

# SAFETY DATA SHEET



Revision date 22-Oct-2020

Revision Number 1

## **PAS Stain Kit**

Item: 87007

| <b><u>Component</u></b>           | <b><u>Item number</u></b> |
|-----------------------------------|---------------------------|
| Periodic Acid Solution (0.5 – 1%) | 88016B                    |
| Schiff Reagent                    | 88017B                    |
| Hematoxylin 1                     | 88018B                    |

This safety data sheet was created pursuant to the requirements of: Regulation (EC) No. 1907/2006 and Regulation (EC) No. 1272/2008



# SAFETY DATA SHEET

This safety data sheet was created pursuant to the requirements of:  
Regulation (EC) No. 1907/2006 and Regulation (EC) No. 1272/2008

Issuing Date 07-Nov-2014

Revision date 30-Apr-2020

Revision Number 2

## 1. Identification

### 1.1. Product identifier

Catalogue Number 88016, 88016B, 88027, 88027B  
Product Name Periodic Acid Solution (0.5 - 1%)  
Synonyms para-Periodic Acid Solution  
Pure substance/mixture Substance

### 1.2. Relevant identified uses of the substance or mixture and uses advised against

Recommended use In vitro diagnostics  
Uses advised against No information available

### 1.3. Details of the supplier of the safety data sheet

**Manufacturer**  
Richard-Allan Scientific  
4481 Campus Drive  
Kalamazoo, MI 49008  
1-800-522-7270

For further information, please contact

### 1.4. Emergency telephone number

Emergency Telephone No information available

| Emergency Telephone - §45 - (EC)1272/2008 |                                         |
|-------------------------------------------|-----------------------------------------|
| Europe                                    | 112                                     |
| Austria                                   | CHEMTREC Vienna, Austria: 43-13649237   |
| Belgium                                   | CHEMTREC Brussels, Belgium: 32-28083237 |
| Denmark                                   | CHEMTREC Denmark: 45-69918573           |
| Finland                                   | CHEMTREC Finland: 358-942419014         |
| France                                    | CHEMTREC France: 33-975181407           |
| Germany                                   | CHEMTREC Germany: 0800-181-7059         |
| Ireland                                   | CHEMTREC Ireland: 353-19014670          |
| Italy                                     | CHEMTREC Italy: 800-789-767             |
| Netherlands                               | CHEMTREC Netherlands: 31-858880596      |
| Norway                                    | CHEMTREC Norway: 47-21930678            |
| Portugal                                  | CHEMTREC Portugal: 351-308801773        |
| Spain                                     | CHEMTREC Spain: 900-868538              |
| Sweden                                    | CHEMTREC Sweden: 46-852503403           |
| Switzerland                               | CHEMTREC Switzerland: 41-435082011      |
| United Kingdom                            | CHEMTREC United Kingdom: 44-870-8200418 |

## 2. Hazard(s) identification

### 2.1. Classification of the substance or mixture

Regulation (EC) No 1272/2008

This mixture is classified as not hazardous according to regulation (EC) 1272/2008 [GHS]

### 2.2. Label elements

This mixture is classified as not hazardous according to regulation (EC) 1272/2008 [GHS]

### Hazard statements

This mixture is classified as not hazardous according to regulation (EC) 1272/2008 [GHS]

### 2.3. Other hazards

No information available

## 3. Composition/information on ingredients

### 3.1 Substances

Not applicable

### 3.2 Mixtures

| Chemical name         | EC No.    | CAS No.    | Weight-% | Classification according to Regulation (EC) No. 1272/2008 [CLP] | REACH registration number |
|-----------------------|-----------|------------|----------|-----------------------------------------------------------------|---------------------------|
| Water                 | 231-791-2 | 7732-18-5  | 95-100   | No data available                                               | No data available         |
| Periodic acid (H5IO6) | 233-937-0 | 10450-60-9 | <1       | No data available                                               | No data available         |

Full text of H- and EUH-phrases: see section 16

## 4. First-aid measures

### 4.1. Description of first aid measures

|              |                                                                                                                      |
|--------------|----------------------------------------------------------------------------------------------------------------------|
| Inhalation   | Remove to fresh air.                                                                                                 |
| Eye contact  | Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician. |
| Skin contact | Wash skin with soap and water. In the case of skin irritation or allergic reactions see a physician.                 |
| Ingestion    | Clean mouth with water and drink afterwards plenty of water.                                                         |

### 4.2. Most important symptoms and effects, both acute and delayed

|          |                           |
|----------|---------------------------|
| Symptoms | No information available. |
|----------|---------------------------|

### 4.3. Indication of any immediate medical attention and special treatment needed

|                    |                        |
|--------------------|------------------------|
| Note to physicians | Treat symptomatically. |
|--------------------|------------------------|

## 5. Fire-fighting measures

### 5.1. Extinguishing media

**Suitable Extinguishing Media** Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

**Unsuitable extinguishing media** No information available.

## **5.2. Special hazards arising from the substance or mixture**

**Specific hazards arising from the chemical** No information available.

## **5.3. Advice for firefighters**

**Special protective equipment for fire-fighters** Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

# **6. Accidental release measures**

## **6.1. Personal precautions, protective equipment and emergency procedures**

**Personal precautions** Ensure adequate ventilation.

**For emergency responders** Use personal protection recommended in Section 8.

## **6.2. Environmental precautions**

**Environmental precautions** See Section 12 for additional Ecological Information.

## **6.3. Methods and material for containment and cleaning up**

**Methods for containment** Prevent further leakage or spillage if safe to do so.

**Methods for cleaning up** Take up mechanically, placing in appropriate containers for disposal.

**Prevention of secondary hazards** Clean contaminated objects and areas thoroughly observing environmental regulations.

## **6.4. Reference to other sections**

**Reference to other sections** See section 8 for more information. See section 13 for more information.

# **7. Handling and storage**

## **7.1. Precautions for safe handling**

**Advice on safe handling** Ensure adequate ventilation.

**General hygiene considerations** Handle in accordance with good industrial hygiene and safety practice.

## **7.2. Conditions for safe storage, including any incompatibilities**

**Storage Conditions** Keep container tightly closed in a dry and well-ventilated place.

## **7.3. Specific end use(s)**

**Risk Management Methods (RMM)** The information required is contained in this Material Safety Data Sheet.

# **8. Exposure controls/personal protection**

## **8.1. Control parameters**

**Exposure Limits** This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

**Derived No Effect Level (DNEL)** No information available.

**Predicted No Effect Concentration (PNEC)** No information available.

## **8.2. Exposure controls**

### **Personal protective equipment**

**Eye/face protection** No special protective equipment required.

**Skin and body protection** No special protective equipment required.

**Respiratory protection** No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

**General hygiene considerations** Handle in accordance with good industrial hygiene and safety practice.

**Environmental exposure controls** No information available.

## **9. Physical and chemical properties**

### **9.1. Information on basic physical and chemical properties**

|                       |                          |
|-----------------------|--------------------------|
| <b>Physical state</b> | Liquid                   |
| <b>Appearance</b>     | white light yellow       |
| <b>Color</b>          | No information available |
| <b>Odor</b>           | Slight. Characteristic.  |
| <b>Odor threshold</b> | No information available |

| <b><u>Property</u></b>                        | <b><u>Values</u></b> | <b><u>Remarks • Method</u></b> |
|-----------------------------------------------|----------------------|--------------------------------|
| <b>pH</b>                                     | 1.0-2.0              | None known                     |
| <b>Melting point / freezing point</b>         | 0 °C                 |                                |
| <b>Boiling point / boiling range</b>          | 100 °C               |                                |
| <b>Flash point</b>                            | No data available °C |                                |
| <b>Evaporation rate</b>                       | No data available    | None known                     |
| <b>Flammability (solid, gas)</b>              | No data available    | None known                     |
| <b>Flammability Limit in Air</b>              |                      | None known                     |
| <b>Upper flammability or explosive limits</b> | No data available    |                                |
| <b>Lower flammability or explosive limits</b> | No data available    |                                |
| <b>Vapor pressure</b>                         | No data available    | None known                     |
| <b>Vapor density</b>                          | No data available    | None known                     |
| <b>Relative density</b>                       | 1.000 - 1.010        |                                |
| <b>Water solubility</b>                       | No data available    | None known                     |
| <b>Solubility(ies)</b>                        | No data available    | None known                     |
| <b>Partition coefficient</b>                  | No data available    | None known                     |
| <b>Autoignition temperature</b>               | No data available    | None known                     |
| <b>Decomposition temperature</b>              | No data available    | None known                     |
| <b>Kinematic viscosity</b>                    | No data available    | None known                     |
| <b>Dynamic viscosity</b>                      | No data available    | None known                     |

|                      |                          |
|----------------------|--------------------------|
| Explosive properties | No information available |
| Oxidizing properties | No information available |

**9.2. Other information**

|                  |                          |
|------------------|--------------------------|
| Softening point  | No information available |
| Molecular weight | No information available |
| VOC Content (%)  | No information available |
| Liquid Density   | No information available |
| Bulk density     | No information available |

