.1 Toxicity**· **Aquatic toxicity:** No further relevant information available.· **12.2 Persistence and degradability** No further relevant information available.

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- **12.3 Bioaccumulative potential** No further relevant information available.
- **12.4 Mobility in soil** No further relevant information available.
- **Ecotoxicological effects:**
- **Remark:** Very toxic for fish
- **Additional ecological information:**
- **General notes:**  
Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water  
Do not allow product to reach ground water, water course or sewage system.  
Must not reach sewage water or drainage ditch undiluted or unneutralised.  
Danger to drinking water if even small quantities leak into the ground.  
Also poisonous for fish and plankton in water bodies.  
Very toxic for aquatic organisms
- **12.5 Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **12.6 Other adverse effects** No further relevant information available.

### SECTION 13: Disposal considerations

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

### SECTION 14: Transport information

- |   |   |
|---|---|
| <ul style="list-style-type: none"> <li>· <b>14.1 UN-Number</b></li> <li>· <b>ADR, IMDG, IATA</b></li> </ul>   | UN3082  |
| <ul style="list-style-type: none"> <li>· <b>14.2 UN proper shipping name</b></li> <li>· <b>ADR</b></li> <li>· <b>IMDG</b></li> <li>· <b>IATA</b></li> </ul> | 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE,<br>LIQUID, N.O.S.<br>ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID,<br>N.O.S., MARINE POLLUTANT<br>ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID,<br>N.O.S.   |
| <ul style="list-style-type: none"> <li>· <b>14.3 Transport hazard class(es)</b></li> <li>· <b>ADR, IMDG, IATA</b></li> </ul>                                | <div style="display: flex; align-items: center; gap: 10px;">   </div> |
| <ul style="list-style-type: none"> <li>· <b>Class</b></li> <li>· <b>Label</b></li> </ul>  | 9 Miscellaneous dangerous substances and articles.<br>9   |
| <ul style="list-style-type: none"> <li>· <b>14.4 Packing group</b></li> <li>· <b>ADR, IMDG, IATA</b></li> </ul>   | III   |

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· <b>14.5 Environmental hazards:</b>	
· <b>Marine pollutant:</b>	Symbol (fish and tree)
· <b>Special marking (ADR):</b>	Symbol (fish and tree)
· <b>Special marking (IATA):</b>	Symbol (fish and tree)
· <b>14.6 Special precautions for user</b>	Warning: Miscellaneous dangerous substances and articles.
· <b>Hazard identification number (Kemler code):</b>	90
· <b>EMS Number:</b>	F-A,S-F
· <b>Stowage Category</b>	A
· <b>14.7 Transport in bulk according to Annex II of Marpol and the IBC Code</b>	Not applicable.
· <b>Transport/Additional information:</b>	
· <b>ADR</b>	
· <b>Limited quantities (LQ)</b>	5L
· <b>Excepted quantities (EQ)</b>	Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
· <b>Transport category</b>	3
· <b>Tunnel restriction code</b>	(-)
· <b>IMDG</b>	
· <b>Limited quantities (LQ)</b>	5L
· <b>Excepted quantities (EQ)</b>	Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
· <b>UN "Model Regulation":</b>	UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S., 9, III

### 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**  
H1 ACUTE TOXIC  
E1 Hazardous to the Aquatic Environment
- **Qualifying quantity (tonnes) for the application of lower-tier requirements** 5 t
- **Qualifying quantity (tonnes) for the application of upper-tier requirements** 20 t
- **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**  
H301 Toxic if swallowed.  
H310 Fatal in contact with skin.  
H315 Causes skin irritation.  
H319 Causes serious eye irritation.

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*H332 Harmful if inhaled.*

**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)*

*LC50: Lethal concentration, 50 percent*

*LD50: Lethal dose, 50 percent*

*PBT: Persistent, Bioaccumulative and Toxic*

*vPvB: very Persistent and very Bioaccumulative*

*Met. Corr. 1: Corrosive to metals – Category 1*

*Acute Tox. 3: Acute toxicity – Category 3*

*Acute Tox. 1: Acute toxicity – Category 1*

*Acute Tox. 2: Acute toxicity – Category 2*

*Acute Tox. 4: Acute toxicity – Category 4*

*Skin Corr. 1B: Skin corrosion/irritation – Category 1B*

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

*Eye Dam. 1: Serious eye damage/eye irritation – Category 1*

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

*Resp. Sens. 1B: Respiratory sensitisation – Category 1B*

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

*Repr. 2: Reproductive toxicity – Category 2*

*STOT SE 1: Specific target organ toxicity (single exposure) – Category 1*

*Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard – Category 1*

GB



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

- **1.1 Productidentificatie**
- **Handelsnaam:** MODIFIED MAYER'S HEMATOXYLIN
- **Artikelnummer:** 26043-18
- **UFI:** 2D54-W0X9-M00C-PGSM
- **1.2 Relevant geïdentificeerd gebruik van de stof of het mengsel en ontraden gebruik**  
Geen verdere relevante informatie verkrijgbaar.
- **Toepassing van de stof / van de bereiding** Laboratoriumchemicaliën
- **1.3 Details betreffende de verstrekker van het veiligheidsinformatieblad**
- **Fabrikant/leverancier:**  
Electron Microscopy Sciences  
1560 Industry Road  
USA-Hatfield, PA 19440  
Tel: 215-412-8400 Fax: 215-412-8450  
email: [info@emsdiasum.com](mailto:info@emsdiasum.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**



GHS06 doodshoofd met gekruiste beenderen

Acute Tox. 1	H300	Dodelijk bij inslikken.
Acute Tox. 3	H311	Giftig bij contact met de huid.
Acute Tox. 2	H330	Dodelijk bij inademing.



GHS08 gezondheidsgevaar

Resp. Sens. 1B	H334	Kan bij inademing allergie- of astmasymptomen of ademhalingsmoeilijkheden veroorzaken.
Muta. 1B	H340	Kan genetische schade veroorzaken.
Repr. 2	H361-H362	Kan mogelijks de vruchtbaarheid of het ongeboren kind schaden. Kan schadelijk zijn via borstvoeding.
STOT SE 1	H370	Veroorzaakt schade aan organen.

(Vervolg op blz. 2)

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(Vervolg van blz. 1)



GHS05 corrosie

Met. Corr.1 H290 Kan bijtend zijn voor metalen.  
 Skin Corr. 1B H314 Veroorzaakt ernstige brandwonden en oogletsel.  
 Eye Dam. 1 H318 Veroorzaakt ernstig oogletsel.



GHS09 milieu

Aquatic Acute 1 H400 Zeer giftig voor in het water levende organismen.

### · 2.2 Etiketteringselementen

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

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

#### · Gevarenpictogrammen



GHS05



GHS06



GHS08



GHS09

#### · Signaalwoord Gevaar

#### · Gevaaraanduidende componenten voor de etikettering:

chloralhydraat

citroenzuur

#### · Gevarenaanduidingen

H290 Kan bijtend zijn voor metalen.

H300+H330 Dodelijk bij inslikken en bij inademing.

H311 Giftig bij contact met de huid.

H314 Veroorzaakt ernstige brandwonden en oogletsel.

H334 Kan bij inademing allergie- of astmasymptomen of ademhalingsmoeilijkheden veroorzaken.

H340 Kan genetische schade veroorzaken.

H361-H362 Kan mogelijks de vruchtbaarheid of het ongeboren kind schaden. Kan schadelijk zijn via borstvoeding.

H370 Veroorzaakt schade aan organen.

H400 Zeer giftig voor in het water levende organismen.

#### · Veiligheidsaanbevelingen

P263 Bij zwangerschap of borstvoeding aanraking vermijden.

P301+P310 NA INSLIKKEN: onmiddellijk een ANTIGIFCENTRUM/arts raadplegen.

P303+P361+P353 BIJ CONTACT MET DE HUID (of het haar): verontreinigde kleding onmiddellijk uittrekken. Huid met water afspoelen [of afdouchen].

P305+P351+P338 BIJ CONTACT MET DE OGEN: voorzichtig afspoelen met water gedurende een aantal minuten; contactlenzen verwijderen, indien mogelijk; blijven spoelen.

P320 Specifieke behandeling dringend vereist (zie op dit etiket).

P361+P364 Verontreinigde kleding onmiddellijk uittrekken en wassen alvorens deze opnieuw te gebruiken.

P405 Achter slot bewaren.

P501 De inhoud en de verpakking verwerken volgens de plaatselijke/regionale/nationale/internationale voorschriften.

#### · 2.3 Andere gevaren

#### · Resultaten van PBT- en zPzB-beoordeling

· **PBT:** Niet bruikbaar.

(Vervolg op blz. 3)

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(Vervolg van blz. 2)

· **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: 302-17-0	chloralhydraat	>2,5-≤10%
EINECS: 206-117-5	⚠ Acute Tox. 3, H301; ⚠ Skin Irrit. 2, H315; Eye Irrit. 2, H319	
CAS: 77-92-9	citroenzuur	≤2,5%
EINECS: 201-069-1	⚠ Acute Tox. 1, H310; ⚠ Acute Tox. 4, H332	

- **Aanvullende gegevens:**

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

### RUBRIEK 4: Eerstehulpmaatregelen

- **4.1 Beschrijving van de eerstehulpmaatregelen**
- **Algemene informatie:**
  - Verontreinigde kleding onmiddellijk uittrekken.
  - Ademhalingstoestel pas afnemen nadat de verontreinigde kleding verwijderd is.
  - Bij onregelmatige ademhaling of ademstilstand kunstmatige ademhaling toepassen.
- **Na het inademen:**
  - Verse lucht of zuurstof toedienen; deskundige medische hulp inroepen.
  - Bij bewusteloosheid ligging en vervoer in stabiele zijligging.
- **Na huidcontact:** Onmiddellijk met water en zeep afwassen en goed naspoelen.
- **Na oogcontact:** Ogen met open ooglid een aantal minuten onder stromend water afspoelen en dokter raadplegen.
- **Na inslikken:**
  - Geen braken teweegbrengen en onmiddellijk medische hulp raadplegen.
  - Drink zeer veel water en voer verse lucht aan. Onmiddellijk een dokter waarschuwen.
- **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.
- **5.2 Speciale gevaren die door de stof of het mengsel worden veroorzaakt**
  - Geen verdere relevante informatie verkrijgbaar.
- **5.3 Advies voor brandweertieners**
- **Speciale beschermende kleding:** Ademhalingstoestel aantrekken.

### 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 Milieuvorzorgsmaatregelen:**
  - Bij indringen in afvalwater of riolering moet de bevoegde instantie gewaarschuwd worden.
  - Met veel water verdunnen.
  - Niet in de riolering/het oppervlaktewater/het grondwater laten terechtkomen.

(Vervolg op blz. 4)

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- **6.3 Insluitings- en reinigingsmethoden en -materiaal:**  
Met vloeistofbindend materiaal (zand, bergmeel, zuurbinder, universele binder, zaagmeel) opnemen.  
Neutralisatiemiddel gebruiken.  
Besmet materiaal zoals afval volgens punt 13 verwijderen.  
Voor voldoende ventilatie zorgen.
- **6.4 Verwijzing naar andere rubrieken**  
Informatie inzake veilig gebruik - zie hoofdstuk 7.  
Informatie inzake persoonlijke beschermingsuitrusting - zie hoofdstuk 8.  
Informatie inzake berging - zie hoofdstuk 13.

### RUBRIEK 7: Hantering en opslag

- **7.1 Voorzorgsmaatregelen voor het veilig hanteren van de stof of het mengsel**  
Voor goede ventilatie/afzuiging op de werkplaatsen zorgen.  
Tanks voorzichtig openen en behandelen.  
Aërosolvorming vermijden.
- **Informatie m.b.t. brand- en ontploffingsgevaar:** Ademhalingsstoestellen gereedhouden.
- **7.2 Voorwaarden voor een veilige opslag, met inbegrip van incompatibele producten**
- **Opslag:**
- **Eisen ten opzichte van opslagruimte en tanks:** Geen bijzondere eisen.
- **Informatie m.b.t. gezamenlijke opslag:** Niet noodzakelijk.
- **Verdere inlichtingen over eisen m.b.t. de opslag:** Tanks ondoordringbaar gesloten houden.
- **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:**  
Het product bevat geen relevante hoeveelheden van stoffen, die met betrekking tot de werkplaatsen, qua grenswaarden gecontroleerd moeten worden.
- **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.

(Vervolg op blz. 5)

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

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

· **Handschoenmateriaal**

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

· **Doordringingstijd van het handschoenmateriaal**

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

· **Oogbescherming:**



Nauw aansluitende veiligheidsbril

### RUBRIEK 9: Fysische en chemische eigenschappen

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

· **Algemene gegevens**

· **Voorkomen:**

· <b>Vorm:</b>	Vloeistof
· <b>Kleur:</b>	Volgens de produktbeschrijving
· <b>Geur:</b>	Karakteristiek
· <b>Geurdrempelwaarde:</b>	Niet bepaald.

· **pH-waarde:** Niet bepaald.

· **Toestandsverandering**

· <b>Smelt-/vriespunt:</b>	Niet bepaald.
· <b>Beginkookpunt en kooktraject:</b>	Niet bepaald.

· **Vlampunt:** Niet bruikbaar.

· **Ontvlambaarheid (vast, gas):** Niet bruikbaar.

· **Ontledingstemperatuur:** Niet bepaald.

· **Zelfontbrandingstemperatuur:** Het produkt ontbrandt niet uit zichzelf.

· **Ontploffingseigenschappen:** Het produkt is niet ontploffingsgevaarlijk.

· **Ontploffingsgrenzen:**

· <b>Onderste:</b>	Niet bepaald.
· <b>Bovenste:</b>	Niet bepaald.

· **Dampspanning bij 20 °C:** 23 hPa

· **Dichtheid:** Niet bepaald.

· **Relatieve dichtheid** Niet bepaald.

· **Dampdichtheid** Niet bepaald.

· **Verdampingssnelheid** Niet bepaald.

· **Oplosbaarheid in/mengbaarheid met**

· **Water:** Volledig mengbaar.

