SAFETY DATA SHEET
SILVER NITRATE LRG


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

1.1. Product identifier

<table>
<thead>
<tr>
<th>Product name</th>
<th>SILVER NITRATE LRG</th>
</tr>
</thead>
<tbody>
<tr>
<td>Product number</td>
<td>1542</td>
</tr>
<tr>
<td>REACH registration number</td>
<td>01-2119513705-43-0000</td>
</tr>
<tr>
<td>CAS number</td>
<td>7761-88-8</td>
</tr>
<tr>
<td>EU index number</td>
<td>047-001-00-2</td>
</tr>
<tr>
<td>EC number</td>
<td>231-853-9</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Identified uses</th>
<th>Laboratory reagent.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Uses advised against</td>
<td>No specific uses advised against are identified.</td>
</tr>
</tbody>
</table>

1.3. Details of the supplier of the safety data sheet

Supplier
Reagent Chemical Services
11b - 13 Aston Fields Road
Whitehouse Industrial Estate
Runcom
Cheshire WA7 3DL
T: 01928 716903 (08.30 - 17.00)
F: 01928 716425
E: info@reagent.co.uk

1.4. Emergency telephone number

Emergency telephone
OHES Environmental Ltd 24-7
Tel. 0333 333 9939 (24 hour)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (EC 1272/2008)

<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Health hazards</td>
<td>Skin Corr. 1B - H314 Eye Dam. 1 - H318</td>
</tr>
<tr>
<td>Environmental hazards</td>
<td>Aquatic Acute 1 - H400 Aquatic Chronic 1 - H410</td>
</tr>
</tbody>
</table>

2.2. Label elements

EC number
231-853-9
SILVER NITRATE LRG

Pictogram

Signal word
Danger

Hazard statements
H272 May intensify fire; oxidiser.
H290 May be corrosive to metals.
H314 Causes severe skin burns and eye damage.
H410 Very toxic to aquatic life with long lasting effects.

Precautionary statements
P220 Keep away from combustible materials.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
P273 Avoid release to the environment.
P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ 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.
P501 Dispose of contents/ container in accordance with national regulations.

Supplementary precautionary statements
P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P221 Take any precaution to avoid mixing with combustibles.
P234 Keep only in original container.
P260 Do not breathe dust.
P264 Wash hands thoroughly after handling.
P301+P330+P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P310 Immediately call a POISON CENTER/ doctor.
P321 Specific treatment (see medical advice on this label).
P370+P378 In case of fire: Use dry powder, dry sand or dry earth to extinguish.
P391 Collect spillage.
P363 Wash contaminated clothing before reuse.

2.3. Other hazards
This substance is not classified as PBT or vPvB according to current EU criteria.

SECTION 3: Composition/information on ingredients

3.1. Substances
Product name SILVER NITRATE LRG
REACH registration number 01-2119513705-43-0000
EU index number 047-001-00-2
CAS number 7761-88-8
EC number 231-853-9

SECTION 4: First aid measures

4.1. Description of first aid measures
General information Get medical attention immediately. Show this Safety Data Sheet to the medical personnel. Chemical burns must be treated by a physician.
SILVER NITRATE LRG

Inhalation
Remove affected person from source of contamination. Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. When breathing is difficult, properly trained personnel may assist affected person by administering oxygen. Place unconscious person on their side in the recovery position and ensure breathing can take place. Get medical attention.

Ingestion
Never give anything by mouth to an unconscious person. Rinse mouth thoroughly with water. Do not induce vomiting. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention immediately.

Skin contact
Take off immediately all contaminated clothing. Rinse immediately with plenty of water. Continue to rinse for at least 15 minutes and get medical attention. Chemical burns must be treated by a physician.

Eye contact
Rinse immediately with plenty of water. Remove contact lenses, if present and easy to do. Continue rinsing. Continue to rinse for at least 10 minutes. Get medical attention immediately.

Protection of first aiders
First aid personnel should wear appropriate protective equipment during any rescue.

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

General information
The severity of the symptoms described will vary dependent on the concentration and the length of exposure.

Inhalation
Symptoms following overexposure may include the following: Severe irritation of nose and throat. Corrosive to the respiratory tract.