**10. Stability and reactivity****10.1. Reactivity**

|            |                           |
|------------|---------------------------|
| Reactivity | No information available. |
|------------|---------------------------|

**10.2. Chemical stability**

|           |                                 |
|-----------|---------------------------------|
| Stability | Stable under normal conditions. |
|-----------|---------------------------------|

**Explosion data**

|                                  |       |
|----------------------------------|-------|
| Sensitivity to mechanical impact | None. |
|----------------------------------|-------|

|                                 |       |
|---------------------------------|-------|
| Sensitivity to static discharge | None. |
|---------------------------------|-------|

**10.3. Possibility of hazardous reactions**

|                                    |                               |
|------------------------------------|-------------------------------|
| Possibility of hazardous reactions | None under normal processing. |
|------------------------------------|-------------------------------|

|                          |                                          |
|--------------------------|------------------------------------------|
| Hazardous polymerization | Hazardous polymerization does not occur. |
|--------------------------|------------------------------------------|

**10.4. Conditions to avoid**

|                     |                                           |
|---------------------|-------------------------------------------|
| Conditions to avoid | None known based on information supplied. |
|---------------------|-------------------------------------------|

**10.5. Incompatible materials**

|                        |                                           |
|------------------------|-------------------------------------------|
| Incompatible materials | None known based on information supplied. |
|------------------------|-------------------------------------------|

**10.6. Hazardous decomposition products**

|                                  |                                                          |
|----------------------------------|----------------------------------------------------------|
| Hazardous decomposition products | Carbon monoxide (CO). Carbon dioxide (CO <sub>2</sub> ). |
|----------------------------------|----------------------------------------------------------|

**11. Toxicological information****11.1. Information on toxicological effects****Information on likely routes of exposure****Product Information**

|            |                                                                   |
|------------|-------------------------------------------------------------------|
| Inhalation | Specific test data for the substance or mixture is not available. |
|------------|-------------------------------------------------------------------|

|             |                                                                   |
|-------------|-------------------------------------------------------------------|
| Eye contact | Specific test data for the substance or mixture is not available. |
|-------------|-------------------------------------------------------------------|

|              |                                                                   |
|--------------|-------------------------------------------------------------------|
| Skin contact | Specific test data for the substance or mixture is not available. |
|--------------|-------------------------------------------------------------------|

|           |                                                                   |
|-----------|-------------------------------------------------------------------|
| Ingestion | Specific test data for the substance or mixture is not available. |
|-----------|-------------------------------------------------------------------|

**Symptoms related to the physical, chemical and toxicological characteristics**

**Symptoms** No information available.

**Numerical measures of toxicity**

**Acute toxicity**

**Unknown acute toxicity** 1 % of the mixture consists of ingredient(s) of unknown toxicity.

1 % of the mixture consists of ingredient(s) of unknown acute oral toxicity.

1 % of the mixture consists of ingredient(s) of unknown acute dermal toxicity.

1 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (gas).

1 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (vapor).

1 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (dust/mist).

**Component Information**

| Chemical name | Oral LD50          | Dermal LD50 | Inhalation LC50 |
|---------------|--------------------|-------------|-----------------|
| Water         | > 90 mL/kg ( Rat ) |             |                 |

**Delayed and immediate effects as well as chronic effects from short and long-term exposure**

**Skin corrosion/irritation** No information available.

**Serious eye damage/eye irritation** No information available.

**Respiratory or skin sensitization** No information available.

**Germ cell mutagenicity** No information available.

**Carcinogenicity** No information available.

**Reproductive toxicity** No information available.

**STOT - single exposure** No information available.

**STOT - repeated exposure** No information available.

**Aspiration hazard** No information available.

**12. Ecological information**

**12.1. Toxicity**

**Ecotoxicity** The environmental impact of this product has not been fully investigated.

**Unknown aquatic toxicity** Contains 0 % of components with unknown hazards to the aquatic environment.

**12.2. Persistence and degradability**

**Persistence and degradability** No information available.

**12.3. Bioaccumulative potential**

**Bioaccumulation** No information available.

**12.4. Mobility in soil**

Mobility in soil No information available.

#### **12.5. Results of PBT and vPvB assessment**

PBT and vPvB assessment No information available.

#### **12.6. Other adverse effects**

Other adverse effects No information available.

### **13. Disposal considerations**

#### **13.1. Waste treatment methods**

Waste from residues/unused products Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.

Contaminated packaging Do not reuse empty containers.

Other information Waste codes should be assigned by the user based on the application for which the product was used. Do not empty into drains.

### **14. Transport information**

#### **IMDG**

14.1 UN number Not regulated  
 14.2 UN proper shipping name Not regulated  
 14.3 Transport hazard class(es) Not regulated  
 14.4 Packing group Not regulated  
 14.5 Marine pollutant Not applicable  
 14.6 Special Provisions None  
 14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code No information available

#### **ADR**

14.1 UN number Not regulated  
 14.2 UN proper shipping name Not regulated  
 14.3 Transport hazard class(es) Not regulated  
 14.4 Packing group Not regulated  
 14.5 Environmental hazards Not applicable  
 14.6 Special Provisions None

#### **IATA**

**Not regulated**  
 14.1 UN number Not regulated  
 14.2 UN proper shipping name Not regulated  
 14.3 Transport hazard class(es) Not regulated  
 14.4 Packing group Not regulated  
 14.5 Environmental hazards Not applicable  
 14.6 Special Provisions None

### **15. Regulatory information**

#### **15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture**

**National regulations****Germany**

**Water hazard class (WGK)** Water endangering class = 1 (self classification)

**European Union**

Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work

**Authorizations and/or restrictions on use:**

This product does not contain substances subject to authorization (Regulation (EC) No. 1907/2006 (REACH), Annex XIV) This product does not contain substances subject to restriction (Regulation (EC) No. 1907/2006 (REACH), Annex XVII)

**Persistent Organic Pollutants**

Not applicable

**Ozone-depleting substances (ODS) regulation (EC) 1005/2009** Not applicable

**International Inventories**

|                      |                                                  |
|----------------------|--------------------------------------------------|
| <b>TSCA</b>          | Contact supplier for inventory compliance status |
| <b>DSL/NDSL</b>      | Contact supplier for inventory compliance status |
| <b>EINECS/ELINCS</b> | Contact supplier for inventory compliance status |
| <b>ENCS</b>          | Contact supplier for inventory compliance status |
| <b>IECSC</b>         | Contact supplier for inventory compliance status |
| <b>KECL</b>          | Contact supplier for inventory compliance status |
| <b>PICCS</b>         | Contact supplier for inventory compliance status |
| <b>AICS</b>          | Contact supplier for inventory compliance status |

**Legend:**

**TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory  
**DSL/NDSL** - Canadian Domestic Substances List/Non-Domestic Substances List  
**EINECS/ELINCS** - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances  
**ENCS** - Japan Existing and New Chemical Substances  
**IECSC** - China Inventory of Existing Chemical Substances  
**KECL** - Korean Existing and Evaluated Chemical Substances  
**PICCS** - Philippines Inventory of Chemicals and Chemical Substances  
**AICS** - Australian Inventory of Chemical Substances

**15.2. Chemical safety assessment**

**Chemical Safety Report** No information available

**16. Other information****Key or legend to abbreviations and acronyms used in the safety data sheet****Legend**

SVHC: Substances of Very High Concern for Authorization:

**Legend Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**

|         |                             |      |                                  |
|---------|-----------------------------|------|----------------------------------|
| TWA     | TWA (time-weighted average) | STEL | STEL (Short Term Exposure Limit) |
| Ceiling | Maximum limit value         | *    | Skin designation                 |

**Key literature references and sources for data used to compile the SDS**

Agency for Toxic Substances and Disease Registry (ATSDR)  
U.S. Environmental Protection Agency ChemView Database  
European Food Safety Authority (EFSA)  
EPA (Environmental Protection Agency)  
Acute Exposure Guideline Level(s) (AELG(s))  
U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act  
U.S. Environmental Protection Agency High Production Volume Chemicals  
Food Research Journal  
Hazardous Substance Database  
International Uniform Chemical Information Database (IUCLID)  
Japan GHS Classification  
Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)  
NIOSH (National Institute for Occupational Safety and Health)  
National Library of Medicine's ChemID Plus (NLM CIP)  
National Library of Medicine's PubMed database (NLM PUBMED)  
National Toxicology Program (NTP)  
New Zealand's Chemical Classification and Information Database (CCID)  
Organization for Economic Co-operation and Development Environment, Health, and Safety Publications  
Organization for Economic Co-operation and Development High Production Volume Chemicals Program  
Organization for Economic Co-operation and Development Screening Information Data Set  
RTECS (Registry of Toxic Effects of Chemical Substances)  
World Health Organization

**Issuing Date** 07-Nov-2014

**Revision date** 30-Apr-2020

**This material safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006**

**Disclaimer**

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

**End of Safety Data Sheet**



# SAFETY DATA SHEET

This safety data sheet was created pursuant to the requirements of:  
Regulation (EC) No. 1907/2006 and Regulation (EC) No. 1272/2008