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

(Vervolg op blz. 6)

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· <b>Viscositeit</b>	
<b>Dynamisch:</b>	Niet bepaald.
<b>Kinematisch:</b>	Niet bepaald.
· <b>Oplosmiddelgehalte:</b>	
<b>Water:</b>	87,0 %
<b>VOC (EG)</b>	0,00 %
<b>Gehalte aan vaste bestanddelen:</b>	7,7 %
· <b>9.2 Overige informatie</b>	Geen verdere relevante informatie verkrijgbaar.

### RUBRIEK 10: Stabiliteit en reactiviteit

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

### RUBRIEK 11: Toxicologische informatie

- **11.1 Informatie over toxicologische effecten**

- **Acute toxiciteit**

Dodelijk bij inslikken en bij inademing.

Giftig bij contact met de huid.

- **Indelingsrelevantie LD/LC50-waarden:**

#### 302-17-0 chloralhydraat

Oraal	LD50	479 mg/kg (rat)
Dermaal	LD50	3.030 mg/kg (rat)

#### 77-92-9 citroenzuur

Oraal	LD50	5.040 mg/kg (mouse)
-------	------	---------------------

- **Primaire aandoening:**

- **Huidcorrosie/-irritatie**

Veroorzaakt ernstige brandwonden en oogletsel.

- **Ernstig oogletsel/oogirritatie**

Veroorzaakt ernstig oogletsel.

- **Sensibilisatie van de luchtwegen/de huid**

Kan bij inademing allergie- of astmasymptomen of ademhalingsmoeilijkheden veroorzaken.

- **Aanvullende toxicologische informatie:**

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

- **Mutageniteit in geslachtscellen**

Kan genetische schade veroorzaken.

- **Kankerverwekkendheid** Gebaseerd op beschikbare gegevens; aan de indelingscriteria is niet voldaan.

- **Giftigheid voor de voortplanting**

Kan mogelijks de vruchtbaarheid of het ongeboren kind schaden. Kan schadelijk zijn via borstvoeding.

- **STOT bij eenmalige blootstelling**

Veroorzaakt schade aan organen.

- **STOT bij herhaalde blootstelling** Gebaseerd op beschikbare gegevens; aan de indelingscriteria is niet voldaan.

(Vervolg op blz. 7)



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(Vervolg van blz. 6)

· **Gevaar bij inademing** Gebaseerd op beschikbare gegevens; aan de indelingscriteria is niet voldaan.

### RUBRIEK 12: Ecologische informatie

- **12.1 Toxiciteit**
- **Aquatische toxiciteit:** Geen verdere relevante informatie verkrijgbaar.
- **12.2 Persistentie en afbreekbaarheid** Geen verdere relevante informatie verkrijgbaar.
- **12.3 Bioaccumulatie** Geen verdere relevante informatie verkrijgbaar.
- **12.4 Mobiliteit in de bodem** Geen verdere relevante informatie verkrijgbaar.
- **Ecotoxische effecten:**
- **Opmerking:** Zeer giftig voor vissen.
- **Verdere ecologische informatie:**
- **Algemene informatie:**  
*Waterbezwaarlijkheid (NL): B(4) Weinig schadelijk voor in water levende organismen*  
*Gevaar voor water klasse 2 (D) (Zelfclassificatie): gevaar voor water*  
*Niet lozen in grondwater, in oppervlaktewater of in riolering.*  
*Mag niet onverdund of niet geneutraliseerd in oppervlaktewater of in afwateringskanaal geloosd worden.*  
*Gevaar voor drinkwater zelfs bij uitlopen van geringe hoeveelheden in de ondergrond.*  
*In oppervlaktewater ook giftig voor vissen en plankton.*  
*zeer giftig voor in het water levende organismen*
- **12.5 Resultaten van PBT- en zPzB-beoordeling**
- **PBT:** Niet bruikbaar.
- **zPzB:** Niet bruikbaar.
- **12.6 Andere schadelijke effecten** Geen verdere relevante informatie verkrijgbaar.

### RUBRIEK 13: Instructies voor verwijdering

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

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

- |  |  |
|--|--|
| · <b>14.1 VN-nummer</b>  |  |
| · <b>ADR, IMDG, IATA</b>   | UN3082   |
| · <b>14.2 Juiste ladingnaam overeenkomstig de modelreglementen van de VN</b> |  |
| · <b>ADR</b>   | 3082 MILIEUGEVAARLIJKE VLOEISTOF, N.E.G.                                 |
| · <b>IMDG</b>  | ENVIRONMENTALLY HAZARDOUS SUBSTANCE,<br>LIQUID, N.O.S., MARINE POLLUTANT |
| · <b>IATA</b>  | ENVIRONMENTALLY HAZARDOUS SUBSTANCE,<br>LIQUID, N.O.S.                   |

(Vervolg op blz. 8)



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(Vervolg van blz. 7)

· **14.3 Transportgevaarenklasse(n)**

· **ADR, IMDG, IATA**



· **klasse** 9 Diverse gevaarlijke stoffen en voorwerpen  
 · **Etiket** 9

· **14.4 Verpakkingsgroep:**

· **ADR, IMDG, IATA** III

· **14.5 Milieugevaren:**

· **Marine pollutant:** Symbool (vis en boom)  
 · **Bijzondere kenmerking (ADR):** Symbool (vis en boom)  
 · **Bijzondere kenmerking (IATA):** Symbool (vis en boom)

· **14.6 Bijzondere voorzorgen voor de gebruiker** Waarschuwing: Diverse gevaarlijke stoffen en voorwerpen  
 · **Gevaarsidentificatienummer (Kemler-getal):** 90  
 · **EMS-nummer:** F-A,S-F  
 · **Stowage Category** A

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

· **Transport/verdere gegevens:**

· **ADR**  
 · **Beperkte hoeveelheden (LQ)** 5L  
 · **Uitgezonderde hoeveelheden (EQ)** Code: E1  
 Grootste netto hoeveelheid per binnenverpakking: 30 ml  
 Grootste netto hoeveelheid per buitenverpakking: 1000 ml  
 · **Vervoerscategorie** 3  
 · **Tunnelbeperkingscode** (-)

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

· **VN "Model Regulation":** UN 3082 MILIEUGEVAARLIJKE VLOEISTOF, N.E.G., 9, III

## RUBRIEK 15: Regelgeving

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

· **SZW-lijst van kankerverwekkende stoffen**

geen der bestanddelen staat op de lijst.

· **SZW-lijst van mutagene stoffen**

geen der bestanddelen staat op de lijst.

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

geen der bestanddelen staat op de lijst.

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

geen der bestanddelen staat op de lijst.

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

geen der bestanddelen staat op de lijst.

· **Lijst Zeer Zorgwekkende Stoffen (ZZS)**

geen der bestanddelen staat op de lijst.

· **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**

H1 ACUUT TOXISCH

E1 Gevaar voor het aquatisch milieu

· **Drempelwaarde (ton) voor toepassing van voorschriften voor lagedrempelinrichtingen 5 t**

· **Drempelwaarde (ton) voor toepassing van voorschriften voor hogedrempelinrichtingen 20 t**

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

· **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.

· **Bijlage II - PRECURSOREN VOOR EXPLOSIEVEN DIE MOETEN WORDEN GEMELD**

geen der bestanddelen staat op de lijst.

· **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.

· **Nationale voorschriften:**

· **Gevaarklasse v. water:** Waterbezwaarlijkheid (NL): B(4) Weinig schadelijk voor in water levende organismen

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

## RUBRIEK 16: Overige informatie

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

· **Relevante zinnen**

H301 Giftig bij inslikken.

H310 Dodelijk bij contact met de huid.

H315 Veroorzaakt huidirritatie.

H319 Veroorzaakt ernstige oogirritatie.

H332 Schadelijk bij inademing.

· **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)

(Vervolg op blz. 10)

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*IMDG: International Maritime Code for Dangerous Goods*  
*IATA: International Air Transport Association*  
*GHS: Globally Harmonised System of Classification and Labelling of Chemicals*  
*EINECS: European Inventory of Existing Commercial Chemical Substances*  
*ELINCS: European List of Notified Chemical Substances*  
*CAS: Chemical Abstracts Service (division of the American Chemical Society)*  
*VOC: Volatile Organic Compounds (USA, EU)*  
*LC50: Lethal concentration, 50 percent*  
*LD50: Lethal dose, 50 percent*  
*PBT: Persistent, Bioaccumulative and Toxic*  
*vPvB: very Persistent and very Bioaccumulative*  
*Met. Corr. 1: Bijtend voor metalen – Categorie 1*  
*Acute Tox. 3: Acute toxiciteit – Categorie 3*  
*Acute Tox. 1: Acute toxiciteit – Categorie 1*  
*Acute Tox. 2: Acute toxiciteit – Categorie 2*  
*Acute Tox. 4: Acute toxiciteit – Categorie 4*  
*Skin Corr. 1B: Huidcorrosie/-irritatie – Categorie 1B*  
*Skin Irrit. 2: Huidcorrosie/-irritatie – Categorie 2*  
*Eye Dam. 1: Ernstig oogletsel/oogirritatie – Categorie 1*  
*Eye Irrit. 2: Ernstig oogletsel/oogirritatie – Categorie 2*  
*Resp. Sens. 1B: Sensibilisatie van de luchtwegen – Categorie 1B*  
*Muta. 1B: Mutageniteit in geslachtscellen – Categorie 1B*  
*Repr. 2: Voortplantingstoxiciteit – Categorie 2*  
*STOT SE 1: Specifieke doelorgaantoxiciteit bij eenmalige blootstelling – Categorie 1*  
*Aquatic Acute 1: Gevaar voor het aquatisch milieu - acuut aquatisch gevaar – Categorie 1*

-NL-

# Fiche de données de sécurité

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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:** MODIFIED MAYER'S HEMATOXYLIN
- **Code du produit:** 26043-18
- **UFI:** 2D54-W0X9-M00C-PGSM
- **1.2 Utilisations identifiées pertinentes de la substance ou du mélange et utilisations déconseillées**  
Pas d'autres informations importantes disponibles.
- **Emploi de la substance / de la préparation** Produits chimiques pour laboratoires
- **1.3 Renseignements concernant le fournisseur de la fiche de données de sécurité**
- **Producteur/fournisseur:**  
Electron Microscopy Sciences  
1560 Industry Road  
USA-Hatfield, PA 19440  
Tel: 215-412-8400 Fax: 215-412-8450  
email: [info@emsdiasum.com](mailto:info@emsdiasum.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**



GHS06 tête de mort sur deux tibias

Acute Tox. 1	H300	Mortel en cas d'ingestion.
Acute Tox. 3	H311	Toxique par contact cutané.
Acute Tox. 2	H330	Mortel par inhalation.



GHS08 danger pour la santé

Resp. Sens. 1B	H334	Peut provoquer des symptômes allergiques ou d'asthme ou des difficultés respiratoires par inhalation.
Muta. 1B	H340	Peut induire des anomalies génétiques.
Repr. 2	H361-H362	Susceptible de nuire à la fertilité ou au fœtus. Peut être nocif pour les bébés nourris au lait maternel.
STOT SE 1	H370	Risque avéré d'effets graves pour les organes.



GHS05 corrosion

Met. Corr.1	H290	Peut être corrosif pour les métaux.
Skin Corr. 1B	H314	Provoque de graves brûlures de la peau et de graves lésions des yeux.
Eye Dam. 1	H318	Provoque de graves lésions des yeux.

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GHS09 environnement

*Aquatic Acute 1 H400*      *Très toxique pour les organismes aquatiques.*

- **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**



GHS05



GHS06



GHS08



GHS09

- **Mention d'avertissement** *Danger*
- **Composants dangereux déterminants pour l'étiquetage:**  
*2,2,2-trichloro-1,1-éthanediol*  
*acide citrique*
- **Mentions de danger**
  - H290*      *Peut être corrosif pour les métaux.*
  - H300+H330* *Mortel par ingestion ou par inhalation.*
  - H311*      *Toxique par contact cutané.*
  - H314*      *Provoque de graves brûlures de la peau et de graves lésions des yeux.*
  - H334*      *Peut provoquer des symptômes allergiques ou d'asthme ou des difficultés respiratoires par inhalation.*
  - H340*      *Peut induire des anomalies génétiques.*
  - H361-H362* *Susceptible de nuire à la fertilité ou au fœtus. Peut être nocif pour les bébés nourris au lait maternel.*
  - H370*      *Risque avéré d'effets graves pour les organes.*
  - H400*      *Très toxique pour les organismes aquatiques.*
- **Conseils de prudence**
  - P263*      *Éviter tout contact avec la substance au cours de la grossesse et pendant l'allaitement.*
  - P301+P310*      *EN CAS D'INGESTION: Appeler immédiatement un CENTRE ANTIPOISON/un médecin.*
  - P303+P361+P353* *EN CAS DE CONTACT AVEC LA PEAU (ou les cheveux): Enlever immédiatement tous les vêtements contaminés. Rincer la peau à l'eau [ou se doucher].*
  - P305+P351+P338* *EN CAS DE CONTACT AVEC LES YEUX: Rincer avec précaution à l'eau pendant plusieurs minutes. Enlever les lentilles de contact si la victime en porte et si elles peuvent être facilement enlevées. Continuer à rincer.*
  - P320*      *Un traitement spécifique est urgent (voir sur cette étiquette).*
  - P361+P364*      *Enlever immédiatement tous les vêtements contaminés et les laver avant réutilisation.*
  - P405*      *Garder sous clef.*
  - P501*      *Éliminer le contenu/récipient conformément à la réglementation locale/régionale/nationale/internationale.*
- **2.3 Autres dangers**
- **Résultats des évaluations PBT et vPvB**
- **PBT:** *Non applicable.*
- **vPvB:** *Non applicable.*

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

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

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**· Composants dangereux:**

CAS: 302-17-0	2,2,2-trichloro-1,1-éthanediol	>2,5-≤10%
EINECS: 206-117-5	⚠ Acute Tox. 3, H301; ⚠ Skin Irrit. 2, H315; Eye Irrit. 2, H319	
CAS: 77-92-9	acide citrique	≤2,5%
EINECS: 201-069-1	⚠ Acute Tox. 1, H310; ⚠ Acute Tox. 4, H332	

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

### RUBRIQUE 4: Premiers secours

· **4.1 Description des premiers secours**

· **Remarques générales:**

Enlever immédiatement les vêtements contaminés par le produit.

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

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

· **Après inhalation:**

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

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

· **Après contact avec la peau:** Laver immédiatement à l'eau et au savon et bien rincer.