Ingestion
May cause chemical burns in mouth, oesophagus and stomach. Severe stomach pain. Nausea, vomiting.

Skin contact
Causes severe burns. Pain or irritation. Redness.

Eye contact
Causes serious eye damage. Symptoms following overexposure may include the following: Pain. Profuse watering of the eyes. Redness.

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

Notes for the doctor
Treat symptomatically.

Specific treatments
No specific chemical antidote is known to be required after exposure to this product.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media
The product is not flammable. Use fire-extinguishing media suitable for the surrounding fire. Recommended method is to flood with plenty of water if practical and safe to do so. Do not use water jet as an extinguisher, as this will spread the fire.

Unsuitable extinguishing media
Do not use water jet as an extinguisher, as this will spread the fire.

5.2. Special hazards arising from the substance or mixture

Specific hazards
May cause or intensify fire; oxidiser. Severe corrosive hazard. Water used for fire extinguishing, which has been in contact with the product, may be corrosive.

Hazardous combustion products
Thermal decomposition or combustion products may include the following substances: Toxic and corrosive gases or vapours. Nitrous gases (NOx).

5.3. Advice for firefighters
SILVER NITRATE LRG

Protective actions during firefighting
Avoid breathing fire gases or vapours. Evacuate area. Keep upwind to avoid inhalation of gases, vapours, fumes and smoke. May cause or intensify fire; oxidiser. Cool containers exposed to heat with water spray and remove them from the fire area if it can be done without risk. Cool containers exposed to flames with water until well after the fire is out. Avoid discharge to the aquatic environment. Control run-off water by containing and keeping it out of sewers and watercourses. If risk of water pollution occurs, notify appropriate authorities.

Special protective equipment for firefighters
Regular protection may not be safe. Wear chemical protective suit. Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing. Firefighter's clothing conforming to European standard EN469 (including helmets, protective boots and gloves) will provide a basic level of protection for chemical incidents.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions
No action shall be taken without appropriate training or involving any personal risk. Keep unnecessary and unprotected personnel away from the spillage. Wear protective clothing as described in Section 8 of this safety data sheet. Follow precautions for safe handling described in this safety data sheet. Wash thoroughly after dealing with a spillage. Ensure procedures and training for emergency decontamination and disposal are in place. Do not touch or walk into spilled material. Avoid inhalation of dust. Use suitable respiratory protection if ventilation is inadequate. Avoid contact with skin and eyes. Avoid contact with contaminated tools and objects.

6.2. Environmental precautions

Environmental precautions
Avoid discharge into drains or watercourses or onto the ground. Avoid discharge to the aquatic environment. Large Spillages: Inform the relevant authorities if environmental pollution occurs (sewers, waterways, soil or air).

6.3. Methods and material for containment and cleaning up

Methods for cleaning up
Wear protective clothing as described in Section 8 of this safety data sheet. Clear up spills immediately and dispose of waste safely. Do not use sawdust or other combustible material. This product is corrosive. Approach the spillage from upwind. Collect spillage with a shovel and broom, or similar and reuse, if possible. Collect and place in suitable waste disposal containers and seal securely. Flush contaminated area with plenty of water. Wash thoroughly after dealing with a spillage. May generate heat. Dangerous for the environment. Do not empty into drains. Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority.

6.4. Reference to other sections

Reference to other sections
For personal protection, see Section 8. See Section 11 for additional information on health hazards. See Section 12 for additional information on ecological hazards. For waste disposal, see Section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Usage precautions
Read and follow manufacturer's recommendations. Wear protective clothing as described in Section 8 of this safety data sheet. Keep away from food, drink and animal feeding stuffs. Keep container tightly sealed when not in use. This product is corrosive. Immediate first aid is imperative. Avoid discharge to the aquatic environment. Do not handle until all safety precautions have been read and understood. Do not handle broken packages without protective equipment. Do not reuse empty containers.
SILVER NITRATE LRG

Advice on general occupational hygiene
Wash promptly if skin becomes contaminated. Take off contaminated clothing. Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Wash at the end of each work shift and before eating, smoking and using the toilet. Change work clothing daily before leaving workplace.