Issuing Date 10-Nov-2014

Revision date 30-Apr-2020

Revision Number 2

## 1. Identification

### 1.1. Product identifier

Catalogue Number 88017, 88017B

Product Name Schiff Reagent

Pure substance/mixture Substance

### 1.2. Relevant identified uses of the substance or mixture and uses advised against

Recommended use In vitro diagnostics

Uses advised against No information available

### 1.3. Details of the supplier of the safety data sheet

#### Manufacturer

Richard-Allan Scientific  
4481 Campus Drive  
Kalamazoo, MI 49008  
1-800-522-7270

For further information, please contact

### 1.4. Emergency telephone number

Emergency Telephone No information available

#### Emergency Telephone - §45 - (EC)1272/2008

|                |                                         |
|----------------|-----------------------------------------|
| Europe         | 112                                     |
| Austria        | CHEMTREC Vienna, Austria: 43-13649237   |
| Belgium        | CHEMTREC Brussels, Belgium: 32-28083237 |
| Denmark        | CHEMTREC Denmark: 45-69918573           |
| Finland        | CHEMTREC Finland: 358-942419014         |
| France         | CHEMTREC France: 33-975181407           |
| Germany        | CHEMTREC Germany: 0800-181-7059         |
| Ireland        | CHEMTREC Ireland: 353-19014670          |
| Italy          | CHEMTREC Italy: 800-789-767             |
| Netherlands    | CHEMTREC Netherlands: 31-858880596      |
| Norway         | CHEMTREC Norway: 47-21930678            |
| Portugal       | CHEMTREC Portugal: 351-308801773        |
| Spain          | CHEMTREC Spain: 900-868538              |
| Sweden         | CHEMTREC Sweden: 46-852503403           |
| Switzerland    | CHEMTREC Switzerland: 41-435082011      |
| United Kingdom | CHEMTREC United Kingdom: 44-870-8200418 |

## 2. Hazard(s) identification

**2.1. Classification of the substance or mixture**

Regulation (EC) No 1272/2008

|                                     |                     |
|-------------------------------------|---------------------|
| Acute toxicity - Inhalation (Gases) | Category 4 - (H332) |
| Skin corrosion/irritation           | Category 1 - (H314) |
| Serious eye damage/eye irritation   | Category 1 - (H318) |
| Category 1                          |                     |

**2.2. Label elements****Signal word**

Danger

**Hazard statements**

H314 - Causes severe skin burns and eye damage

H332 - Harmful if inhaled

EUH210 - Safety data sheet available on request

**Precautionary Statements - EU (§28, 1272/2008)**

P260 - Do not breathe dust/fume/gas/mist/vapors/spray

P280 - Wear protective gloves/protective clothing and eye/face protection

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

P310 - Immediately call a POISON CENTER or doctor

P321 - Specific treatment (see .? on this label)

**Additional information**

This product requires tactile warnings if supplied to the general public. This product requires child resistant fastenings if supplied to the general public.

**2.3. Other hazards**

No information available

**3. Composition/information on ingredients****3.1 Substances**

Not applicable

**3.2 Mixtures**

| Chemical name                                                     | EC No.    | CAS No.    | Weight-% | Classification according to Regulation (EC) No. 1272/2008 [CLP] | REACH registration number |
|-------------------------------------------------------------------|-----------|------------|----------|-----------------------------------------------------------------|---------------------------|
| Water                                                             | 231-791-2 | 7732-18-5  | >95      | No data available                                               | No data available         |
| Hydrochloric acid                                                 | 231-595-7 | 7647-01-0  | 1-3      | Acute Tox. 3 (H331)<br>Skin Corr. 1A (H314)<br>Press. Gas       | No data available         |
| Potassium metabisulfite                                           | 240-795-3 | 16731-55-8 | 1        | No data available                                               | No data available         |
| Carbon                                                            | 231-153-3 | 7440-44-0  | <1       | No data available                                               | No data available         |
| Basic Fuchsin, high purity biological stain, special for flagella | -         | 58969-01-0 | <1       | No data available                                               | No data available         |

Full text of H- and EUH-phrases: see section 16

## 4. First-aid measures

### 4.1. Description of first aid measures

|                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|-------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>General advice</b>                     | Immediate medical attention is required. Show this safety data sheet to the doctor in attendance.                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Inhalation</b>                         | Remove to fresh air. If breathing has stopped, give artificial respiration. Get medical attention immediately. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. If breathing is difficult, (trained personnel should) give oxygen. Delayed pulmonary edema may occur. Get immediate medical advice/attention. |
| <b>Eye contact</b>                        | Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Keep eye wide open while rinsing. Do not rub affected area. Remove contact lenses, if present and easy to do. Continue rinsing. Get immediate medical advice/attention.                                                                                                                                                                                                               |
| <b>Skin contact</b>                       | Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Get immediate medical advice/attention.                                                                                                                                                                                                                                                                                                                                  |
| <b>Ingestion</b>                          | Do NOT induce vomiting. Clean mouth with water and drink afterwards plenty of water. Never give anything by mouth to an unconscious person. Get immediate medical advice/attention.                                                                                                                                                                                                                                                                                            |
| <b>Self-protection of the first aider</b> | Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination. Avoid contact with skin, eyes or clothing. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation. Avoid breathing vapors or mists. Use personal protective equipment as required. See section 8 for more information.                                                                              |

### 4.2. Most important symptoms and effects, both acute and delayed

|                 |                                                                        |
|-----------------|------------------------------------------------------------------------|
| <b>Symptoms</b> | Burning sensation. Coughing and/ or wheezing. Difficulty in breathing. |
|-----------------|------------------------------------------------------------------------|

### 4.3. Indication of any immediate medical attention and special treatment needed

|                           |                                                                                                                                                                                                                                                                                                                                        |
|---------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Note to physicians</b> | Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated. Do not give chemical antidotes. Asphyxia from glottal edema may occur. Marked decrease in blood pressure may occur with moist rales, frothy sputum, and high pulse pressure. |
|---------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

## 5. Fire-fighting measures

### 5.1. Extinguishing media

|                                       |                                                                                                         |
|---------------------------------------|---------------------------------------------------------------------------------------------------------|
| <b>Suitable Extinguishing Media</b>   | Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. |
| <b>Unsuitable extinguishing media</b> | No information available.                                                                               |

### 5.2. Special hazards arising from the substance or mixture

|                                                   |                                                                                                                                        |
|---------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------|
| <b>Specific hazards arising from the chemical</b> | The product causes burns of eyes, skin and mucous membranes. Thermal decomposition can lead to release of irritating gases and vapors. |
|---------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------|

### 5.3. Advice for firefighters

**Special protective equipment for fire-fighters** Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

## 6. Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

**Personal precautions** Attention! Corrosive material. Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Use personal protective equipment as required. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak. Avoid breathing vapors or mists.

**Other information** Refer to protective measures listed in Sections 7 and 8.

**For emergency responders** Use personal protection recommended in Section 8.

### 6.2. Environmental precautions

**Environmental precautions** Prevent further leakage or spillage if safe to do so. Should not be released into the environment. Do not allow to enter into soil/subsoil. Prevent product from entering drains.

### 6.3. Methods and material for containment and cleaning up

**Methods for containment** Prevent further leakage or spillage if safe to do so.

**Methods for cleaning up** Take up mechanically, placing in appropriate containers for disposal.

**Prevention of secondary hazards** Clean contaminated objects and areas thoroughly observing environmental regulations.

### 6.4. Reference to other sections

**Reference to other sections** See section 8 for more information. See section 13 for more information.

## 7. Handling and storage

### 7.1. Precautions for safe handling

**Advice on safe handling** Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. In case of insufficient ventilation, wear suitable respiratory equipment. Handle product only in closed system or provide appropriate exhaust ventilation. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash before reuse. Avoid breathing vapors or mists.

**General hygiene considerations** Avoid contact with skin, eyes or clothing. Wear suitable gloves and eye/face protection. Do not eat, drink or smoke when using this product. Remove and wash contaminated clothing and gloves, including the inside, before re-use. Contaminated work clothing should not be allowed out of the workplace. Regular cleaning of equipment, work area and clothing is recommended. Wash hands before breaks and immediately after handling the product.

### 7.2. Conditions for safe storage, including any incompatibilities

**Storage Conditions** Keep containers tightly closed in a dry, cool and well-ventilated place. Protect from moisture. Store locked up. Keep out of the reach of children. Store away from other materials.