· **Après contact avec les yeux:**

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

· **Après ingestion:**

Ne pas faire vomir, demander d'urgence une assistance médicale.

Boire de l'eau en abondance et donner de l'air frais. Consulter immédiatement un médecin.

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

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

Pas d'autres informations importantes disponibles.

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

· **5.1 Moyens d'extinction**

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

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

Pas d'autres informations importantes disponibles.

· **5.3 Conseils aux pompiers**

· **Équipement spécial de sécurité:** Porter un appareil de protection respiratoire.

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

· **6.1 Précautions individuelles, équipement de protection et procédures d'urgence**

Porter un équipement de sécurité. Eloigner les personnes non protégées.

· **6.2 Précautions pour la protection de l'environnement:**

En cas de pénétration dans les eaux ou les égouts, avertir les autorités compétentes.

Diluer avec beaucoup d'eau.

Ne pas rejeter dans les canalisations, dans les eaux de surface et dans les nappes d'eau souterraines.

· **6.3 Méthodes et matériel de confinement et de nettoyage:**

Recueillir les liquides à l'aide d'un produit absorbant (sable, kieselguhr, neutralisant d'acide, liant universel, sciure).

Utiliser un neutralisant.

Évacuer les matériaux contaminés en tant que déchets conformément au point 13.

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Assurer une aération suffisante.

· **6.4 Référence à d'autres rubriques**

Afin d'obtenir des informations pour une manipulation sûre, consulter le chapitre 7.

Afin d'obtenir des informations sur les équipements de protection personnels, consulter le chapitre 8.

Afin d'obtenir des informations sur l'élimination, consulter le chapitre 13.

### RUBRIQUE 7: Manipulation et stockage

· **7.1 Précautions à prendre pour une manipulation sans danger**

Veiller à une bonne ventilation/aspiration du poste de travail.

Ouvrir et manipuler les récipients avec précaution.

Eviter la formation d'aérosols.

· **Préventions des incendies et des explosions:** Tenir des appareils de protection respiratoire prêts.

· **7.2 Conditions d'un stockage sûr, y compris d'éventuelles incompatibilités**

· **Stockage:**

· **Exigences concernant les lieux et conteneurs de stockage:** Aucune exigence particulière.

· **Indications concernant le stockage commun:** Pas nécessaire.

· **Autres indications sur les conditions de stockage:** Tenir les emballages hermétiquement fermés.

· **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:**

Le produit ne contient pas en quantité significative des substances présentant des valeurs-seuil à surveiller par poste de travail.

· **Remarques supplémentaires:**

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

· **8.2 Contrôles de l'exposition**

· **Equipement de protection individuel:**

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

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

Retirer immédiatement les vêtements souillés ou humectés.

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

Conserver à part les vêtements de protection.

Eviter tout contact avec les yeux.

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.

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· **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:**

<b>Forme:</b>	Liquide
<b>Couleur:</b>	Selon désignation produit
<b>Odeur:</b>	Caractéristique
<b>Seuil olfactif:</b>	Non déterminé.

· **valeur du pH:** Non déterminé.

· **Changement d'état**

<b>Point de fusion/point de congélation:</b>	Non déterminé.
<b>Point initial d'ébullition et intervalle d'ébullition:</b>	Non déterminé.

· **Point d'éclair** Non applicable.

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

· **Température de décomposition:** Non déterminé.

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

· **Propriétés explosives:** Le produit n'est pas explosif.

· **Limites d'explosion:**

<b>Inférieure:</b>	Non déterminé.
<b>Supérieure:</b>	Non déterminé.

· **Pression de vapeur à 20 °C:** 23 hPa

· **Densité:** Non déterminée.

· **Densité relative** Non déterminé.

· **Densité de vapeur:** Non déterminé.

· **Taux d'évaporation:** Non déterminé.

· **Solubilité dans/miscibilité avec l'eau:**

Entièrement miscible

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

· **Viscosité:**

<b>Dynamique:</b>	Non déterminé.
<b>Cinématique:</b>	Non déterminé.

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<b>· Teneur en solvants:</b>	
<b>Eau:</b>	87,0 %
<b>VOC (CE)</b>	0,00 %
<b>Teneur en substances solides:</b>	
	7,7 %
<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** *Aucune réaction dangereuse connue.*
- **10.4 Conditions à éviter** *Pas d'autres informations importantes disponibles.*
- **10.5 Matières incompatibles:** *Pas d'autres informations importantes disponibles.*
- **10.6 Produits de décomposition dangereux:** *Pas de produits de décomposition dangereux connus*

### RUBRIQUE 11: Informations toxicologiques

#### · 11.1 Informations sur les effets toxicologiques

##### · Toxicité aiguë

*Mortel par ingestion ou par inhalation.*

*Toxique par contact cutané.*

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

###### **302-17-0 2,2,2-trichloro-1,1-éthanediol**

Oral	LD50	479 mg/kg (rat)
Dermique	LD50	3.030 mg/kg (rat)

###### **77-92-9 acide citrique**

Oral	LD50	5.040 mg/kg (souris)
------	------	----------------------

- **Effet primaire d'irritation:**
- **Corrosion cutanée/irritation cutanée**  
*Provoque de graves brûlures de la peau et de graves lésions des yeux.*
- **Lésions oculaires graves/irritation oculaire**  
*Provoque de graves lésions des yeux.*
- **Sensibilisation respiratoire ou cutanée**  
*Peut provoquer des symptômes allergiques ou d'asthme ou des difficultés respiratoires par inhalation.*
- **Indications toxicologiques complémentaires:**
- **Effets CMR (cancérogène, mutagène et toxique pour la reproduction)**
- **Mutagenicité sur les cellules germinales**  
*Peut induire des anomalies génétiques.*
- **Cancérogénicité** *Compte tenu des données disponibles, les critères de classification ne sont pas remplis.*
- **Toxicité pour la reproduction**  
*Susceptible de nuire à la fertilité ou au fœtus. Peut être nocif pour les bébés nourris au lait maternel.*
- **Toxicité spécifique pour certains organes cibles - exposition unique**  
*Risque avéré d'effets graves pour les organes.*
- **Toxicité spécifique pour certains organes cibles - exposition répétée**  
*Compte tenu des données disponibles, les critères de classification ne sont pas remplis.*

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

### RUBRIQUE 12: Informations écologiques

- **12.1 Toxicité**
- **Toxicité aquatique:** Pas d'autres informations importantes disponibles.
- **12.2 Persistance et dégradabilité** Pas d'autres informations importantes disponibles.
- **12.3 Potentiel de bioaccumulation** Pas d'autres informations importantes disponibles.
- **12.4 Mobilité dans le sol** Pas d'autres informations importantes disponibles.
- **Effets écotoxiques:**
- **Remarque:** Très toxique chez les poissons.
- **Autres indications écologiques:**
- **Indications générales:**  
 Catégorie de pollution des eaux 2 (D) (Classification propre): polluant  
 Ne pas laisser pénétrer dans la nappe phréatique, les eaux ou les canalisations.  
 Ne doit pas pénétrer à l'état non dilué ou non neutralisé dans les eaux usées ou le collecteur.  
 Danger pour l'eau potable dès fuite d'une petite quantité dans le sous-sol.  
 Dans les eaux, également toxique pour les poissons et le plancton.  
 Très toxique pour organismes aquatiques.
- **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, IMDG, IATA</b>                                   | UN3082  |
| · <b>14.2 Désignation officielle de transport de l'ONU</b> |   |
| · <b>ADR</b>   | 3082 MATIÈRE DANGEREUSE DU POINT DE VUE DE L'ENVIRONNEMENT, LIQUIDE, N.S.A. |
| · <b>IMDG</b>  | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S., MARINE POLLUTANT       |
| · <b>IATA</b>  | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.                         |

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

· **ADR, IMDG, IATA**



· **Classe** 9 Matières et objets dangereux divers.  
 · **Étiquette** 9

· **14.4 Groupe d'emballage**

· **ADR, IMDG, IATA** III

· **14.5 Dangers pour l'environnement:**

· **Marine Pollutant:** Signe conventionnel (poisson et arbre)  
 · **Marquage spécial (ADR):** Signe conventionnel (poisson et arbre)  
 · **Marquage spécial (IATA):** Signe conventionnel (poisson et arbre)

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

· **Numéro d'identification du danger (Indice Kemler):** Attention: Matières et objets dangereux divers.  
 · **No EMS:** 90  
 · **Stowage Category** F-A,S-F  
 A

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

Non applicable.

· **Indications complémentaires de transport:**

· **ADR**  
 · **Quantités limitées (LQ)** 5L  
 · **Quantités exceptées (EQ)** Code: E1  
 Quantité maximale nette par emballage intérieur: 30 ml  
 Quantité maximale nette par emballage extérieur: 1000 ml  
 · **Catégorie de transport** 3  
 · **Code de restriction en tunnels** (-)

· **IMDG**

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

· **"Règlement type" de l'ONU:**

UN 3082 MATIÈRE DANGEREUSE DU POINT DE VUE DE L'ENVIRONNEMENT, LIQUIDE, N.S.A., 9, III

### 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.

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- **Catégorie SEVESO**  
H1 TOXICITÉ AIGUË  
E1 Danger pour l'environnement aquatique
- **Quantité seuil (tonnes) pour l'application des exigences relatives au seuil bas 5 t**
- **Quantité seuil (tonnes) pour l'application des exigences relatives au seuil haut 20 t**
- **RÈGLEMENT (CE) N° 1907/2006 ANNEXE XVII Conditions de limitation: 3**

· **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.

· **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 SIGNALLEMENT**

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.

· **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**

H301 Toxique en cas d'ingestion.

H310 Mortel par contact cutané.

H315 Provoque une irritation cutanée.

H319 Provoque une sévère irritation des yeux.

H332 Nocif par inhalation.

· **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)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

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

Acute Tox. 3: Toxicité aiguë – Catégorie 3

Acute Tox. 1: Toxicité aiguë – Catégorie 1

Acute Tox. 2: Toxicité aiguë – Catégorie 2

Acute Tox. 4: Toxicité aiguë – Catégorie 4

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

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

Eye Dam. 1: Lésions oculaires graves/irritation oculaire – Catégorie 1

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

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

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

*Repr. 2: Toxicité pour la reproduction – Catégorie 2*

*STOT SE 1: Toxicité spécifique pour certains organes cibles (exposition unique) – Catégorie 1*

*Aquatic Acute 1: Dangers pour le milieu aquatique- toxicité aiguë pour le milieu aquatique – Catégorie 1*

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

- **1.1 Produktidentifikator**
- **Handelsname:** MODIFIED MAYER'S HEMATOXYLIN
- **Artikelnummer:** 26043-18
- **UFI:** 2D54-W0X9-M00C-PGSM
- **1.2 Relevante identifizierte Verwendungen des Stoffs oder Gemischs und Verwendungen, von denen abgeraten wird**  
Keine weiteren relevanten Informationen verfügbar.
- **Verwendung des Stoffes / des Gemisches** Laborchemikalien
- **1.3 Einzelheiten zum Lieferanten, der das Sicherheitsdatenblatt bereitstellt**
- **Hersteller/Lieferant:**  
Electron Microscopy Sciences  
1560 Industry Road  
USA-Hatfield, PA 19440  
Tel: 215-412-8400 Fax: 215-412-8450  
email: [info@emsdiasum.com](mailto:info@emsdiasum.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**



GHS06 Totenkopf mit gekreuzten Knochen

Acute Tox. 1	H300	Lebensgefahr bei Verschlucken.
Acute Tox. 3	H311	Giftig bei Hautkontakt.
Acute Tox. 2	H330	Lebensgefahr bei Einatmen.



GHS08 Gesundheitsgefahr

Resp. Sens. 1B	H334	Kann bei Einatmen Allergie, asthmaartige Symptome oder Atembeschwerden verursachen.
Muta. 1B	H340	Kann genetische Defekte verursachen.
Repr. 2	H361-H362	Kann vermutlich die Fruchtbarkeit beeinträchtigen oder das Kind im Mutterleib schädigen. Kann Säuglinge über die Muttermilch schädigen.
STOT SE 1	H370	Schädigt die Organe.

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GHS05 Ätzwirkung

Met. Corr.1 H290 Kann gegenüber Metallen korrosiv sein.  
 Skin Corr. 1B H314 Verursacht schwere Verätzungen der Haut und schwere Augenschäden.  
 Eye Dam. 1 H318 Verursacht schwere Augenschäden.



GHS09 Umwelt

Aquatic Acute 1 H400 Sehr giftig für Wasserorganismen.

### · 2.2 Kennzeichnungselemente

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

Das Produkt ist gemäß CLP-Verordnung eingestuft und gekennzeichnet.

#### · Gefahrenpiktogramme



GHS05



GHS06



GHS08



GHS09

#### · Signalwort Gefahr

#### · Gefahrbestimmende Komponenten zur Etikettierung:

Chloralhydrat

Zitronensäure

#### · Gefahrenhinweise

H290 Kann gegenüber Metallen korrosiv sein.  
 H300+H330 Lebensgefahr bei Verschlucken oder Einatmen.  
 H311 Giftig bei Hautkontakt.  
 H314 Verursacht schwere Verätzungen der Haut und schwere Augenschäden.  
 H334 Kann bei Einatmen Allergie, asthmaartige Symptome oder Atembeschwerden verursachen.  
 H340 Kann genetische Defekte verursachen.  
 H361-H362 Kann vermutlich die Fruchtbarkeit beeinträchtigen oder das Kind im Mutterleib schädigen. Kann Säuglinge über die Muttermilch schädigen.  
 H370 Schädigt die Organe.  
 H400 Sehr giftig für Wasserorganismen.

#### · Sicherheitshinweise

P263 Berührung während Schwangerschaft und Stillzeit vermeiden.  
 P301+P310 BEI VERSCHLUCKEN: Sofort GIFTINFORMATIONSZENTRUM/Arzt anrufen.  
 P303+P361+P353 BEI BERÜHRUNG MIT DER HAUT (oder dem Haar): Alle kontaminierten Kleidungsstücke sofort ausziehen. Haut mit Wasser abwaschen [oder duschen].  
 P305+P351+P338 BEI KONTAKT MIT DEN AUGEN: Einige Minuten lang behutsam mit Wasser spülen. Eventuell vorhandene Kontaktlinsen nach Möglichkeit entfernen. Weiter spülen.  
 P320 Besondere Behandlung dringend erforderlich (siehe auf diesem Kennzeichnungsetikett).  
 P361+P364 Alle kontaminierten Kleidungsstücke sofort ausziehen und vor erneutem Tragen waschen.  
 P405 Unter Verschluss aufbewahren.  
 P501 Entsorgung des Inhalts / des Behälters gemäß den örtlichen / regionalen / nationalen / internationalen Vorschriften.

#### · Zusätzliche Angaben:

Nur für gewerbliche Anwender.

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- **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: 302-17-0	Chloralhydrat	>2,5-≤10%
EINECS: 206-117-5	⚠ Acute Tox. 3, H301; ⚠ Skin Irrit. 2, H315; ⚠ Eye Irrit. 2, H319	
CAS: 77-92-9	Zitronensäure	≤2,5%
EINECS: 201-069-1	⚠ Acute Tox. 1, H310; ⚠ Acute Tox. 4, H332	

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

### ABSCHNITT 4: Erste-Hilfe-Maßnahmen

- **4.1 Beschreibung der Erste-Hilfe-Maßnahmen**
- **Allgemeine Hinweise:**
  - Mit Produkt verunreinigte Kleidungsstücke unverzüglich entfernen.
  - Atenschutz erst nach Entfernen verunreinigter Kleidungsstücke abnehmen.
  - Bei unregelmäßiger Atmung oder Atemstillstand künstliche Beatmung.
- **Nach Einatmen:**
  - Frischluf- oder Sauerstoffzufuhr; ärztliche Hilfe in Anspruch nehmen.
  - Bei Bewusstlosigkeit Lagerung und Transport in stabiler Seitenlage.
- **Nach Hautkontakt:** Sofort mit Wasser und Seife abwaschen und gut nachspülen.
- **Nach Augenkontakt:**
  - Augen bei geöffnetem Lidspalt mehrere Minuten unter fließendem Wasser abspülen und Arzt konsultieren.
- **Nach Verschlucken:**
  - Kein Erbrechen herbeiführen, sofort Arzthilfe zuziehen.
  - Reichlich Wasser nachtrinken und Frischluftzufuhr. Unverzüglich Arzt hinzuziehen.
- **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.
- **5.2 Besondere vom Stoff oder Gemisch ausgehende Gefahren**
  - Keine weiteren relevanten Informationen verfügbar.
- **5.3 Hinweise für die Brandbekämpfung**
- **Besondere Schutzausrüstung:** Atemschutzgerät anlegen.

### ABSCHNITT 6: Maßnahmen bei unbeabsichtigter Freisetzung

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

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- **6.2 Umweltschutzmaßnahmen:**  
Bei Eindringen in Gewässer oder Kanalisation zuständige Behörden benachrichtigen.  
Mit viel Wasser verdünnen.  
Nicht in die Kanalisation/Oberflächenwasser/Grundwasser gelangen lassen.
- **6.3 Methoden und Material für Rückhaltung und Reinigung:**  
Mit flüssigkeitsbindendem Material (Sand, Kieselgur, Säurebinder, Universalbinder, Sägemehl) aufnehmen.  
Neutralisationsmittel anwenden.  
Kontaminiertes Material als Abfall nach Abschnitt 13 entsorgen.  
Für ausreichende Lüftung sorgen.
- **6.4 Verweis auf andere Abschnitte**  
Informationen zur sicheren Handhabung siehe Abschnitt 7.  
Informationen zur persönlichen Schutzausrüstung siehe Abschnitt 8.  
Informationen zur Entsorgung siehe Abschnitt 13.

### ABSCHNITT 7: Handhabung und Lagerung

- **7.1 Schutzmaßnahmen zur sicheren Handhabung**  
Für gute Belüftung/Absaugung am Arbeitsplatz sorgen.  
Behälter mit Vorsicht öffnen und handhaben.  
Aerosolbildung vermeiden.
- **Hinweise zum Brand- und Explosionsschutz:** Atemschutzgeräte bereithalten.
- **7.2 Bedingungen zur sicheren Lagerung unter Berücksichtigung von Unverträglichkeiten**
- **Lagerung:**
- **Anforderung an Lagerräume und Behälter:** Keine besonderen Anforderungen.
- **Zusammenlagerungshinweise:** Nicht erforderlich.
- **Weitere Angaben zu den Lagerbedingungen:** Behälter dicht geschlossen halten.
- **Lagerklasse:**
- **Klassifizierung nach Betriebssicherheitsverordnung (BetrSichV):**  
Auf Metalle korrosiv wirkende Stoffe oder Gemische
- **7.3 Spezifische Endanwendungen** Keine weiteren relevanten Informationen verfügbar.

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

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

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

77-92-9 Zitronensäure

AGW	Langzeitwert: 2 E mg/m <sup>3</sup> 2(I);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.

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(Fortsetzung von Seite 4)

**· 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.

**· Augenschutz:**


Dichtschließende Schutzbrille

### ABSCHNITT 9: Physikalische und chemische Eigenschaften

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

<b>Form:</b>	Flüssigkeit
<b>Farbe:</b>	Gemäß Produktbezeichnung
<b>Geruch:</b>	Charakteristisch
<b>Geruchsschwelle:</b>	Nicht bestimmt.

**· pH-Wert:** Nicht bestimmt.

**· Zustandsänderung**

<b>Schmelzpunkt/Gefrierpunkt:</b>	Nicht bestimmt.
<b>Siedebeginn und Siedebereich:</b>	Nicht bestimmt.

**· Flammpunkt:** Nicht anwendbar.

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

**· Zersetzungstemperatur:** Nicht bestimmt.

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

**· Explosive Eigenschaften:** Das Produkt ist nicht explosionsgefährlich.

**· Explosionsgrenzen:**

<b>Untere:</b>	Nicht bestimmt.
<b>Obere:</b>	Nicht bestimmt.

(Fortsetzung auf Seite 6)

# Sicherheitsdatenblatt

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· <b>Dampfdruck bei 20 °C:</b>	23 hPa
· <b>Dichte:</b>	Nicht bestimmt.
· <b>Relative Dichte</b>	Nicht bestimmt.
· <b>Dampfdichte</b>	Nicht bestimmt.
· <b>Verdampfungsgeschwindigkeit</b>	Nicht bestimmt.
· <b>Löslichkeit in / Mischbarkeit mit Wasser:</b>	Vollständig mischbar.
· <b>Verteilungskoeffizient: n-Octanol/Wasser:</b>	Nicht bestimmt.
· <b>Viskosität:</b>	
<b>Dynamisch:</b>	Nicht bestimmt.
<b>Kinematisch:</b>	Nicht bestimmt.
· <b>Lösemittelgehalt:</b>	
<b>Wasser:</b>	87,0 %
<b>VOC (EU)</b>	0,00 %
· <b>Festkörpergehalt:</b>	7,7 %
· <b>9.2 Sonstige Angaben</b>	Keine weiteren relevanten Informationen verfügbar.

### ABSCHNITT 10: Stabilität und Reaktivität

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

### ABSCHNITT 11: Toxikologische Angaben

- **11.1 Angaben zu toxikologischen Wirkungen**
- **Akute Toxizität**  
Lebensgefahr bei Verschlucken oder Einatmen.  
Giftig bei Hautkontakt.

· <b>Einstufungsrelevante LD/LC50-Werte:</b>		
<b>302-17-0 Chloralhydrat</b>		
Oral	LD50	479 mg/kg (rat)
Dermal	LD50	3.030 mg/kg (rat)
<b>77-92-9 Zitronensäure</b>		
Oral	LD50	5.040 mg/kg (mouse)

- **Primäre Reizwirkung:**
- **Ätz-/Reizwirkung auf die Haut**  
Verursacht schwere Verätzungen der Haut und schwere Augenschäden.
- **Schwere Augenschädigung/-reizung**  
Verursacht schwere Augenschäden.

(Fortsetzung auf Seite 7)

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(Fortsetzung von Seite 6)

- **Sensibilisierung der Atemwege/Haut**  
Kann bei Einatmen Allergie, asthmaartige Symptome oder Atembeschwerden verursachen.
- **Zusätzliche toxikologische Hinweise:**
- **CMR-Wirkungen (krebserzeugende, erbgutverändernde und fortpflanzungsgefährdende Wirkung)**
- **Keimzell-Mutagenität**  
Kann genetische Defekte verursachen.
- **Karzinogenität** Aufgrund der verfügbaren Daten sind die Einstufungskriterien nicht erfüllt.
- **Reproduktionstoxizität**  
Kann vermutlich die Fruchtbarkeit beeinträchtigen oder das Kind im Mutterleib schädigen. Kann Säuglinge über die Muttermilch schädigen.
- **Spezifische Zielorgan-Toxizität bei einmaliger Exposition**  
Schädigt die Organe.
- **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.
- **Ökotoxische Wirkungen:**
- **Bemerkung:** Sehr giftig für Fische.
- **Weitere ökologische Hinweise:**
- **Allgemeine Hinweise:**  
Wassergefährdungsklasse 2 (Selbsteinstufung): deutlich wassergefährdend  
Nicht in das Grundwasser, in Gewässer oder in die Kanalisation gelangen lassen.  
Darf nicht unverdünnt bzw. unneutralisiert ins Abwasser bzw. in den Vorfluter gelangen.  
Trinkwassergefährdung bereits beim Auslaufen geringer Mengen in den Untergrund.  
In Gewässern auch giftig für Fische und Plankton.  
sehr giftig für Wasserorganismen
- **12.5 Ergebnisse der PBT- und vPvB-Beurteilung**
- **PBT:** Nicht anwendbar.
- **vPvB:** Nicht anwendbar.
- **12.6 Andere schädliche Wirkungen** Keine weiteren relevanten Informationen verfügbar.

### ABSCHNITT 13: Hinweise zur Entsorgung

- **13.1 Verfahren der Abfallbehandlung**
- **Empfehlung:** Darf nicht zusammen mit Hausmüll entsorgt werden. Nicht in die Kanalisation gelangen lassen.
- **Ungereinigte Verpackungen:**
- **Empfehlung:** Entsorgung gemäß den behördlichen Vorschriften.
- **Empfohlenes Reinigungsmittel:** Wasser, gegebenenfalls mit Zusatz von Reinigungsmitteln.

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(Fortsetzung auf Seite 8)



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### ABSCHNITT 14: Angaben zum Transport

<ul style="list-style-type: none"> <li>· 14.1 UN-Nummer</li> <li>· ADR, IMDG, IATA</li> </ul>	UN3082
<ul style="list-style-type: none"> <li>· 14.2 Ordnungsgemäße UN-Versandbezeichnung</li> <li>· ADR</li> <li>· IMDG</li> <li>· IATA</li> </ul>	3082 UMWELTGEFÄHRDENDER STOFF, FLÜSSIG, N.A.G. ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S., MARINE POLLUTANT ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
<ul style="list-style-type: none"> <li>· 14.3 Transportgefahrenklassen</li> <li>· ADR, IMDG, IATA</li> </ul>	<div style="display: flex; align-items: center; gap: 10px;">   </div> <ul style="list-style-type: none"> <li>· Klasse</li> <li>· Gefahrzettel</li> </ul>
<ul style="list-style-type: none"> <li>· Klasse</li> <li>· Gefahrzettel</li> </ul>	9 Verschiedene gefährliche Stoffe und Gegenstände 9
<ul style="list-style-type: none"> <li>· 14.4 Verpackungsgruppe</li> <li>· ADR, IMDG, IATA</li> </ul>	III
<ul style="list-style-type: none"> <li>· 14.5 Umweltgefahren:</li> <li>· Marine pollutant:</li> <li>· Besondere Kennzeichnung (ADR):</li> <li>· Besondere Kennzeichnung (IATA):</li> </ul>	Symbol (Fisch und Baum) Symbol (Fisch und Baum) Symbol (Fisch und Baum)
<ul style="list-style-type: none"> <li>· 14.6 Besondere Vorsichtsmaßnahmen für den Verwender</li> <li>· Nummer zur Kennzeichnung der Gefahr (Kemler-Zahl):</li> <li>· EMS-Nummer:</li> <li>· Stowage Category</li> </ul>	Achtung: Verschiedene gefährliche Stoffe und Gegenstände 90 F-A,S-F A
<ul style="list-style-type: none"> <li>· 14.7 Massengutbeförderung gemäß Anhang II des MARPOL-Übereinkommens und gemäß IBC-Code</li> </ul>	Nicht anwendbar.
<ul style="list-style-type: none"> <li>· Transport/weitere Angaben:</li> </ul>	<ul style="list-style-type: none"> <li>· ADR</li> <li>· Begrenzte Menge (LQ)</li> <li>· Freigestellte Mengen (EQ)</li> <li>· Beförderungskategorie</li> <li>· Tunnelbeschränkungscode</li> </ul>
<ul style="list-style-type: none"> <li>· ADR</li> <li>· Begrenzte Menge (LQ)</li> <li>· Freigestellte Mengen (EQ)</li> <li>· Beförderungskategorie</li> <li>· Tunnelbeschränkungscode</li> </ul>	5L Code: E1 Höchste Nettomenge je Innenverpackung: 30 ml Höchste Nettomenge je Außenverpackung: 1000 ml 3 (-)
<ul style="list-style-type: none"> <li>· IMDG</li> <li>· Limited quantities (LQ)</li> <li>· Excepted quantities (EQ)</li> </ul>	5L Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml

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· <b>UN "Model Regulation":</b>	UN 3082 UMWELTGEFÄHRDENDER STOFF, FLÜSSIG, N.A.G., 9, III
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### 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  
HI AKUT TOXISCH  
E1 Gewässergefährdend
- Mengenschwelle (in Tonnen) für die Anwendung in Betrieben der unteren Klasse 5 t
- Mengenschwelle (in Tonnen) für die Anwendung in Betrieben der oberen Klasse 20 t
- VERORDNUNG (EG) Nr. 1907/2006 ANHANG XVII Beschränkungsbedingungen: 3

· 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:

· Technische Anleitung Luft:

Klasse	Anteil in %
Wasser	87,0
I	7,5

· Wassergefährdungsklasse: WGK 2 (Selbsteinstufung): deutlich wassergefährdend.