### 7.3. Specific end use(s)

**Risk Management Methods (RMM)** The information required is contained in this Material Safety Data Sheet.

## 8. Exposure controls/personal protection

### 8.1. Control parameters

#### Exposure Limits

| Chemical name                  | European Union                                                                       | United Kingdom                                                                                         | France                                                 | Spain                                                                                  | Germany                                                                              |
|--------------------------------|--------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------|--------------------------------------------------------|----------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
| Hydrochloric acid<br>7647-01-0 | TWA: 5 ppm<br>TWA: 8 mg/m <sup>3</sup><br>STEL: 10 ppm<br>STEL: 15 mg/m <sup>3</sup> | TWA: 1 ppm<br>TWA: 2 mg/m <sup>3</sup><br>STEL: 5 ppm<br>STEL: 8 mg/m <sup>3</sup>                     | STEL: 5 ppm<br>STEL: 7.6 mg/m <sup>3</sup>             | TWA: 5 ppm<br>TWA: 7.6 mg/m <sup>3</sup><br>STEL: 10 ppm<br>STEL: 15 mg/m <sup>3</sup> | TWA: 2 ppm<br>TWA: 3 mg/m <sup>3</sup>                                               |
| Chemical name                  | Italy                                                                                | Portugal                                                                                               | Netherlands                                            | Finland                                                                                | Denmark                                                                              |
| Hydrochloric acid<br>7647-01-0 | TWA: 5 ppm<br>TWA: 8 mg/m <sup>3</sup><br>STEL: 10 ppm<br>STEL: 15 mg/m <sup>3</sup> | TWA: 5 ppm<br>TWA: 8 mg/m <sup>3</sup><br>STEL: 10 ppm<br>STEL: 15 mg/m <sup>3</sup><br>Ceiling: 2 ppm | TWA: 8 mg/m <sup>3</sup><br>STEL: 15 mg/m <sup>3</sup> | STEL: 5 ppm<br>STEL: 7.6 mg/m <sup>3</sup>                                             | Ceiling: 5 ppm<br>Ceiling: 8 mg/m <sup>3</sup>                                       |
| Chemical name                  | Austria                                                                              | Switzerland                                                                                            | Poland                                                 | Norway                                                                                 | Ireland                                                                              |
| Hydrochloric acid<br>7647-01-0 | TWA: 5 ppm<br>TWA: 8 mg/m <sup>3</sup><br>STEL 10 ppm<br>STEL 15 mg/m <sup>3</sup>   | TWA: 2 ppm<br>TWA: 3 mg/m <sup>3</sup><br>STEL: 4 ppm<br>STEL: 6 mg/m <sup>3</sup>                     | STEL: 10 mg/m <sup>3</sup><br>TWA: 5 mg/m <sup>3</sup> | -                                                                                      | TWA: 8 mg/m <sup>3</sup><br>TWA: 5 ppm<br>STEL: 10 ppm<br>STEL: 15 mg/m <sup>3</sup> |
| Carbon<br>7440-44-0            | TWA: 5 mg/m <sup>3</sup><br>STEL 10 mg/m <sup>3</sup>                                | -                                                                                                      | TWA: 6 mg/m <sup>3</sup>                               | -                                                                                      | -                                                                                    |

**Derived No Effect Level (DNEL)** No information available.

**Predicted No Effect Concentration (PNEC)** No information available.

### 8.2. Exposure controls

#### Personal protective equipment

**Eye/face protection** Face protection shield.

**Hand protection** Wear suitable gloves. Impervious gloves.

**Skin and body protection** Wear suitable protective clothing. Long sleeved clothing. Chemical resistant apron.

**Respiratory protection** No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

**Recommended filter type:** Particulates filter conforming to EN 143.

**General hygiene considerations** Avoid contact with skin, eyes or clothing. Wear suitable gloves and eye/face protection. Do not eat, drink or smoke when using this product. Remove and wash contaminated clothing and gloves, including the inside, before re-use. Contaminated work clothing should not be allowed out of the workplace. Regular cleaning of equipment, work area and clothing is recommended. Wash hands before breaks and immediately after handling the product.

**Environmental exposure controls** No information available.

## 9. Physical and chemical properties

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

|                |                          |
|----------------|--------------------------|
| Physical state | Liquid                   |
| Appearance     | colorless                |
| Color          | No information available |
| Odor           | Odorless.                |
| Odor threshold | No information available |

| <u>Property</u>                        | <u>Values</u>            | <u>Remarks • Method</u> |
|----------------------------------------|--------------------------|-------------------------|
| pH                                     | 1.7-2.2                  |                         |
| Melting point / freezing point         | No data available        | None known              |
| Boiling point / boiling range          | No data available        |                         |
| Flash point                            | No data available        |                         |
| Evaporation rate                       | No data available        | None known              |
| Flammability (solid, gas)              | No data available        | None known              |
| Flammability Limit in Air              |                          | None known              |
| Upper flammability or explosive limits | No data available        |                         |
| Lower flammability or explosive limits | No data available        |                         |
| Vapor pressure                         | No information available |                         |
| Vapor density                          | No data available        |                         |
| Relative density                       | 1.005 - 1.050            |                         |
| Water solubility                       | No data available        | None known              |
| Solubility(ies)                        | Soluble in water         |                         |
| Partition coefficient                  | No data available        | None known              |
| Autoignition temperature               | No data available        | None known              |
| Decomposition temperature              | No data available        | None known              |
| Kinematic viscosity                    | No data available        | None known              |
| Dynamic viscosity                      | No data available        | None known              |
| Explosive properties                   | No information available |                         |
| Oxidizing properties                   | No information available |                         |

**9.2. Other information**

|                  |                          |
|------------------|--------------------------|
| Softening point  | No information available |
| Molecular weight | No information available |
| VOC Content (%)  | No information available |
| Liquid Density   | No information available |
| Bulk density     | No information available |

**10. Stability and reactivity****10.1. Reactivity**

|            |                           |
|------------|---------------------------|
| Reactivity | No information available. |
|------------|---------------------------|

**10.2. Chemical stability**

|           |                                 |
|-----------|---------------------------------|
| Stability | Stable under normal conditions. |
|-----------|---------------------------------|

**Explosion data**

|                                  |       |
|----------------------------------|-------|
| Sensitivity to mechanical impact | None. |
| Sensitivity to static discharge  | None. |

**10.3. Possibility of hazardous reactions**

|                                    |                               |
|------------------------------------|-------------------------------|
| Possibility of hazardous reactions | None under normal processing. |
|------------------------------------|-------------------------------|

|                          |                                          |
|--------------------------|------------------------------------------|
| Hazardous polymerization | Hazardous polymerization does not occur. |
|--------------------------|------------------------------------------|

**10.4. Conditions to avoid**

|                     |                                                                     |
|---------------------|---------------------------------------------------------------------|
| Conditions to avoid | Exposure to air or moisture over prolonged periods. Excessive heat. |
|---------------------|---------------------------------------------------------------------|

**10.5. Incompatible materials**

**Incompatible materials** Acids. Bases. Oxidizing agent.

**10.6. Hazardous decomposition products**

**Hazardous decomposition products** Thermal decomposition can lead to release of irritating gases and vapors.

**11. Toxicological information****11.1. Information on toxicological effects****Information on likely routes of exposure****Product Information**

|                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|---------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Inhalation</b>   | Specific test data for the substance or mixture is not available. Corrosive by inhalation. (based on components). Inhalation of corrosive fumes/gases may cause coughing, choking, headache, dizziness, and weakness for several hours. Pulmonary edema may occur with tightness in the chest, shortness of breath, bluish skin, decreased blood pressure, and increased heart rate. Inhaled corrosive substances can lead to a toxic edema of the lungs. Pulmonary edema can be fatal. Harmful by inhalation.            |
| <b>Eye contact</b>  | Specific test data for the substance or mixture is not available. Causes burns. (based on components). Corrosive to the eyes and may cause severe damage including blindness. Causes serious eye damage. May cause irreversible damage to eyes.                                                                                                                                                                                                                                                                           |
| <b>Skin contact</b> | Specific test data for the substance or mixture is not available. May cause irritation.                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Ingestion</b>    | Specific test data for the substance or mixture is not available. Causes burns. (based on components). Ingestion causes burns of the upper digestive and respiratory tracts. May cause severe burning pain in the mouth and stomach with vomiting and diarrhea of dark blood. Blood pressure may decrease. Brownish or yellowish stains may be seen around the mouth. Swelling of the throat may cause shortness of breath and choking. May cause lung damage if swallowed. May be fatal if swallowed and enters airways. |

**Symptoms related to the physical, chemical and toxicological characteristics**

**Symptoms** Redness. Burning. May cause blindness. Coughing and/ or wheezing.

**Numerical measures of toxicity****Acute toxicity**

The following values are calculated based on chapter 3.1 of the GHS document

|                                      |                |
|--------------------------------------|----------------|
| <b>ATEmix (oral)</b>                 | 7,437.50 mg/kg |
| <b>ATEmix (inhalation-gas)</b>       | 17,603.19 ppm  |
| <b>ATEmix (inhalation-dust/mist)</b> | 15.66 mg/l     |

**Unknown acute toxicity** 3.2 % of the mixture consists of ingredient(s) of unknown toxicity.  
 0 % of the mixture consists of ingredient(s) of unknown acute oral toxicity.  
 0 % of the mixture consists of ingredient(s) of unknown acute dermal toxicity.  
 0 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (gas).  
 3.2 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (vapor).  
 0 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (dust/mist).