· Sonstige Vorschriften, Beschränkungen und Verbotsverordnungen

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

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

### ABSCHNITT 16: Sonstige Angaben

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

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· **Relevante Sätze**

- H301 Giftig bei Verschlucken.
- H310 Lebensgefahr bei Hautkontakt.
- H315 Verursacht Hautreizungen.
- H319 Verursacht schwere Augenreizung.
- H332 Gesundheitsschädlich bei Einatmen.

· **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)
- LC50: Lethal concentration, 50 percent
- LD50: Lethal dose, 50 percent
- PBT: Persistent, Bioaccumulative and Toxic
- vPvB: very Persistent and very Bioaccumulative
- Met. Corr.1: Korrosiv gegenüber Metallen – Kategorie 1
- Acute Tox. 3: Akute Toxizität – Kategorie 3
- Acute Tox. 1: Akute Toxizität – Kategorie 1
- Acute Tox. 2: Akute Toxizität – Kategorie 2
- Acute Tox. 4: Akute Toxizität – Kategorie 4
- Skin Corr. 1B: Hautreizende/-ätzende Wirkung – Kategorie 1B
- Skin Irrit. 2: Hautreizende/-ätzende Wirkung – Kategorie 2
- Eye Dam. 1: Schwere Augenschädigung/Augenreizung – Kategorie 1
- Eye Irrit. 2: Schwere Augenschädigung/Augenreizung – Kategorie 2
- Resp. Sens. 1B: Sensibilisierung der Atemwege – Kategorie 1B
- Muta. 1B: Keimzellmutagenität – Kategorie 1B
- Repr. 2: Reproduktionstoxizität – Kategorie 2
- STOT SE 1: Spezifische Zielorgan-Toxizität (einmalige Exposition) – Kategorie 1
- Aquatic Acute 1: Gewässergefährdend - akut gewässergefährdend – Kategorie 1

DE

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

Stampato il: 10.05.2022

Revisione: 10.05.2022

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

- **1.1 Identificatore del prodotto**
- **Denominazione commerciale:** MODIFIED MAYER'S HEMATOXYLIN
- **Articolo numero:** 26043-18
- **UFI:** 2D54-W0X9-M00C-PGSM
- **1.2 Usi identificati pertinenti della sostanza o della miscela e usi sconsigliati**  
Non sono disponibili altre informazioni.
- **Utilizzazione della Sostanza / del Preparato** Prodotti chimici per laboratorio
- **1.3 Informazioni sul fornitore della scheda di dati di sicurezza**
- **Produttore/fornitore:**  
Electron Microscopy Sciences  
1560 Industry Road  
USA-Hatfield, PA 19440  
Tel: 215-412-8400 Fax: 215-412-8450  
email: [info@emsdiasum.com](mailto:info@emsdiasum.com)  
[www.emsdiasum.com](http://www.emsdiasum.com)
- **Società Italiana Chimici**  
Via Rio Nell Ellba 140  
00138 Rome, Italy  
Tel: 39 06 8800211  
Fax: 39 30 06 8815313  
Web: [www.sichim.com](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**



GHS06 teschio e tibie incrociate

Acute Tox. 1	H300	Letale se ingerito.
Acute Tox. 3	H311	Tossico per contatto con la pelle.
Acute Tox. 2	H330	Letale se inalato.



GHS08 pericolo per la salute

Resp. Sens. 1B	H334	Può provocare sintomi allergici o asmatici o difficoltà respiratorie se inalato.
Muta. 1B	H340	Può provocare alterazioni genetiche.
Repr. 2	H361-H362	Sospettato di nuocere alla fertilità o al feto. Può essere nocivo per i lattanti allattati al seno.
STOT SE 1	H370	Provoca danni agli organi.



GHS05 corrosione

(continua a pagina 2)

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

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(Segue da pagina 1)

Met. Corr.1 H290 Può essere corrosivo per i metalli.  
Skin Corr. 1B H314 Provoca gravi ustioni cutanee e gravi lesioni oculari.  
Eye Dam. 1 H318 Provoca gravi lesioni oculari.



GHS09 ambiente

Aquatic Acute 1 H400 Molto tossico per gli organismi acquatici.

· **2.2 Elementi dell'etichetta**

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

Il prodotto è classificato ed etichettato conformemente al regolamento CLP.

· **Pittogrammi di pericolo**



GHS05

GHS06

GHS08

GHS09

· **Avvertenza Pericolo**

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

cloralio idrato

acido citrico

· **Indicazioni di pericolo**

H290 Può essere corrosivo per i metalli.

H300+H330 Mortale se ingerito o inalato.

H311 Tossico per contatto con la pelle.

H314 Provoca gravi ustioni cutanee e gravi lesioni oculari.

H334 Può provocare sintomi allergici o asmatici o difficoltà respiratorie se inalato.

H340 Può provocare alterazioni genetiche.

H361-H362 Sospettato di nuocere alla fertilità o al feto. Può essere nocivo per i lattanti allattati al seno.

H370 Provoca danni agli organi.

H400 Molto tossico per gli organismi acquatici.

· **Consigli di prudenza**

P263 Evitare il contatto durante la gravidanza e l'allattamento.

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

P303+P361+P353 IN CASO DI CONTATTO CON LA PELLE (o con i capelli): togliersi di dosso immediatamente tutti gli indumenti contaminati. Sciacquare la pelle [o fare una doccia].

P305+P351+P338 IN CASO DI CONTATTO CON GLI OCCHI: sciacquare accuratamente per parecchi minuti. Togliere le eventuali lenti a contatto se è agevole farlo. Continuare a sciacquare.

P320 Trattamento specifico urgente (vedere su questa etichetta).

P361+P364 Togliere immediatamente tutti gli indumenti contaminati e lavarli prima di indossarli nuovamente.

P405 Conservare sotto chiave.

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

· **2.3 Altri pericoli**

· **Risultati della valutazione PBT e vPvB**

· **PBT:** Non applicabile.

· **vPvB:** Non applicabile.

IT

(continua a pagina 3)

# Scheda di dati di sicurezza

## ai sensi del regolamento 1907/2006/CE, Articolo 31

Stampato il: 10.05.2022

Revisione: 10.05.2022

**Denominazione commerciale: MODIFIED MAYER'S HEMATOXYLIN**

(Segue da pagina 2)

### SEZIONE 3: Composizione/informazioni sugli ingredienti

#### · 3.2 Caratteristiche chimiche: Miscela

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

#### · Sostanze pericolose:

CAS: 302-17-0	cloralio idrato	>2,5-≤10%
EINECS: 206-117-5	⚠ Acute Tox. 3, H301; ⚠ Skin Irrit. 2, H315; Eye Irrit. 2, H319	
CAS: 77-92-9	acido citrico	≤2,5%
EINECS: 201-069-1	⚠ Acute Tox. 1, H310; ⚠ Acute Tox. 4, H332	

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

### SEZIONE 4: Misure di primo soccorso

#### · 4.1 Descrizione delle misure di primo soccorso

#### · Indicazioni generali:

Allontanare immediatamente gli abiti contaminati dal prodotto.

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

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

#### · Inalazione:

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

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

· **Contatto con la pelle:** Lavare immediatamente con acqua e sapone sciacquando accuratamente.

#### · Contatto con gli occhi:

Lavare con acqua corrente per diversi minuti tenendo le palpebre ben aperte e consultare il medico.

#### · Ingestione:

Non provocare il vomito, chiamare subito il medico.

Bere abbondante acqua e sostare in zona ben areata. Richiedere immediatamente l'intervento del 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.

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

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

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

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

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

Indossare equipaggiamento protettivo. Allontanare le persone non equipaggiate.

#### · 6.2 Precauzioni ambientali:

In caso di infiltrazione nei corpi d'acqua o nelle fognature avvertire le autorità competenti.

Diluire abbondantemente con acqua.

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

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

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

Utilizzare mezzi di neutralizzazione.

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

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Smaltimento del materiale contaminato conformemente al punto 13.

Provvedere ad una sufficiente areazione.

· **6.4 Riferimento ad altre sezioni**

Per informazioni relative ad una manipolazione sicura, vedere capitolo 7.

Per informazioni relative all'equipaggiamento protettivo ad uso personale vedere Capitolo 8.

Per informazioni relative allo smaltimento vedere Capitolo 13.

### SEZIONE 7: Manipolazione e immagazzinamento

· **7.1 Precauzioni per la manipolazione sicura**

Accurata ventilazione/aspirazione nei luoghi di lavoro.

Aprire e manipolare i recipienti con cautela.

Evitare la formazione di aerosol.

· **Indicazioni in caso di incendio ed esplosione:** Tener pronto il respiratore.

· **7.2 Condizioni per lo stoccaggio sicuro, comprese eventuali incompatibilità**

· **Stoccaggio:**

· **Requisiti dei magazzini e dei recipienti:** Non sono richiesti requisiti particolari.

· **Indicazioni sullo stoccaggio misto:** Non necessario.

· **Ulteriori indicazioni relative alle condizioni di immagazzinamento:** Mantenere i recipienti ermeticamente chiusi.

· **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:**

Il prodotto non contiene quantità rilevanti di sostanze i cui valori limite devono essere tenuti sotto controllo negli ambienti di lavoro.

· **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.

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**Scheda di dati di sicurezza**  
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**· Materiale dei guanti**

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

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

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

**· Occhiali protettivi:**

Occhiali protettivi a tenuta

**SEZIONE 9: Proprietà fisiche e chimiche****· 9.1 Informazioni sulle proprietà fisiche e chimiche fondamentali****· Indicazioni generali****· Aspetto:**

<b>Forma:</b>	Liquido
<b>Colore:</b>	In conformità con la denominazione del prodotto
<b>Odore:</b>	Caratteristico
<b>Soglia olfattiva:</b>	Non definito.

**· valori di pH:** Non definito.

**· Cambiamento di stato**

<b>Punto di fusione/punto di congelamento:</b>	Non definito.
<b>Punto di ebollizione iniziale e intervallo di ebollizione:</b>	Non definito.

**· Punto di infiammabilità:** Non applicabile.

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

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

**· Temperatura di autoaccensione:** Prodotto non autoinfiammabile.

**· Proprietà esplosive:** Prodotto non esplosivo.

**· Limiti di infiammabilità:**

<b>Inferiore:</b>	Non definito.
<b>Superiore:</b>	Non definito.

**· Tensione di vapore a 20 °C:** 23 hPa

**· Densità:** Non definito.

**· Densità relativa** Non definito.

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

**· Velocità di evaporazione** Non definito.

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

Completamente miscibile.

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

**· Viscosità:**

<b>Dinamica:</b>	Non definito.
<b>Cinematica:</b>	Non definito.

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<b>· Tenore del solvente:</b>	
Acqua:	87,0 %
VOC (CE)	0,00 %
<b>Contenuto solido:</b>	
	7,7 %
<b>· 9.2 Altre informazioni</b>	Non sono disponibili altre informazioni.

### SEZIONE 10: Stabilità e reattività

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

### SEZIONE 11: Informazioni tossicologiche

· **11.1 Informazioni sugli effetti tossicologici**

· **Tossicità acuta**

Mortale se ingerito o inalato.

Tossico per contatto con la pelle.

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

**302-17-0 cloralio idrato**

Orale	LD50	479 mg/kg (rat)
Cutaneo	LD50	3.030 mg/kg (rat)

**77-92-9 acido citrico**

Orale	LD50	5.040 mg/kg (mouse)
-------	------	---------------------

· **Irritabilità primaria:**

· **Corrosione/irritazione cutanea**

Provoca gravi ustioni cutanee e gravi lesioni oculari.

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

Provoca gravi lesioni oculari.

· **Sensibilizzazione respiratoria o cutanea**

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

· **Ulteriori dati tossicologici:**

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

· **Mutagenicità delle cellule germinali**

Può provocare alterazioni genetiche.

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

· **Tossicità per la riproduzione**

Sospettato di nuocere alla fertilità o al feto. Può essere nocivo per i lattanti allattati al seno.

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

Provoca danni agli organi.

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

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

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

### SEZIONE 12: Informazioni ecologiche

- **12.1 Tossicità**
- **Tossicità acquatica:** Non sono disponibili altre informazioni.
- **12.2 Persistenza e degradabilità** Non sono disponibili altre informazioni.
- **12.3 Potenziale di bioaccumulo** Non sono disponibili altre informazioni.
- **12.4 Mobilità nel suolo** Non sono disponibili altre informazioni.
- **Effetti tossici per l'ambiente:**
- **Osservazioni:** Molto tossico per i pesci.
- **Ulteriori indicazioni in materia ambientale:**
- **Ulteriori indicazioni:**  
Pericolosità per le acque classe 2 (D) (Autoclassificazione): pericoloso  
Non immettere nelle acque freatiche, nei corsi d'acqua o nelle fognature.  
Non immettere il prodotto non diluito o non neutralizzato nelle acque di scarico e nei canali di raccolta.  
Pericolo per le acque potabili anche in caso di perdite nel sottosuolo di piccole quantità di prodotto.  
Tossico per pesci e plancton.  
Molto tossico per gli organismi acquatici
- **12.5 Risultati della valutazione PBT e vPvB**
- **PBT:** Non applicabile.
- **vPvB:** Non applicabile.
- **12.6 Altri effetti avversi** Non sono disponibili altre informazioni.

### SEZIONE 13: Considerazioni sullo smaltimento

- **13.1 Metodi di trattamento dei rifiuti**
- **Consigli:** Non smaltire il prodotto insieme ai rifiuti domestici Non immettere nelle fognature.
- **Imballaggi non puliti:**
- **Consigli:** Smaltimento in conformità con le disposizioni amministrative.
- **Detergente consigliato:** Acqua eventualmente con l'aggiunta di detersivi.

### SEZIONE 14: Informazioni sul trasporto

- |   |   |
|---|---|
| · <b>14.1 Numero ONU</b>                  |   |
| · <b>ADR, IMDG, IATA</b>                  | UN3082  |
| · <b>14.2 Nome di spedizione dell'ONU</b> |   |
| · <b>ADR</b>                              | 3082 MATERIA PERICOLOSA PER L'AMBIENTE, LIQUIDA, N.A.S.               |
| · <b>IMDG</b>                             | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S., MARINE POLLUTANT |
| · <b>IATA</b>                             | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.                   |

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

· **ADR, IMDG, IATA**



· **Classe** 9 Materie ed oggetti pericolosi diversi  
 · **Etichetta** 9

· **14.4 Gruppo di imballaggio**

· **ADR, IMDG, IATA** III

· **14.5 Pericoli per l'ambiente:**

· **Marine pollutant:** Simbolo (pesce e albero)  
 · **Marcatura speciali (ADR):** Simbolo (pesce e albero)  
 · **Marcatura speciali (IATA):** Simbolo (pesce e albero)

· **14.6 Precauzioni speciali per gli utilizzatori**

· **N° identificazione pericolo (Numero Kemler):** Attenzione: Materie ed oggetti pericolosi diversi  
 90  
 · **Numero EMS:** F-A,S-F  
 · **Stowage Category** A

· **14.7 Trasporto di rinfuse secondo l'allegato II di MARPOL ed il codice IBC**

Non applicabile.

· **Trasporto/ulteriori indicazioni:**

· **ADR**

· **Quantità limitate (LQ)** 5L  
 · **Quantità esenti (EQ)** Codice: E1  
 Quantità massima netta per imballaggio interno: 30 ml  
 Quantità massima netta per imballaggio esterno: 1000 ml  
 · **Categoria di trasporto** 3  
 · **Codice di restrizione in galleria** (-)

· **IMDG**

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

· **UN "Model Regulation":**

UN 3082 MATERIA PERICOLOSA PER L'AMBIENTE, LIQUIDA, N.A.S., 9, III

### 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**

H1 TOSSICITÀ ACUTA

E1 Pericoloso per l'ambiente acquatico

· **Quantità limite (tonnellate) ai fini dell'applicazione dei requisiti di soglia inferiore 5 t**

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**Denominazione commerciale: MODIFIED MAYER'S HEMATOXYLIN**

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- **Quantità limite (tonnellate) ai fini dell'applicazione dei requisiti di soglia superiore 20 t**
- **REGOLAMENTO (CE) n. 1907/2006 ALLEGATO XVII Restrizioni: 3**

· **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.

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

## **SEZIONE 16: Altre informazioni**

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

### · **Frasi rilevanti**

H301 Tossico se ingerito.  
H310 Letale per contatto con la pelle.  
H315 Provoca irritazione cutanea.  
H319 Provoca grave irritazione oculare.  
H332 Nocivo se inalato.

### · **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)  
LC50: Lethal concentration, 50 percent  
LD50: Lethal dose, 50 percent  
PBT: Persistent, Bioaccumulative and Toxic  
vPvB: very Persistent and very Bioaccumulative  
Met. Corr. 1: Sostanze o miscele corrosive per i metalli – Categoria 1  
Acute Tox. 3: Tossicità acuta – Categoria 3  
Acute Tox. 1: Tossicità acuta – Categoria 1  
Acute Tox. 2: Tossicità acuta – Categoria 2  
Acute Tox. 4: Tossicità acuta – Categoria 4  
Skin Corr. 1B: Corrosione/irritazione della pelle – Categoria 1B  
Skin Irrit. 2: Corrosione/irritazione della pelle – Categoria 2  
Eye Dam. 1: Gravi lesioni oculari/irritazione oculare – Categoria 1  
Eye Irrit. 2: Gravi lesioni oculari/irritazione oculare – Categoria 2  
Resp. Sens. 1B: Sensibilizzazione delle vie respiratorie – Categoria 1B  
Muta. 1B: Mutagenicità sulle cellule germinali – Categoria 1B  
Repr. 2: Tossicità per la riproduzione – Categoria 2  
STOT SE 1: Tossicità specifica per organi bersaglio (esposizione singola) – Categoria 1  
Aquatic Acute 1: Pericoloso per l'ambiente acquatico - pericolo acuto per l'ambiente acquatico – Categoria 1

# 물질안전보건자료 GHS에 따라

인쇄일자: 2022.05.10

개정: 2022.05.10

## 1 화학제품과 회사에 관한 정보

- 제품 식별자
- 제품명: **MODIFIED MAYER'S HEMATOXYLIN**
- 상품번호: 26043-18
- 해당 순물질이나 혼합물의 관련 하위용도 및 사용금지용도
- 제품의 권고 용도와 사용상의 제한: MODIFIED MAYER'S HEMATOXYLIN
- 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  
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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



두개골과 대퇴골

급성 독성 - 경구 - 구분1	H300	삼키면 치명적임
급성 독성 - 경피 - 구분3	H311	피부와 접촉하면 유독함
급성 독성 - 흡입 - 구분2	H330	흡입하면 치명적임



건강에 위험

호흡기 과민성 - 구분1	H334	흡입시 알레르기성 반응, 천식 또는 호흡 곤란 등을 일으킬 수 있음
생식세포 변이원성- 구분1B	H340	유전적인 결함을 일으킬 수 있음
생식독성 - 구분2	H361-H362	태아 또는 생식능력에 손상을 일으킬 것으로 의심됨 모유를 먹는 아이에게 유해할 수 있음
특정표적장기 독성 - 1회 노출- 구분1	H370	장기에 손상을 일으킴

(2 쪽에 계속)

# 물질안전보건자료 GHS에 따라

인쇄일자: 2022.05.10

개정: 2022.05.10

**제품명: MODIFIED MAYER'S HEMATOXYLIN**

(1 쪽부터계속)



금속부식성 물질- 구분1	H290	금속을 부식시킬 수 있음
피부 부식성/피부 자극성 - 구분 1	H314	피부에 심한 화상과 눈에 손상을 일으킴
심한 눈 손상성/눈 자극성 - 구분1	H318	눈에 심한 손상을 일으킴



수생환경 유해성 - 급성 - 구분1	H400	수생생물에 매우 유독함
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- 라벨표기 요소
- GHS 라벨 요소 본 제품은 화학물질의 분류 및 표기에 관한 국제조화시스템(GHS)에 따라 분류 및 표기되었습니다.
- GHS 그림문자



- 신호어 위험
- 상표상에명확히위험성이표시된성분:  
chloral hydrate  
haematoxylin  
Citric acid
- 유해·위험문구  
금속을 부식시킬 수 있음  
삼키거나 흡입하면 치명적임.  
피부와 접촉하면 유독함  
피부에 심한 화상과 눈에 손상을 일으킴  
흡입시 알레르기성 반응, 천식 또는 호흡 곤란 등을 일으킬 수 있음  
유전적인 결함을 일으킬 수 있음  
태아 또는 생식능력이 손상을 일으킬 것으로 의심됨 모유를 먹는 아이에게 유해할 수 있음  
장기에 손상을 일으킴  
수생생물에 매우 유독함

- 예방조치문구  
임신·수유 기간에는 접촉하지 마시오.  
삼켰을 시: 즉시 독성물질센터/병원 연락 필요.  
피부(또는 머리카락)에 묻으면 오염된 모든 의복은 벗거나 제거하십시오. 피부를 물로 씻으시오/샤워하십시오 .  
눈에 묻으면 몇 분간 물로 조심해서 씻으시오. 가능하면 콘택트렌즈를 제거하십시오. 계속 씻으시오.  
긴급히(라벨 참조) 처치를 하시오.  
오염된 모든 의복은 즉시 벗고 다시 사용 전 세척하십시오.  
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.

KR

(3 쪽에계속)

# 물질안전보건자료 GHS에 따라

인쇄일자: 2022.05.10

개정: 2022.05.10

**제품명: MODIFIED MAYER'S HEMATOXYLIN**

(2 쪽부터 계속)

### 3 구성성분의 명칭 및 함유량

- **화 학 적 특 성:** 혼합물
- **설 명:** 무해한 첨 가 물 이 함유된 아래에 열 거 된 물 질 로 만 들 어 진 혼 합 물.

· 위 험 요 소:		
302-17-0	chloral hydrate ⚠ 급성 독성 - 경구 - 구분3, H301; ⚠ 피부 부식성/피부 자극성 - 구분2, H315; 심한 눈 손상성/눈 자극성 - 구분 2, H319	>2.5-≤10%
517-28-2	haematoxylin ⚠ 급성 독성 - 흡입 - 구분3, H331; ⚠ 급성 독성 - 경피 - 구분4, H312	≤2.5%
77-92-9	Citric acid ⚠ 급성 독성 - 경피 - 구분1, H310; ⚠ 급성 독성 - 흡입 - 구분4, H332	≤2.5%

### 4 응급조치 요령

- **응급조치요령 내용**
- **일 반 적 정 보:**  
이 제품에 의해 오염된 의상은 즉시 제거한다.  
반드시 오염된 의상을 완전히 제거한 후에 호흡보호기를 떼어낸다.  
불규칙적인 호흡이나 호흡정지상태에서는 인공호흡을 실시한다.
- **흡입했을 때:**  
신선한 공기나 산소를 공급받고, 의료진의 도움을 구한다.  
환자가 의식을 잃었을 경우에는 안전한 자세에서 환자를 운반한다.
- **피부에 접촉했을 때:** 즉시 물과 비누로 씻고 잘 헹군다.
- **눈에 들어갔을 때:** 흐르는 물에 눈을 몇분동안 씻어내고 나서, 의사와 상담한다
- **먹었을 때:**  
구토를 유발시키지 않는다. 즉시 의료진의 도움을 구한다.  
물을 충분히 마시고 신선한 공기를 쐬다. 즉시 의사의 도움을 구한다.
- **기타 의사의 주의사항:**
- **가장 중요한 급·만성 증상 및 영향** 추가적인 정보가 존재하지 않습니다.
- **즉각적인 의료처치 및 특별치료가 필요함을 시사하는 징후** 추가적인 정보가 존재하지 않습니다.

### 5 폭발·화재시 대처방법

- **소화제**
- **적절한 소화제:** 주변 환경에 맞는 화재진화방법을 사용한다.
- **본 화학물질이나 혼합물에서 발생하는 특별 유해성** 추가적인 정보가 존재하지 않습니다.
- **소방관에 대한 권고사항**
- **화재 진압 시 착용할 보호구 및 예방조치:** 호흡보호장비 설치.

### 6 누출 사고 시 대처방법

- **개인적 예방조치, 보호장비 및 응급처치 절차** 안전장비 착용하고, 무방비의 사람은 격리시킨다.
- **환경 관련 예방조치:**  
하천이나 하수도로 유입되었을 경우 해당 관청에 보고한다.  
많은 물로 희석시킨다.  
하수도망/해수면 위 물/지하수로 도달하지 않게 한다.
- **밀폐 및 정화 방법과 소재:**  
액체가 혼합된 물질 (모래, 규조토, 산성 결합물, 일반 결합물, 톱밥)에 흡입되도록 한다.  
중성제를 사용한다.

(4 쪽에 계속)



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(3 쪽부터계속)

- 항목 13에 따라 오염된 물질을 쓰레기로 처분한다.
- 충분한 환기가 되도록 한다.
- **타 색션 참조**
- 안 전 관 리 에 대한 정보는 제7 장 을 참고하시오.
- 개 인 보 호 장 비에 대한 정보는 제8 장 을 참고하시 오.
- 쓰 레 기 처 리 에 대한 정보는 제13 장 을 참고하시 오.

## 7 취급 및 저장방법

- **취급:**
- **안전 취급을 위한 예방조치**  
작업장에서는통풍이잘되고/습기제거가잘되게주의한다.  
조심스럽게용기를개봉하거나취급한다.  
연무질이형성되는것을피한다.
- **화재 및 폭발 사고 예방대책에 관한 정보:** 호흡보호장비를항상비치한다.
- **혼합위험성 등 안전 저장 조건**
- **보관:**
- **안전한 저장 방법:** 특 별 한 요구사항이 없음.
- **하나의 공동 보관 시설에 대한 보관 관련 정보:** 필 요없음
- **보 관 조 건 에 관 한 추가적인 정보:** 용기를새지않게밀폐한채보관한다.
- **구체적 최종 사용자** 추가적인 정보가 존재하지 않습니다.

## 8 노출방지 및 개인보호구

- **첨단시설 디자인에 대한 추가정보:** 더 이 상 의 자료는 없음. 항 목 7 을 참고하시 오.
- **통제 변수**
- **화학물질의 노출기준, 생물학적 노출기준 등:**  
본 제품에는 작업장에서 감시가 필요한 주요한 가치의 어떤 해당 재료의 양을 함유하고 있지 않다.
- **추 가 정 보:** 제 조 할 당시에 유 효 한 목 록을 기초로 사용했다.
- **노출 통제**
- **개인 보호구**
- **일반적보호조치및위생조치:**  
식 료 품, 음 료 수와 사 료 로 부 터 멀 리 떨 어 뜨 려 놓 는 다.  
더 러 워 지 거 나 음 료 수 가 문 은 옷 은 즉 시 탈 의 한다.  
휴 식 전 이 나 작 업 이 끝 날 때 마 다 손 을 씻 는 다.  
방호복은따로보관한다.  
눈과의 접촉을 피 한다.  
눈 과 피 부와 의 접 촉 은 피 한 다.
- **호흡기 보호:**  
단 시 간 또 는 경 미 한 오 염 의 경 우 에 는 호 흡 여 과 기 를 사 용 한 다. 심 각 한 또 는 장 기 간 노 출 시 에 는 호 흡 보 호 장 비 를 사 용 한 다.
- **손 보호:**



보호용 장갑

장갑재질은제품 / 원료 / 조제를투과시키지않아야하고, 내구성이있어야한다.  
테 슣 트 를 하 지 않 았 기 때 문 에 제 품 / 조 제 / 화 학 혼 합 물 에 적 합 한 장 갑 재 질 에 대 한 추 천 이 없 다.  
투과 시간, 침 투 율 과 저 하 를 고 려 해 서 장 갑 재 료 를 선택한다.