**Component Information**

| Chemical name | Oral LD50 | Dermal LD50 | Inhalation LC50 |
|---------------|-----------|-------------|-----------------|
|---------------|-----------|-------------|-----------------|

|                         |                         |                         |                         |
|-------------------------|-------------------------|-------------------------|-------------------------|
| Water                   | > 90 mL/kg ( Rat )      |                         |                         |
| Hydrochloric acid       | 238 - 277 mg/kg ( Rat ) | > 5010 mg/kg ( Rabbit ) | = 1.68 mg/L ( Rat ) 1 h |
| Potassium metabisulfite | = 1800 mg/kg ( Rat )    |                         |                         |
| Carbon                  | > 10000 mg/kg ( Rat )   |                         |                         |

**Delayed and immediate effects as well as chronic effects from short and long-term exposure**

|                                          |                                                                                                       |
|------------------------------------------|-------------------------------------------------------------------------------------------------------|
| <b>Skin corrosion/irritation</b>         | May cause skin irritation.                                                                            |
| <b>Serious eye damage/eye irritation</b> | Classification based on data available for ingredients. Causes burns. Risk of serious damage to eyes. |
| <b>Respiratory or skin sensitization</b> | No information available.                                                                             |
| <b>Germ cell mutagenicity</b>            | No information available.                                                                             |
| <b>Carcinogenicity</b>                   | No information available.                                                                             |
| <b>Reproductive toxicity</b>             | No information available.                                                                             |
| <b>STOT - single exposure</b>            | No information available.                                                                             |
| <b>STOT - repeated exposure</b>          | No information available.                                                                             |
| <b>Aspiration hazard</b>                 | No information available.                                                                             |

**12. Ecological information****12.1. Toxicity**

|                                 |                                                                             |
|---------------------------------|-----------------------------------------------------------------------------|
| <b>Ecotoxicity</b>              | .                                                                           |
| <b>Unknown aquatic toxicity</b> | Contains 0 % of components with unknown hazards to the aquatic environment. |

| Chemical name           | Algae/aquatic plants | Fish                                                                                                       | Toxicity to microorganisms | Crustacea |
|-------------------------|----------------------|------------------------------------------------------------------------------------------------------------|----------------------------|-----------|
| Hydrochloric acid       | -                    | LC50: =282mg/L (96h, <i>Gambusia affinis</i> )                                                             | -                          | -         |
| Potassium metabisulfite | -                    | LC50: 460 - 1000mg/L (96h, <i>Brachydanio rerio</i> )<br>LC50: 220 - 460mg/L (96h, <i>Leuciscus idus</i> ) | -                          | -         |

**12.2. Persistence and degradability**

|                                      |                           |
|--------------------------------------|---------------------------|
| <b>Persistence and degradability</b> | No information available. |
|--------------------------------------|---------------------------|

**12.3. Bioaccumulative potential**

|                        |                                    |
|------------------------|------------------------------------|
| <b>Bioaccumulation</b> | There is no data for this product. |
|------------------------|------------------------------------|

| Chemical name           | Partition coefficient |
|-------------------------|-----------------------|
| Potassium metabisulfite | -4                    |

**12.4. Mobility in soil**

Mobility in soil No information available.

Mobility .

#### 12.5. Results of PBT and vPvB assessment

PBT and vPvB assessment No information available.

#### 12.6. Other adverse effects

Other adverse effects No information available.

### 13. Disposal considerations

#### 13.1. Waste treatment methods

Waste from residues/unused products Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.

Contaminated packaging Do not reuse empty containers.

Other information Waste codes should be assigned by the user based on the application for which the product was used. Do not empty into drains. Do not dispose of waste into sewer. Solutions with low pH-value must be neutralized before discharge.

### 14. Transport information

#### IMDG

14.1 UN number Not regulated  
 14.2 UN proper shipping name Not regulated  
 14.3 Transport hazard class(es) Not regulated  
 14.4 Packing group Not regulated  
 14.5 Marine pollutant Not applicable  
 14.6 Special Provisions None  
 14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code No information available

#### ADR

14.1 UN number Not regulated  
 14.2 UN proper shipping name Not regulated  
 14.3 Transport hazard class(es) Not regulated  
 14.4 Packing group Not regulated  
 14.5 Environmental hazards Not applicable  
 14.6 Special Provisions None

#### IATA

**Not regulated**  
 14.1 UN number Not regulated  
 14.2 UN proper shipping name Not regulated  
 14.3 Transport hazard class(es) Not regulated  
 14.4 Packing group Not regulated  
 14.5 Environmental hazards Not applicable  
 14.6 Special Provisions None

### 15. Regulatory information

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

| Chemical name           | Germany - Water Classification (VwVwS) | Germany - TA-Luft Class |
|-------------------------|----------------------------------------|-------------------------|
| Hydrochloric acid       | WGK 1                                  |                         |
| Potassium metabisulfite | WGK 1                                  |                         |

**European Union**

Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work

**Authorizations and/or restrictions on use:**

This product does not contain substances subject to authorization (Regulation (EC) No. 1907/2006 (REACH), Annex XIV) This product does not contain substances subject to restriction (Regulation (EC) No. 1907/2006 (REACH), Annex XVII)

**Persistent Organic Pollutants**

Not applicable

**Ozone-depleting substances (ODS) regulation (EC) 1005/2009** Not applicable

**International Inventories**

|                      |                                                  |
|----------------------|--------------------------------------------------|
| <b>TSCA</b>          | Contact supplier for inventory compliance status |
| <b>DSL/NDSL</b>      | Contact supplier for inventory compliance status |
| <b>EINECS/ELINCS</b> | Contact supplier for inventory compliance status |
| <b>ENCS</b>          | Contact supplier for inventory compliance status |
| <b>IECSC</b>         | Contact supplier for inventory compliance status |
| <b>KECL</b>          | Contact supplier for inventory compliance status |
| <b>PICCS</b>         | Contact supplier for inventory compliance status |
| <b>AICS</b>          | Contact supplier for inventory compliance status |

**Legend:**

**TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory  
**DSL/NDSL** - Canadian Domestic Substances List/Non-Domestic Substances List  
**EINECS/ELINCS** - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances  
**ENCS** - Japan Existing and New Chemical Substances  
**IECSC** - China Inventory of Existing Chemical Substances  
**KECL** - Korean Existing and Evaluated Chemical Substances  
**PICCS** - Philippines Inventory of Chemicals and Chemical Substances  
**AICS** - Australian Inventory of Chemical Substances

**15.2. Chemical safety assessment**

**Chemical Safety Report** No information available

**16. Other information****Key or legend to abbreviations and acronyms used in the safety data sheet****Full text of H-Statements referred to under section 3**

H314 - Causes severe skin burns and eye damage  
H331 - Toxic if inhaled

**Legend**

SVHC: Substances of Very High Concern for Authorization:

**Legend Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**

|         |                             |      |                                  |
|---------|-----------------------------|------|----------------------------------|
| TWA     | TWA (time-weighted average) | STEL | STEL (Short Term Exposure Limit) |
| Ceiling | Maximum limit value         | *    | Skin designation                 |

**Key literature references and sources for data used to compile the SDS**

Agency for Toxic Substances and Disease Registry (ATSDR)  
U.S. Environmental Protection Agency ChemView Database  
European Food Safety Authority (EFSA)  
EPA (Environmental Protection Agency)  
Acute Exposure Guideline Level(s) (AEGl(s))  
U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act  
U.S. Environmental Protection Agency High Production Volume Chemicals  
Food Research Journal  
Hazardous Substance Database  
International Uniform Chemical Information Database (IUCLID)  
Japan GHS Classification  
Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)  
NIOSH (National Institute for Occupational Safety and Health)  
National Library of Medicine's ChemID Plus (NLM CIP)  
National Library of Medicine's PubMed database (NLM PUBMED)  
National Toxicology Program (NTP)  
New Zealand's Chemical Classification and Information Database (CCID)  
Organization for Economic Co-operation and Development Environment, Health, and Safety Publications  
Organization for Economic Co-operation and Development High Production Volume Chemicals Program  
Organization for Economic Co-operation and Development Screening Information Data Set  
RTECS (Registry of Toxic Effects of Chemical Substances)  
World Health Organization

**Issuing Date** 10-Nov-2014**Revision date** 30-Apr-2020**This material safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006****Disclaimer**

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

**End of Safety Data Sheet**



# SAFETY DATA SHEET

This safety data sheet was created pursuant to the requirements of:  
Regulation (EC) No. 1907/2006 and Regulation (EC) No. 1272/2008

Issuing Date 07-Oct-2014

Revision date 15-Apr-2020

Revision Number 2

## 1. Identification

### 1.1. Product identifier

Catalogue Number 88018, 7221, 7221L

Product Name Hematoxylin 1

Pure substance/mixture Mixture

### 1.2. Relevant identified uses of the substance or mixture and uses advised against

Recommended use In vitro diagnostics

Uses advised against No information available

### 1.3. Details of the supplier of the safety data sheet

#### Manufacturer

Richard-Allan Scientific  
4481 Campus Drive  
Kalamazoo, MI 49008  
1-800-522-7270