(5 쪽에계속)

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**제품명: MODIFIED MAYER'S HEMATOXYLIN**

(4 쪽부터 계속)

- **장갑의재료**  
적합한장갑의선택은재질차이뿐아니라품질기준의차이도고려하여야어려워야하고제조업종에따라서도다르게선정되어야한다 .  
제품은다양한재료로부터의조제로이루어지는것이기때문에 , 장갑재질의안정성은사전에예측되어질수있는것이아니고 ,  
반드시사용전에 (그안전성이) 체크되어야한다.
- **장갑재료의 투과시간** 정확한관통시간은보호장갑제조자에의하여인지되고, 준수되어야한다.
- **눈 보호:**



꼭조이는보안경

## 9 물리화학적 특성

· 기본 물리 및 화학적 특성에 대한 정보	
· 일반정보	
· 외형	
· 물리적 상태:	액체
· 색:	제 품 표 시 에 따름
· 냄새:	특색있는
· 후각역치	알맞지않다.
· pH:	알맞지않다.
· 상태변화	
· 녹는점/어는점:	맞지않는
· 초기 끓는점과 끓는점 범위:	맞지않는
· 인화점:	해당사항 없음.
· 인화성(고체, 기체):	해당사항 없음.
· 분해 온도:	알맞지않다.
· 자기점화:	이제품은자연발화성이없다.
· 폭발위험:	이제품은폭발위험성이없다
· 인화 또는 폭발 범위의 상한/하한	
· 아래로:	알맞지않다.
· 위로:	알맞지않다.
· 증기압 의경우 20 °C:	23 hPa
· 밀도:	맞지않는다.
· 비중:	알맞지않다.
· 증기밀도:	알맞지않다.
· 증발 속도:	알맞지않다.
· 용해도:	
· 물:	완전히혼합할수있는
· n 옥탄올/물 분배계수:	알맞지않다.
· 점도:	
· 역학성:	알맞지않다.
· 동점성:	알맞지않다.
· 용매내용물	
· 물:	87.0 %

(6 쪽에 계속)

물질안전보건자료  
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(5 쪽부터계속)

VOC (EU)	0.00 %
고체의 함량:	7.7 %
· 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: 규정에따라서사용할경우해체는없다
- 유해반응 가능성 위험한반응으로는알려지지않았다.
- 피해야 할 조건 추가적인 정보가 존재하지 않습니다.
- 혼합 금지 물질: 추가적인 정보가 존재하지 않습니다.
- 유해분해물질: 위험성있는분해물들은알려지지않았다.

11 독성에 관한 정보

- 독성학적 영향에 대한 정보
- 급성 독성:

· LD/LC50-수치에 따른 분류:		
302-17-0 chloral hydrate		
구강의	LD50	479 mg/kg (rat)
피부의	LD50	3,030 mg/kg (rat)
77-92-9 Citric acid		
구강의	LD50	5,040 mg/kg (mouse)

- 일차적 자극 효과:
- 피부 부식성 또는 자극성: 피부와점막에강한부식작용.
- 심한 눈 손상 또는 자극성: 강한부식작용  
심각한안구상처의위험이있는강한자극
- 감각화: 호흡을통한감각화가가능성이있다.
- 추 가 적 인 독성 에 관 한 정보:  
이제품은유럽공동체의공동분류원칙의합법적인절차에근거하여최근에발효된원고에서아래위험들의사전준비에대하여제시하고있다.  
독성의  
건강에해로운  
부식작용의  
자극적인  
맹독성의  
삼킬경우식도나위등의내장기관벽에상처를주는위험과마찬가지로입주변이나구강에강한부식작용을한다  
이제품은유전적인장애를유발할수있다.
- 다음 종류의 잠재적인 효과에 대한 정보
- CMR-효과 (암 유발, 돌연변이성 그리고 생식 독성)  
생식세포 변이원성- 구분1B, 생식독성 - 구분2

12 환경에 미치는 영향

- 독성
- 수생독성: 추가적인 정보가 존재하지 않습니다.

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(6 쪽부터계속)

- 지속성 및 분해성 추가적인 정보가 존재하지 않습니다.
- 환경 시스템에서의 행동:
- 생물농축 잠재성 추가적인 정보가 존재하지 않습니다.
- 토양내 이동성 추가적인 정보가 존재하지 않습니다.
- 생태독성:
- 의견: 어 류 에 매우 독성임
- 추가적인 생태학 정보:
- 일반 특징:
  - 수질오염등급 2 (자체등급분류): 수질오염이된 지하수나, 하천으로또는하수도망에도달하지않게한다.
  - 희석시키지않은채또는중화시키지않은채하수도나배수로에도달하지않게해야한다.
  - 지하수로경미한양이유입되었을경우엔이미식수오염상태이다
  - 하천에서는역시물고기나플랑크톤게는독성이있다.
  - 물속의유기체에아주독이되는것
- PBT(잔류성, 생물농축성, 독성 물질) 및 vPvB(고 잔류성, 고 생물농축성 물질) 평가 결과
- PBT(잔류성, 생물농축성, 독성 물질): 해당사항 없음.
- vPvB(고 잔류성, 고 생물농축성 물질): 해당사항 없음.
- 기타 부작용 추가적인 정보가 존재하지 않습니다.

### 13 폐기시 주의사항

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

### 14 운송에 필요한 정보

· 유엔 번호	
· ADR, IMDG, IATA	UN3082
· UN 적정 선적명	
· ADR	3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
· IMDG	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S., MARINE POLLUTANT
· IATA	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
· 교통 위험 클래스	
· ADR, IMDG, IATA	
	
· 등급	9 여러모로위험한물질과물체
· 위험물 라벨	9
· 용기등급	
· ADR, IMDG, IATA	III

(8 쪽에계속)

# 물질안전보건자료 GHS에 따라

인쇄일자: 2022.05.10

개정: 2022.05.10

**제품명: MODIFIED MAYER'S HEMATOXYLIN**

(7 쪽부터계속)

<ul style="list-style-type: none"> <li>· 환경적 유해물질:</li> <li>· 해양오염물질:</li> <li>· 특수 마킹 (ADR):</li> <li>· 특수 마킹 (IATA):</li> </ul>	<ul style="list-style-type: none"> <li>심벌 (물고기와 나무)</li> <li>심벌 (물고기와 나무)</li> <li>심벌 (물고기와 나무)</li> </ul>
<ul style="list-style-type: none"> <li>· 이용자 특별 예방조치</li> <li>· 위험 코드:</li> <li>· EMS-번호:</li> <li>· Stowage Category</li> </ul>	<ul style="list-style-type: none"> <li>경고: 여러모로위험한물질과물체</li> <li>90</li> <li>F-A,S-F</li> <li>A</li> </ul>
<ul style="list-style-type: none"> <li>· MARPOL73/78(선박으로부터의 해양오염방지협약) 부속서2 및 IBC Code(국제선적화물코드)에 따른 벌크(bulk) 운송</li> </ul>	<ul style="list-style-type: none"> <li>해당사항 없음.</li> </ul>
<ul style="list-style-type: none"> <li>· 운 송/추가 정보:</li> </ul>	
<ul style="list-style-type: none"> <li>· ADR</li> <li>· 한정 수량 (LQ)</li> <li>· Excepted quantities (EQ)</li> </ul>	<ul style="list-style-type: none"> <li>5L</li> <li>Code: E1</li> <li>Maximum net quantity per inner packaging: 30 ml</li> <li>Maximum net quantity per outer packaging: 1000 ml</li> </ul>
<ul style="list-style-type: none"> <li>· 운송 구분</li> <li>· 터널 제한 코드</li> </ul>	<ul style="list-style-type: none"> <li>3</li> <li>(-)</li> </ul>
<ul style="list-style-type: none"> <li>· IMDG</li> <li>· Limited quantities (LQ)</li> <li>· Excepted quantities (EQ)</li> </ul>	<ul style="list-style-type: none"> <li>5L</li> <li>Code: E1</li> <li>Maximum net quantity per inner packaging: 30 ml</li> <li>Maximum net quantity per outer packaging: 1000 ml</li> </ul>
<ul style="list-style-type: none"> <li>· UN "모범 규제":</li> </ul>	<ul style="list-style-type: none"> <li>UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S., 9, III</li> </ul>

## 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>	어떠한내용물도목록화되어있지않다	
<ul style="list-style-type: none"> <li>· 허가대상물질:</li> </ul>	어떠한내용물도목록화되어있지않다	
<ul style="list-style-type: none"> <li>· 관리대상유해물질:</li> </ul>	어떠한내용물도목록화되어있지않다	
<ul style="list-style-type: none"> <li>· 작업환경측정 대상 유해인자</li> </ul>	어떠한내용물도목록화되어있지않다	
<ul style="list-style-type: none"> <li>· 특수건강진단 대상 유해인자</li> </ul>	어떠한내용물도목록화되어있지않다	
<ul style="list-style-type: none"> <li>· 해당 순물질 또는 혼합물에 대한 안전, 보건 및 환경 규제/법률 추가적인 정보가 존재하지 않습니다.</li> </ul>		
<ul style="list-style-type: none"> <li>· Korean Existing Chemical Inventory</li> </ul>		
7732-18-5 물		KE-35400
302-17-0 chloral hydrate		KE-34070

(9 쪽에계속)

물질안전보건자료  
GHS에 따라

인쇄일자: 2022.05.10

개정: 2022.05.10

제품명: MODIFIED MAYER'S HEMATOXYLIN

(8 쪽부터계속)

517-28-2	haematoxylin	KE-10609
77-92-9	Citric acid	KE-20831
7681-55-2	Sodium iodate	KE-31509

· 화학물질관리법

· 사고대비물질

어떠한내용물도목록화되어있지않다

· 금지물질

어떠한내용물도목록화되어있지않다

· 제한물질

어떠한내용물도목록화되어있지않다

· 유독물질

어떠한내용물도목록화되어있지않다

· 허가물질

어떠한내용물도목록화되어있지않다

· 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



GHS05 GHS06 GHS08 GHS09

· 신호어 위험

· 상표상에명확히위험성이표시된성분:

chloral hydrate  
haematoxylin  
Citric acid

· 유해·위험문구

금속을 부식시킬 수 있음  
삼키거나 흡입하면 치명적임.  
피부와 접촉하면 유독함  
피부에 심한 화상과 눈에 손상을 일으킴  
흡입시 알레르기성 반응, 천식 또는 호흡 곤란 등을 일으킬 수 있음  
유전적인 결함을 일으킬 수 있음  
태아 또는 생식능력에 손상을 일으킬 것으로 의심됨 모유를 먹는 아이에게 유해할 수 있음  
장기에 손상을 일으킴  
수생생물에 매우 유독함

· 예방조치문구

임신·수유 기간에는 접촉하지 마시오.

(10 쪽에계속)

# 물질안전보건자료

## GHS에 따라

인쇄일자: 2022.05.10

개정: 2022.05.10

**제품명: MODIFIED MAYER'S HEMATOXYLIN**

(9 쪽부터계속)

삼켰을 시: 즉시 독성물질센터/병원 연락 필요.  
 피부(또는 머리카락)에 묻으면 오염된 모든 의복은 벗거나 제거하십시오. 피부를 물로 씻으시오/샤워하십시오.  
 눈에 묻으면 몇 분간 물로 조심해서 씻으시오. 가능하면 콘택트렌즈를 제거하십시오. 계속 씻으시오.  
 긴급히(라벨 참조) 처치를 하시오.  
 오염된 모든 의복은 즉시 벗고 다시 사용 전 세척하십시오.  
 밀봉하여 저장하십시오.  
 (지방/지역/국가/국제 규정에 따라) 에 내용물/용기를 폐기하십시오.  
 · **화학물질 안전성 평가:** 화학물질 안전성 평가가 수행되지 않음

### 16 그 밖의 참고사항

이 보고는 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:** 2022.05.10

· **개정 횟수 및 최종 개정일자:** 1 / 2022.05.10

· **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)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

KR



# Ficha de datos de seguridad

## según 1907/2006/CE, Artículo 31

fecha de impresión 10.05.2022

Revisión: 10.05.2022

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

- **1.1 Identificador del producto**
- **Nombre comercial:** MODIFIED MAYER'S HEMATOXYLIN
- **Número del artículo:** 26043-18
- **UFI:** 2D54-W0X9-M00C-PGSM
- **1.2 Usos pertinentes identificados de la sustancia o de la mezcla y usos desaconsejados**  
No existen más datos relevantes disponibles.
- **Utilización del producto / de la elaboración** Sustancias químicas de laboratorio
- **1.3 Datos del proveedor de la ficha de datos de seguridad**
- **Fabricante/distribuidor:**  
Electron Microscopy Sciences  
1560 Industry Road  
USA-Hatfield, PA 19440  
Tel: 215-412-8400 Fax: 215-412-8450  
email: [info@emsdiasum.com](mailto:info@emsdiasum.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**



GHS06 calavera y tibias cruzadas

Acute Tox. 1	H300	Mortal en caso de ingestión.
Acute Tox. 3	H311	Tóxico en contacto con la piel.
Acute Tox. 2	H330	Mortal en caso de inhalación.



GHS08 peligro para la salud

Resp. Sens. 1B	H334	Puede provocar síntomas de alergia o asma o dificultades respiratorias en caso de inhalación.
Muta. 1B	H340	Puede provocar defectos genéticos.
Repr. 2	H361-H362	Se sospecha que puede perjudicar la fertilidad o dañar el feto. Puede perjudicar a los niños alimentados con leche materna.
STOT SE 1	H370	Provoca daños en los órganos.

( se continua en página 2 )

# Ficha de datos de seguridad

## según 1907/2006/CE, Artículo 31

fecha de impresión 10.05.2022

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Nombre comercial: **MODIFIED MAYER'S HEMATOXYLIN**

( se continua en página 1 )



GHS05 corrosión

Met. Corr.1 H290 Puede ser corrosivo para los metales.  
 Skin Corr. 1B H314 Provoca quemaduras graves en la piel y lesiones oculares graves.  
 Eye Dam. 1 H318 Provoca lesiones oculares graves.



GHS09 medio ambiente

Aquatic Acute 1 H400 Muy tóxico para los organismos acuáticos.

### · 2.2 Elementos de la etiqueta

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

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

#### · Pictogramas de peligro



GHS05 GHS06 GHS08 GHS09

#### · Palabra de advertencia Peligro

#### · Componentes peligrosos a indicar en el etiquetaje:

2,2,2-tricloro-1,1-etanodiol  
 ácido cítrico

#### · Indicaciones de peligro

H290 Puede ser corrosivo para los metales.  
 H300+H330 Mortal en caso de ingestión o inhalación.  
 H311 Tóxico en contacto con la piel.  
 H314 Provoca quemaduras graves en la piel y lesiones oculares graves.  
 H334 Puede provocar síntomas de alergia o asma o dificultades respiratorias en caso de inhalación.  
 H340 Puede provocar defectos genéticos.  
 H361-H362 Se sospecha que puede perjudicar la fertilidad o dañar el feto. Puede perjudicar a los niños alimentados con leche materna.  
 H370 Provoca daños en los órganos.  
 H400 Muy tóxico para los organismos acuáticos.