For further information, please contact

### 1.4. Emergency telephone number

Emergency Telephone No information available

#### Emergency Telephone - §45 - (EC)1272/2008

|                |                                         |
|----------------|-----------------------------------------|
| Europe         | 112                                     |
| Austria        | CHEMTREC Vienna, Austria: 43-13649237   |
| Belgium        | CHEMTREC Brussels, Belgium: 32-28083237 |
| Denmark        | CHEMTREC Denmark: 45-69918573           |
| Finland        | CHEMTREC Finland: 358-942419014         |
| France         | CHEMTREC France: 33-975181407           |
| Germany        | CHEMTREC Germany: 0800-181-7059         |
| Ireland        | CHEMTREC Ireland: 353-19014670          |
| Italy          | CHEMTREC Italy: 800-789-767             |
| Netherlands    | CHEMTREC Netherlands: 31-858880596      |
| Norway         | CHEMTREC Norway: 47-21930678            |
| Portugal       | CHEMTREC Portugal: 351-308801773        |
| Spain          | CHEMTREC Spain: 900-868538              |
| Sweden         | CHEMTREC Sweden: 46-852503403           |
| Switzerland    | CHEMTREC Switzerland: 41-435082011      |
| United Kingdom | CHEMTREC United Kingdom: 44-870-8200418 |

## 2. Hazard(s) identification

**2.1. Classification of the substance or mixture**

Regulation (EC) No 1272/2008

|                       |                     |
|-----------------------|---------------------|
| Acute toxicity - Oral | Category 4 - (H302) |
|-----------------------|---------------------|

**2.2. Label elements****Signal word**

Warning

**Hazard statements**

H302 - Harmful if swallowed

**Precautionary Statements - EU (§28, 1272/2008)**

P264 - Wash face, hands and any exposed skin thoroughly after handling

P270 - Do not eat, drink or smoke when using this product

P301 + P312 - IF SWALLOWED: Call a POISON CENTER or doctor if you feel unwell

P330 - Rinse mouth

P501 - Dispose of contents/ container to an approved waste disposal plant

**Additional information**

This product requires tactile warnings if supplied to the general public.

**2.3. Other hazards**

No information available

**3. Composition/information on ingredients****3.1 Substances**

Not applicable

**3.2 Mixtures**

| Chemical name    | EC No.    | CAS No.    | Weight-% | Classification according to Regulation (EC) No. 1272/2008 [CLP] | REACH registration number |
|------------------|-----------|------------|----------|-----------------------------------------------------------------|---------------------------|
| Water            | 231-791-2 | 7732-18-5  | 65-70    | No data available                                               | No data available         |
| Ethylene glycol  | 203-473-3 | 107-21-1   | 25 - 30  | Acute Tox. 4 (H302)                                             | No data available         |
| Aluminum sulfate | 233-135-0 | 10043-01-3 | 4-5      | No data available                                               | No data available         |
| Acetic acid      | 200-580-7 | 64-19-7    | <1       | Skin Corr. 1A (H314)<br>Flam. Liq. 3 (H226)                     | No data available         |
| Hematoxylin      | 208-237-3 | 517-28-2   | <1       | No data available                                               | No data available         |
| Sodium iodate    | 231-672-5 | 7681-55-2  | <1       | No data available                                               | No data available         |

**Full text of H- and EUH-phrases: see section 16****4. First-aid measures****4.1. Description of first aid measures****General advice**

Show this safety data sheet to the doctor in attendance.

|              |                                                                                                                                                               |
|--------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Inhalation   | Remove to fresh air.                                                                                                                                          |
| Eye contact  | Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.                                          |
| Skin contact | Wash skin with soap and water. In the case of skin irritation or allergic reactions see a physician.                                                          |
| Ingestion    | Do NOT induce vomiting. Clean mouth with water and drink afterwards plenty of water. Never give anything by mouth to an unconscious person. Call a physician. |

#### **4.2. Most important symptoms and effects, both acute and delayed**

|          |                           |
|----------|---------------------------|
| Symptoms | No information available. |
|----------|---------------------------|

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

|                    |                        |
|--------------------|------------------------|
| Note to physicians | Treat symptomatically. |
|--------------------|------------------------|

### **5. Fire-fighting measures**

#### **5.1. Extinguishing media**

|                                |                                                                                                         |
|--------------------------------|---------------------------------------------------------------------------------------------------------|
| Suitable Extinguishing Media   | Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. |
| Unsuitable extinguishing media | No information available.                                                                               |

#### **5.2. Special hazards arising from the substance or mixture**

|                                            |                           |
|--------------------------------------------|---------------------------|
| Specific hazards arising from the chemical | No information available. |
|--------------------------------------------|---------------------------|

#### **5.3. Advice for firefighters**

|                                                |                                                                                                                                    |
|------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------|
| Special protective equipment for fire-fighters | Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment. |
|------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------|

### **6. Accidental release measures**

#### **6.1. Personal precautions, protective equipment and emergency procedures**

|                          |                                                   |
|--------------------------|---------------------------------------------------|
| Personal precautions     | Ensure adequate ventilation.                      |
| For emergency responders | Use personal protection recommended in Section 8. |

#### **6.2. Environmental precautions**

|                           |                                                       |
|---------------------------|-------------------------------------------------------|
| Environmental precautions | See Section 12 for additional Ecological Information. |
|---------------------------|-------------------------------------------------------|

#### **6.3. Methods and material for containment and cleaning up**

|                                 |                                                                                      |
|---------------------------------|--------------------------------------------------------------------------------------|
| Methods for containment         | Prevent further leakage or spillage if safe to do so.                                |
| Methods for cleaning up         | Take up mechanically, placing in appropriate containers for disposal.                |
| Prevention of secondary hazards | Clean contaminated objects and areas thoroughly observing environmental regulations. |

#### **6.4. Reference to other sections**

**Reference to other sections** See section 8 for more information. See section 13 for more information.

## 7. Handling and storage

### 7.1. Precautions for safe handling

**Advice on safe handling** Ensure adequate ventilation.

**General hygiene considerations** Handle in accordance with good industrial hygiene and safety practice.

### 7.2. Conditions for safe storage, including any incompatibilities

**Storage Conditions** Keep containers tightly closed in a dry, cool and well-ventilated place. Keep out of the reach of children.

### 7.3. Specific end use(s)

**Risk Management Methods (RMM)** The information required is contained in this Material Safety Data Sheet.

## 8. Exposure controls/personal protection

### 8.1. Control parameters

#### Exposure Limits

| Chemical name                  | European Union                                                                                    | United Kingdom                                                                                                                                            | France                                                                                      | Spain                                                                                                   | Germany                                                                                                                                            |
|--------------------------------|---------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------|
| Ethylene glycol<br>107-21-1    | TWA: 20 ppm<br>TWA: 52 mg/m <sup>3</sup><br>STEL: 40 ppm<br>STEL: 104 mg/m <sup>3</sup><br>*      | TWA: 10 mg/m <sup>3</sup><br>TWA: 20 ppm<br>TWA: 52 mg/m <sup>3</sup><br>STEL: 40 ppm<br>STEL: 104 mg/m <sup>3</sup><br>STEL: 30 mg/m <sup>3</sup><br>Sk* | TWA: 20 ppm<br>TWA: 52 mg/m <sup>3</sup><br>STEL: 40 ppm<br>STEL: 104 mg/m <sup>3</sup>     | TWA: 20 ppm<br>TWA: 52 mg/m <sup>3</sup><br>STEL: 40 ppm<br>STEL: 104 mg/m <sup>3</sup><br>vía dérmica* | TWA: 10 ppm<br>TWA: 26 mg/m <sup>3</sup>                                                                                                           |
| Aluminum sulfate<br>10043-01-3 | -                                                                                                 | TWA: 2 mg/m <sup>3</sup>                                                                                                                                  | TWA: 2 mg/m <sup>3</sup>                                                                    | TWA: 2 mg/m <sup>3</sup>                                                                                | -                                                                                                                                                  |
| Acetic acid<br>64-19-7         | -                                                                                                 | TWA: 10 ppm<br>TWA: 25 mg/m <sup>3</sup><br>STEL: 20 ppm<br>STEL: 50 mg/m <sup>3</sup>                                                                    | STEL: 10 ppm<br>STEL: 25 mg/m <sup>3</sup>                                                  | TWA: 10 ppm<br>TWA: 25 mg/m <sup>3</sup><br>STEL: 20 ppm<br>STEL: 50 mg/m <sup>3</sup>                  | TWA: 10 ppm<br>TWA: 25 mg/m <sup>3</sup>                                                                                                           |
| Chemical name                  | Italy                                                                                             | Portugal                                                                                                                                                  | Netherlands                                                                                 | Finland                                                                                                 | Denmark                                                                                                                                            |
| Ethylene glycol<br>107-21-1    | TWA: 20 ppm<br>TWA: 52 mg/m <sup>3</sup><br>STEL: 40 ppm<br>STEL: 104 mg/m <sup>3</sup><br>pelle* | TWA: 20 ppm<br>TWA: 52 mg/m <sup>3</sup><br>STEL: 40 ppm<br>STEL: 104 mg/m <sup>3</sup><br>Ceiling: 100 mg/m <sup>3</sup>                                 | TWA: 52 mg/m <sup>3</sup><br>TWA: 10 mg/m <sup>3</sup><br>STEL: 104 mg/m <sup>3</sup><br>H* | TWA: 20 ppm<br>TWA: 50 mg/m <sup>3</sup><br>STEL: 40 ppm<br>STEL: 100 mg/m <sup>3</sup><br>iho*         | TWA: 10 ppm<br>TWA: 26 mg/m <sup>3</sup><br>TWA: 10 mg/m <sup>3</sup><br>H*                                                                        |
| Aluminum sulfate<br>10043-01-3 | -                                                                                                 | TWA: 2 mg/m <sup>3</sup>                                                                                                                                  | -                                                                                           | TWA: 1 mg/m <sup>3</sup>                                                                                | TWA: 1 mg/m <sup>3</sup>                                                                                                                           |
| Acetic acid<br>64-19-7         | -                                                                                                 | TWA: 10 ppm<br>TWA: 25 mg/m <sup>3</sup><br>STEL: 20 ppm<br>STEL: 50 mg/m <sup>3</sup>                                                                    | TWA: 25 mg/m <sup>3</sup><br>STEL: 50 mg/m <sup>3</sup>                                     | TWA: 5 ppm<br>TWA: 13 mg/m <sup>3</sup><br>STEL: 10 ppm<br>STEL: 25 mg/m <sup>3</sup>                   | TWA: 10 ppm<br>TWA: 25 mg/m <sup>3</sup>                                                                                                           |
| Chemical name                  | Austria                                                                                           | Switzerland                                                                                                                                               | Poland                                                                                      | Norway                                                                                                  | Ireland                                                                                                                                            |
| Ethylene glycol<br>107-21-1    | TWA: 10 ppm<br>TWA: 26 mg/m <sup>3</sup><br>STEL 20 ppm<br>STEL 52 mg/m <sup>3</sup><br>H*        | TWA: 10 ppm<br>TWA: 26 mg/m <sup>3</sup><br>STEL: 20 ppm<br>STEL: 52 mg/m <sup>3</sup><br>H*                                                              | STEL: 50 mg/m <sup>3</sup><br>TWA: 15 mg/m <sup>3</sup>                                     | STEL: 104 mg/m <sup>3</sup><br>STEL: 40 ppm                                                             | TWA: 10 mg/m <sup>3</sup><br>TWA: 20 ppm<br>TWA: 52 mg/m <sup>3</sup><br>STEL: 40 ppm<br>STEL: 30 mg/m <sup>3</sup><br>STEL: 104 mg/m <sup>3</sup> |

|                                |                                                                                      |                                                                                        |                                                         |                                              | Sk*                                                                                    |
|--------------------------------|--------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|---------------------------------------------------------|----------------------------------------------|----------------------------------------------------------------------------------------|
| Aluminum sulfate<br>10043-01-3 | -                                                                                    | TWA: 2 mg/m <sup>3</sup>                                                               | -                                                       | STEL: 4 mg/m <sup>3</sup>                    | TWA: 2 mg/m <sup>3</sup><br>STEL: 6 mg/m <sup>3</sup>                                  |
| Acetic acid<br>64-19-7         | TWA: 10 ppm<br>TWA: 25 mg/m <sup>3</sup><br>STEL 20 ppm<br>STEL 50 mg/m <sup>3</sup> | TWA: 10 ppm<br>TWA: 25 mg/m <sup>3</sup><br>STEL: 20 ppm<br>STEL: 50 mg/m <sup>3</sup> | STEL: 50 mg/m <sup>3</sup><br>TWA: 25 mg/m <sup>3</sup> | STEL: 15 ppm<br>STEL: 37.5 mg/m <sup>3</sup> | TWA: 10 ppm<br>TWA: 25 mg/m <sup>3</sup><br>STEL: 20 ppm<br>STEL: 50 mg/m <sup>3</sup> |

**Derived No Effect Level (DNEL)** No information available.

**Predicted No Effect Concentration (PNEC)** No information available.

## 8.2. Exposure controls

### Personal protective equipment

**Eye/face protection** No special protective equipment required.

**Skin and body protection** No special protective equipment required.

**Respiratory protection** No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

**General hygiene considerations** Handle in accordance with good industrial hygiene and safety practice.

**Environmental exposure controls** No information available.

## 9. Physical and chemical properties

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

|                       |                          |
|-----------------------|--------------------------|
| <b>Physical state</b> | Liquid                   |
| <b>Appearance</b>     | purple                   |
| <b>Color</b>          | No information available |
| <b>Odor</b>           | sweet.                   |
| <b>Odor threshold</b> | No information available |

| <u>Property</u>                        | <u>Values</u>            | <u>Remarks • Method</u> |
|----------------------------------------|--------------------------|-------------------------|
| pH                                     | 2.3-2.6                  |                         |
| Melting point / freezing point         | No data available        | None known              |
| Boiling point / boiling range          | No data available °C     |                         |
| Flash point                            | > 93.28 °C               |                         |
| Evaporation rate                       | No data available        | None known              |
| Flammability (solid, gas)              | No data available        | None known              |
| Flammability Limit in Air              |                          | None known              |
| Upper flammability or explosive limits | No data available        |                         |
| Lower flammability or explosive limits | No data available        |                         |
| Vapor pressure                         | No information available |                         |
| Vapor density                          | No data available        |                         |
| Relative density                       | No data available        | None known              |
| Water solubility                       | No data available        | None known              |
| Solubility(ies)                        | Soluble in water         |                         |
| Partition coefficient                  | No data available        | None known              |
| Autoignition temperature               | No data available        | None known              |

|                           |                          |            |
|---------------------------|--------------------------|------------|
| Decomposition temperature | No data available        | None known |
| Kinematic viscosity       | No data available        | None known |
| Dynamic viscosity         | No data available        | None known |
| Explosive properties      | No information available |            |
| Oxidizing properties      | No information available |            |

**9.2. Other information**

|                  |                          |
|------------------|--------------------------|
| Softening point  | No information available |
| Molecular weight | No information available |
| VOC Content (%)  | No information available |
| Liquid Density   | No information available |
| Bulk density     | No information available |

**10. Stability and reactivity****10.1. Reactivity**

|            |                           |
|------------|---------------------------|
| Reactivity | No information available. |
|------------|---------------------------|

**10.2. Chemical stability**

|           |                                 |
|-----------|---------------------------------|
| Stability | Stable under normal conditions. |
|-----------|---------------------------------|

**Explosion data**

|                                  |       |
|----------------------------------|-------|
| Sensitivity to mechanical impact | None. |
| Sensitivity to static discharge  | None. |

**10.3. Possibility of hazardous reactions**

|                                    |                               |
|------------------------------------|-------------------------------|
| Possibility of hazardous reactions | None under normal processing. |
|------------------------------------|-------------------------------|

|                          |                                          |
|--------------------------|------------------------------------------|
| Hazardous polymerization | Hazardous polymerization does not occur. |
|--------------------------|------------------------------------------|

**10.4. Conditions to avoid**

|                     |                                           |
|---------------------|-------------------------------------------|
| Conditions to avoid | None known based on information supplied. |
|---------------------|-------------------------------------------|

**10.5. Incompatible materials**

|                        |                                           |
|------------------------|-------------------------------------------|
| Incompatible materials | None known based on information supplied. |
|------------------------|-------------------------------------------|

**10.6. Hazardous decomposition products**

|                                  |                                                                         |
|----------------------------------|-------------------------------------------------------------------------|
| Hazardous decomposition products | Carbon monoxide (CO). Carbon dioxide (CO <sub>2</sub> ). Sulfur oxides. |
|----------------------------------|-------------------------------------------------------------------------|

**11. Toxicological information****11.1. Information on toxicological effects****Information on likely routes of exposure**

|                     |                                                                                                |
|---------------------|------------------------------------------------------------------------------------------------|
| Product Information | .                                                                                              |
| Inhalation          | Specific test data for the substance or mixture is not available.                              |
| Eye contact         | Specific test data for the substance or mixture is not available.                              |
| Skin contact        | Specific test data for the substance or mixture is not available.                              |
| Ingestion           | Specific test data for the substance or mixture is not available. Harmful if swallowed. (based |

on components).

### Symptoms related to the physical, chemical and toxicological characteristics

**Symptoms** No information available.

### Numerical measures of toxicity

#### Acute toxicity

The following values are calculated based on chapter 3.1 of the GHS document

**ATEmix (oral)** 1,712.80 mg/kg

**ATEmix (dermal)** 37,857.10 mg/kg

**Unknown acute toxicity** 32.85 % of the mixture consists of ingredient(s) of unknown toxicity.

0.25 % of the mixture consists of ingredient(s) of unknown acute oral toxicity.

4.85 % of the mixture consists of ingredient(s) of unknown acute dermal toxicity.

32.85 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (gas).

32.85 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (vapor).

32.85 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (dust/mist).