#### · Consejos de prudencia

P263 Evitar todo contacto con la sustancia durante el embarazo y la lactancia.  
 P301+P310 EN CASO DE INGESTIÓN: Llamar inmediatamente a un CENTRO DE TOXICOLOGÍA/ médico.  
 P303+P361+P353 EN CASO DE CONTACTO CON LA PIEL (o el pelo): Quitar inmediatamente toda la ropa contaminada. Enjuagar la piel con agua [o ducharse].  
 P305+P351+P338 EN CASO DE CONTACTO CON LOS OJOS: Enjuagar con agua cuidadosamente durante varios minutos. Quitar las lentes de contacto cuando estén presentes y pueda hacerse con facilidad. Proseguir con el lavado.  
 P320 Se necesita urgentemente un tratamiento específico (ver en esta etiqueta).  
 P361+P364 Quitar inmediatamente todas las prendas contaminadas y lavarlas antes de volver a usarlas.  
 P405 Guardar bajo llave.  
 P501 Eliminar el contenido o el recipiente conforme a la reglamentación local/regional/nacional/ internacional.

( se continua en página 3 )

# Ficha de datos de seguridad

## según 1907/2006/CE, Artículo 31

fecha de impresión 10.05.2022

Revisión: 10.05.2022

**Nombre comercial: MODIFIED MAYER'S HEMATOXYLIN**

( se continua en página 2 )

- **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: 302-17-0	2,2,2-tricloro-1,1-etanodiol	>2,5-≤10%
EINECS: 206-117-5	⚠ Acute Tox. 3, H301; ⚠ Skin Irrit. 2, H315; Eye Irrit. 2, H319	
CAS: 77-92-9	ácido cítrico	≤2,5%
EINECS: 201-069-1	⚠ Acute Tox. 1, H310; ⚠ Acute Tox. 4, H332	

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

### SECCIÓN 4: Primeros auxilios

- **4.1 Descripción de los primeros auxilios**
- **Instrucciones generales:**
  - Quitar de inmediato toda prenda contaminada con el producto.
  - Antes de quitarse la protección respiratoria, quítese la ropa contaminada.
  - En caso de respiración irregular o apnea (paro respiratorio), hágase la respiración artificial.
- **En caso de inhalación del producto:**
  - Suministrar aire fresco u oxígeno; solicitar ayuda médica.
  - Las personas desmayadas deben tenderse y transportarse de lado con la suficiente estabilidad.
- **En caso de contacto con la piel:** Lavar inmediatamente con agua y jabón y enjuagar bien.
- **En caso de con los ojos:**
  - Limpiar los ojos abiertos durante varios minutos con agua corriente y consultar un médico.
- **En caso de ingestión:**
  - No provocar el vómito y solicitar asistencia médica inmediata.
  - Beber mucha agua a respirar aire fresco. Solicitar asistencia médica inmediatamente.
- **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.
- **5.2 Peligros específicos derivados de la sustancia o la mezcla** No existen más datos relevantes disponibles.
- **5.3 Recomendaciones para el personal de lucha contra incendios**
- **Equipo especial de protección:** Colocarse la protección respiratoria.

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

- **6.1 Precauciones personales, equipo de protección y procedimientos de emergencia**
  - Llevar puesto equipo de protección. Mantener alejadas las personas sin protección.
- **6.2 Precauciones relativas al medio ambiente:**
  - Al penetrar en las aguas o en el alcantarillado, avisar a las autoridades pertinentes.

( se continua en página 4 )

# Ficha de datos de seguridad

## según 1907/2006/CE, Artículo 31

fecha de impresión 10.05.2022

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**Nombre comercial: MODIFIED MAYER'S HEMATOXYLIN**

( se continua en página 3 )

Diluir con mucha agua.

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

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

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

Utilizar un neutralizador.

Desechar el material contaminado como vertido según item 13.

Asegurar suficiente ventilación.

· **6.4 Referencia a otras secciones**

Ver capítulo 7 para mayor información sobre una manipulación segura.

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

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

### SECCIÓN 7: Manipulación y almacenamiento

· **7.1 Precauciones para una manipulación segura**

Asegurar suficiente ventilación /aspiración en el puesto de trabajo.

Abrir y manejar el recipiente con cuidado.

Evitar la formación de aerosoles.

· **Prevención de incendios y explosiones:** Tener preparados los aparatos respiratorios.

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

· **Almacenamiento:**

· **Exigencias con respecto al almacén y los recipientes:** No se requieren medidas especiales.

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

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

Mantener el recipiente cerrado herméticamente.

· **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:**

El producto no contiene cantidades relevantes de sustancias con valores límite que exijan un control en el puesto de trabajo.

· **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.

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· **Protección de manos:**

Guantes de protección

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

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

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

· **Material de los guantes**

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

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

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

· **Protección de ojos:**

Gafas de protección herméticas

### SECCIÓN 9: Propiedades físicas y químicas

· **9.1 Información sobre propiedades físicas y químicas básicas**· **Datos generales**· **Aspecto:**

Forma:

Líquido

Color:

Según denominación del producto

· **Olor:**

Característico

· **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:

Indeterminado.

· **Punto de inflamación:**

No aplicable.

· **Inflamabilidad (sólido, gas):**

No aplicable.

· **Temperatura de descomposición:**

No determinado.

· **Temperatura de auto-inflamación:**

El producto no es autoinflamable.

· **Propiedades explosivas:**

El producto no es explosivo.

· **Límites de explosión:**

Inferior:

No determinado.

Superior:

No determinado.

· **Presión de vapor a 20 °C:**

23 hPa

· **Densidad:**

Indeterminado.

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· <b>Densidad relativa</b>	No determinado.
· <b>Densidad de vapor</b>	No determinado.
· <b>Tasa de evaporación:</b>	No determinado.
· <b>Solubilidad en / miscibilidad con agua:</b>	Completamente mezclable.
· <b>Coefficiente de reparto: n-octanol/agua:</b>	No determinado.
· <b>Viscosidad:</b>	
<b>Dinámica:</b>	No determinado.
<b>Cinemática:</b>	No determinado.
· <b>Concentración del disolvente:</b>	
<b>Agua:</b>	87,0 %
<b>VOC (CE)</b>	0,00 %
<b>Contenido de cuerpos sólidos:</b>	7,7 %
· <b>9.2 Otros datos</b>	No existen más datos relevantes disponibles.

### SECCIÓN 10: Estabilidad y reactividad

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

### SECCIÓN 11: Información toxicológica

- **11.1 Información sobre los efectos toxicológicos**
- **Toxicidad aguda**

Mortal en caso de ingestión o inhalación.  
Tóxico en contacto con la piel.

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

#### 302-17-0 2,2,2-tricloro-1,1-etanodiol

Oral	LD50	479 mg/kg (rat)
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Dermal	LD50	3.030 mg/kg (rat)
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#### 77-92-9 ácido cítrico

Oral	LD50	5.040 mg/kg (mouse)
------	------	---------------------

- **Efecto estimulante primario:**
- **Corrosión o irritación cutáneas**  
Provoca quemaduras graves en la piel y lesiones oculares graves.
- **Lesiones o irritación ocular graves**  
Provoca lesiones oculares graves.
- **Sensibilización respiratoria o cutánea**  
Puede provocar síntomas de alergia o asma o dificultades respiratorias en caso de inhalación.

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- **Indicaciones toxicológicas adicionales:**
- **Efectos CMR (carcinogenicidad, mutagenicidad y toxicidad para la reproducción)**
- **Mutagenicidad en células germinales**  
Puede provocar defectos genéticos.
- **Carcinogenicidad** A la vista de los datos disponibles, no se cumplen los criterios de clasificación.
- **Toxicidad para la reproducción**  
Se sospecha que puede perjudicar la fertilidad o dañar el feto. Puede perjudicar a los niños alimentados con leche materna.
- **Toxicidad específica en determinados órganos (STOT) – exposición única**  
Provoca daños en los órganos.
- **Toxicidad específica en determinados órganos (STOT) – exposición repetida**  
A la vista de los datos disponibles, no se cumplen los criterios de clasificación.
- **Peligro de aspiración** A la vista de los datos disponibles, no se cumplen los criterios de clasificación.

### SECCIÓN 12: Información ecológica

- **12.1 Toxicidad**
- **Toxicidad acuática:** No existen más datos relevantes disponibles.
- **12.2 Persistencia y degradabilidad** No existen más datos relevantes disponibles.
- **12.3 Potencial de bioacumulación** No existen más datos relevantes disponibles.
- **12.4 Movilidad en el suelo** No existen más datos relevantes disponibles.
- **Efectos ecotóxicos:**
- **Observación:** Muy tóxico para peces.
- **Indicaciones medioambientales adicionales:**
- **Indicaciones generales:**  
Nivel de riesgo para el agua 2 (autoclasiificación): peligroso para el agua  
No dejar que se infiltre en aguas subterráneas, aguas superficiales o en alcantarillados.  
En estado no diluido o no neutralizado, no verter en el alcantarillado o en otros sistemas de desagüe.  
Una cantidad mínima vertida en el subsuelo ya representa un peligro para el agua potable.  
Vertido en aguas superficiales, también es tóxico para los peces y el plancton.  
muy tóxico para organismos acuáticos
- **12.5 Resultados de la valoración PBT y mPmB**
- **PBT:** No aplicable.
- **mPmB:** No aplicable.
- **12.6 Otros efectos adversos** No existen más datos relevantes disponibles.

### SECCIÓN 13: Consideraciones relativas a la eliminación

- **13.1 Métodos para el tratamiento de residuos**
- **Recomendación:** No debe desecharse con la basura doméstica. No debe llegar al alcantarillado.
- **Embalajes sin limpiar:**
- **Recomendación:** Eliminar conforme a las disposiciones oficiales.
- **Producto de limpieza recomendado:** Agua, eventualmente añadiendo productos de limpieza.

### SECCIÓN 14: Información relativa al transporte

- **14.1 Número ONU**
- **ADR, IMDG, IATA** UN3082

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· **14.2 Designación oficial de transporte de las Naciones Unidas**  
 · **ADR** 3082 SUSTANCIA LÍQUIDA PELIGROSA PARA EL MEDIO AMBIENTE, N.E.P.  
 · **IMDG** ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S., MARINE POLLUTANT  
 · **IATA** ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.

· **14.3 Clase(s) de peligro para el transporte**· **ADR, IMDG, IATA**

· **Clase** 9 Materias y objetos peligrosos diversos  
 · **Etiqueta** 9

· **14.4 Grupo de embalaje**· **ADR, IMDG, IATA** III· **14.5 Peligros para el medio ambiente:**

· **Contaminante marino:** Símbolo (pez y árbol)  
 · **Marcado especial (ADR):** Símbolo (pez y árbol)  
 · **Marcado especial (IATA):** Símbolo (pez y árbol)

· **14.6 Precauciones particulares para los usuarios** Atención: Materias y objetos peligrosos diversos

· **Número de identificación de peligro (Número Kemler):** 90  
 · **Número EMS:** F-A,S-F  
 · **Stowage Category** A

· **14.7 Transporte a granel con arreglo al anexo II del Convenio MARPOL y el Código IBC** No aplicable.

· **Transporte/datos adicionales:**

· **ADR**  
 · **Cantidades limitadas (LQ)** 5L  
 · **Cantidades exceptuadas (EQ)** Código: E1  
 Cantidad neta máxima por envase interior: 30 ml  
 Cantidad neta máxima por embalaje exterior: 1000 ml  
 · **Categoría de transporte** 3  
 · **Código de restricción del túnel** (-)

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

· **"Reglamentación Modelo" de la UNECE:** UN 3082 SUSTANCIA LÍQUIDA PELIGROSA PARA EL MEDIO AMBIENTE, N.E.P., 9, III

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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**  
H1 TOXICIDAD AGUDA  
E1 Peligroso para el medio ambiente acuático
- **Cantidad umbral (toneladas) a efectos de aplicación de los requisitos de nivel inferior 5 t**
- **Cantidad umbral (toneladas) a efectos de aplicación de los requisitos de nivel superior 20 t**
- **REGLAMENTO (CE) n° 1907/2006 ANEXO XVII Restricciones: 3**
- **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
- **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

- H301 Tóxico en caso de ingestión.
- H310 Mortal en contacto con la piel.
- H315 Provoca irritación cutánea.
- H319 Provoca irritación ocular grave.
- H332 Nocivo en caso de inhalación.

#### · 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
- GHS: Globally Harmonised System of Classification and Labelling of Chemicals
- EINECS: European Inventory of Existing Commercial Chemical Substances
- ELINCS: European List of Notified Chemical Substances
- CAS: Chemical Abstracts Service (division of the American Chemical Society)
- VOC: Volatile Organic Compounds (USA, EU)
- LC50: Lethal concentration, 50 percent
- LD50: Lethal dose, 50 percent
- PBT: Persistent, Bioaccumulative and Toxic
- vPvB: very Persistent and very Bioaccumulative

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*Met. Corr.1: Corrosivos para los metales – Categoría 1**Acute Tox. 3: Toxicidad aguda – Categoría 3**Acute Tox. 1: Toxicidad aguda – Categoría 1**Acute Tox. 2: Toxicidad aguda – Categoría 2**Acute Tox. 4: Toxicidad aguda – Categoría 4**Skin Corr. 1B: Corrosión o irritación cutáneas – Categoría 1B**Skin Irrit. 2: Corrosión o irritación cutáneas – Categoría 2**Eye Dam. 1: Lesiones oculares graves o irritación ocular – Categoría 1**Eye Irrit. 2: Lesiones oculares graves o irritación ocular – Categoría 2**Resp. Sens. 1B: Sensibilización respiratoria – Categoría 1B**Muta. 1B: Mutagenicidad en células germinales – Categoría 1B**Repr. 2: Toxicidad para la reproducción – Categoría 2**STOT SE 1: Toxicidad específica en determinados órganos ( exposición única) – Categoría 1**Aquatic Acute 1: Peligroso para el medio ambiente acuático - peligro acuático agudo – Categoría 1*

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