#### Component Information

| Chemical name    | Oral LD50            | Dermal LD50                                   | Inhalation LC50         |
|------------------|----------------------|-----------------------------------------------|-------------------------|
| Water            | > 90 mL/kg ( Rat )   |                                               |                         |
| Ethylene glycol  | = 4700 mg/kg ( Rat ) | = 10600 mg/kg ( Rat ) = 9530 µL/kg ( Rabbit ) |                         |
| Aluminum sulfate | = 1930 mg/kg ( Rat ) |                                               |                         |
| Acetic acid      | = 3310 mg/kg ( Rat ) | = 1060 mg/kg ( Rabbit )                       | = 11.4 mg/L ( Rat ) 4 h |

### Delayed and immediate effects as well as chronic effects from short and long-term exposure

**Skin corrosion/irritation** No information available.

**Serious eye damage/eye irritation** No information available.

**Respiratory or skin sensitization** No information available.

**Germ cell mutagenicity** No information available.

**Carcinogenicity** No information available.

**Reproductive toxicity** No information available.

**Developmental toxicity** Developmental effects have occurred in experimental animals.

**STOT - single exposure** No information available.

**STOT - repeated exposure** No information available.

**Other adverse effects** The toxicological properties have not been fully investigated. See actual entry in RTECS for complete information.

**Aspiration hazard** No information available.

## 12. Ecological information

**12.1. Toxicity****Ecotoxicity**

**Unknown aquatic toxicity** Contains 0.25 % of components with unknown hazards to the aquatic environment.

| Chemical name    | Algae/aquatic plants                                                  | Fish                                                                                                                                                                                                                                                                                                                                           | Toxicity to microorganisms | Crustacea                                                                                |
|------------------|-----------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|------------------------------------------------------------------------------------------|
| Ethylene glycol  | EC50: 6500 - 13000mg/L (96h, <i>Pseudokirchneriella subcapitata</i> ) | LC50: =27540mg/L (96h, <i>Lepomis macrochirus</i> )<br>LC50: =41000mg/L (96h, <i>Oncorhynchus mykiss</i> )<br>LC50: 40000 - 60000mg/L (96h, <i>Pimephales promelas</i> )<br>LC50: =40761mg/L (96h, <i>Oncorhynchus mykiss</i> )<br>LC50: 14 - 18mL/L (96h, <i>Oncorhynchus mykiss</i> )<br>LC50: =16000mg/L (96h, <i>Poecilia reticulata</i> ) | -                          | EC50: =46300mg/L (48h, <i>Daphnia magna</i> )                                            |
| Aluminum sulfate | -                                                                     | LC50: =27.9mg/L (96h, <i>Pimephales promelas</i> )<br>LC50: =100mg/L (96h, <i>Carassius auratus</i> )<br>LC50: =37mg/L (96h, <i>Gambusia affinis</i> )                                                                                                                                                                                         | -                          | EC50: =136mg/L (15min, <i>Daphnia magna</i> )                                            |
| Acetic acid      | -                                                                     | LC50: =75mg/L (96h, <i>Lepomis macrochirus</i> )<br>LC50: =79mg/L (96h, <i>Pimephales promelas</i> )                                                                                                                                                                                                                                           | -                          | EC50: =65mg/L (48h, <i>Daphnia magna</i> )<br>EC50: =47mg/L (24h, <i>Daphnia magna</i> ) |

**12.2. Persistence and degradability**

**Persistence and degradability** No information available.

**12.3. Bioaccumulative potential**

**Bioaccumulation** There is no data for this product.

**Component Information**

| Chemical name   | Partition coefficient |
|-----------------|-----------------------|
| Ethylene glycol | -1.93                 |
| Acetic acid     | -0.31                 |

**12.4. Mobility in soil**

**Mobility in soil** No information available.

**Mobility****12.5. Results of PBT and vPvB assessment**

**PBT and vPvB assessment** No information available.

**12.6. Other adverse effects**

**Other adverse effects** No information available.

### 13. Disposal considerations

#### 13.1. Waste treatment methods

|                                     |                                                                                                                 |
|-------------------------------------|-----------------------------------------------------------------------------------------------------------------|
| Waste from residues/unused products | Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation. |
| Contaminated packaging              | Do not reuse empty containers.                                                                                  |

### 14. Transport information

#### IMDG

|                                                                          |                          |
|--------------------------------------------------------------------------|--------------------------|
| 14.1 UN number                                                           | Not regulated            |
| 14.2 UN proper shipping name                                             | Not regulated            |
| 14.3 Transport hazard class(es)                                          | Not regulated            |
| 14.4 Packing group                                                       | Not regulated            |
| 14.5 Marine pollutant                                                    | Not applicable           |
| 14.6 Special Provisions                                                  | None                     |
| 14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code | No information available |

#### ADR

|                                 |                |
|---------------------------------|----------------|
| 14.1 UN number                  | Not regulated  |
| 14.2 UN proper shipping name    | Not regulated  |
| 14.3 Transport hazard class(es) | Not regulated  |
| 14.4 Packing group              | Not regulated  |
| 14.5 Environmental hazards      | Not applicable |
| 14.6 Special Provisions         | None           |

#### IATA

|                                 |                      |
|---------------------------------|----------------------|
|                                 | <b>Not regulated</b> |
| 14.1 UN number                  | Not regulated        |
| 14.2 UN proper shipping name    | Not regulated        |
| 14.3 Transport hazard class(es) | Not regulated        |
| 14.4 Packing group              | Not regulated        |
| 14.5 Environmental hazards      | Not applicable       |
| 14.6 Special Provisions         | None                 |

### 15. Regulatory information

#### 15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

| Chemical name    | Germany - Water Classification (VwVwS) | Germany - TA-Luft Class |
|------------------|----------------------------------------|-------------------------|
| Ethylene glycol  | WGK 1                                  |                         |
| Aluminum sulfate | WGK 1                                  |                         |
| Acetic acid      | WGK 1                                  |                         |

#### European Union

Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents

at work

#### Authorizations and/or restrictions on use:

This product does not contain substances subject to authorization (Regulation (EC) No. 1907/2006 (REACH), Annex XIV) This product does not contain substances subject to restriction (Regulation (EC) No. 1907/2006 (REACH), Annex XVII)

#### Persistent Organic Pollutants

Not applicable

**Ozone-depleting substances (ODS) regulation (EC) 1005/2009** Not applicable

#### International Inventories

|               |                                                  |
|---------------|--------------------------------------------------|
| TSCA          | Contact supplier for inventory compliance status |
| DSL/NDL       | Contact supplier for inventory compliance status |
| EINECS/ELINCS | Contact supplier for inventory compliance status |
| ENCS          | Contact supplier for inventory compliance status |
| IECSC         | Contact supplier for inventory compliance status |
| KECL          | Contact supplier for inventory compliance status |
| PICCS         | Contact supplier for inventory compliance status |
| AICS          | Contact supplier for inventory compliance status |

#### Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory  
 DSL/NDL - Canadian Domestic Substances List/Non-Domestic Substances List  
 EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances  
 ENCS - Japan Existing and New Chemical Substances  
 IECSC - China Inventory of Existing Chemical Substances  
 KECL - Korean Existing and Evaluated Chemical Substances  
 PICCS - Philippines Inventory of Chemicals and Chemical Substances  
 AICS - Australian Inventory of Chemical Substances

#### 15.2. Chemical safety assessment

**Chemical Safety Report** No information available

### 16. Other information

#### Key or legend to abbreviations and acronyms used in the safety data sheet

##### Full text of H-Statements referred to under section 3

H226 - Flammable liquid and vapor  
 H302 - Harmful if swallowed  
 H314 - Causes severe skin burns and eye damage

#### Legend

SVHC: Substances of Very High Concern for Authorization:

#### Legend Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

|         |                             |      |                                  |
|---------|-----------------------------|------|----------------------------------|
| TWA     | TWA (time-weighted average) | STEL | STEL (Short Term Exposure Limit) |
| Ceiling | Maximum limit value         | *    | Skin designation                 |

#### Key literature references and sources for data used to compile the SDS

Agency for Toxic Substances and Disease Registry (ATSDR)  
 U.S. Environmental Protection Agency ChemView Database  
 European Food Safety Authority (EFSA)  
 EPA (Environmental Protection Agency)  
 Acute Exposure Guideline Level(s) (AEL(s))  
 U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act

U.S. Environmental Protection Agency High Production Volume Chemicals  
Food Research Journal  
Hazardous Substance Database  
International Uniform Chemical Information Database (IUCLID)  
Japan GHS Classification  
Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)  
NIOSH (National Institute for Occupational Safety and Health)  
National Library of Medicine's ChemID Plus (NLM CIP)  
National Library of Medicine's PubMed database (NLM PUBMED)  
National Toxicology Program (NTP)  
New Zealand's Chemical Classification and Information Database (CCID)  
Organization for Economic Co-operation and Development Environment, Health, and Safety Publications  
Organization for Economic Co-operation and Development High Production Volume Chemicals Program  
Organization for Economic Co-operation and Development Screening Information Data Set  
RTECS (Registry of Toxic Effects of Chemical Substances)  
World Health Organization

**Issuing Date** 07-Oct-2014

**Revision date** 15-Apr-2020

**This material safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006**

**Disclaimer**

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

**End of Safety Data Sheet**