7.2. Conditions for safe storage, including any incompatibilities

Storage precautions
Store away from incompatible materials (see Section 10). Store in accordance with local regulations. Keep away from flammable and combustible materials. Keep only in the original container. Keep container tightly closed, in a cool, well ventilated place. Keep containers upright. Protect containers from damage. Store in corrosive resistant container with a resistant inner liner. Bund storage facilities to prevent soil and water pollution in the event of spillage. The storage area floor should be leak-tight, jointless and not absorbent.

Storage class
Oxidiser storage.

7.3. Specific end use(s)
Specific end use(s)
The identified uses for this product are detailed in Section 1.2.

SECTION 8: Exposure Controls/personal protection

8.1. Control parameters

Occupational exposure limits
Long-term exposure limit (8-hour TWA): WEL 0.01 As Ag mg/m³
WEL = Workplace Exposure Limit

DNEL
Workers - Inhalation; Long term systemic effects: 0.016 mg/m³
General population - Inhalation; Long term systemic effects: 0.006 mg/m³
General population - Oral; Long term systemic effects: 0.02 mg/kg/day

PNEC
- Fresh water: 0.00004 mg/l
- Marine water: 0.00086 mg/l
- STP: 0.025 mg/l
- Sediment (Freshwater): 438.13 mg/kg
- Sediment (Marinewater): 438.13 mg/kg
- Soil: 1.41 mg/kg

8.2. Exposure controls

Protective equipment
Provide adequate ventilation. Personal, workplace environment or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Use process enclosures, local exhaust ventilation or other engineering controls as the primary means to minimise worker exposure. Personal protective equipment should only be used if worker exposure cannot be controlled adequately by the engineering control measures. Ensure control measures are regularly inspected and maintained. Ensure operatives are trained to minimise exposure.

Appropriate engineering controls

Eye/face protection
Eyewear complying with an approved standard should be worn if a risk assessment indicates eye contact is possible. Personal protective equipment for eye and face protection should comply with European Standard EN166. Wear tight-fitting, chemical splash goggles or face shield. If inhalation hazards exist, a full-face respirator may be required instead.
SILVER NITRATE LRG

**Hand protection**

Chemical-resistant, impervious gloves complying with an approved standard should be worn if a risk assessment indicates skin contact is possible. To protect hands from chemicals, gloves should comply with European Standard EN374. Considering the data specified by the glove manufacturer, check during use that the gloves are retaining their protective properties and change them as soon as any deterioration is detected. The selected gloves should have a breakthrough time of at least 8 hours. It is recommended that gloves are made of the following material: Butyl rubber. Nitrile rubber. Thickness: ≤ 0.2 mm The most suitable glove should be chosen in consultation with the glove supplier/manufacturer, who can provide information about the breakthrough time of the glove material. Frequent changes are recommended.

**Other skin and body protection**

Appropriate footwear and additional protective clothing complying with an approved standard should be worn if a risk assessment indicates skin contamination is possible.

**Hygiene measures**

Provide eyewash station and safety shower. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reuse. Clean equipment and the work area every day. Good personal hygiene procedures should be implemented. Wash at the end of each work shift and before eating, smoking and using the toilet. When using do not eat, drink or smoke. Preventive industrial medical examinations should be carried out. Warn cleaning personnel of any hazardous properties of the product.

**Respiratory protection**

Respiratory protection complying with an approved standard should be worn if a risk assessment indicates inhalation of contaminants is possible. Ensure all respiratory protective equipment is suitable for its intended use and is ‘CE’-marked. Check that the respirator fits tightly and the filter is changed regularly. Gas and combination filter cartridges should comply with European Standard EN14387. Full face mask respirators with replaceable filter cartridges should comply with European Standard EN136. Half mask and quarter mask respirators with replaceable filter cartridges should comply with European Standard EN140.

**Environmental exposure controls**

Keep container tightly sealed when not in use. Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

### SECTION 9: Physical and Chemical Properties

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

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Crystalline solid.</td>
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<tr>
<td>Colour</td>
<td>Colourless</td>
</tr>
<tr>
<td>Odour</td>
<td>Odourless</td>
</tr>
<tr>
<td>Odour threshold</td>
<td>Not determined</td>
</tr>
<tr>
<td>pH</td>
<td>pH (concentrated solution): ~7</td>
</tr>
<tr>
<td>Melting point</td>
<td>212°C</td>
</tr>
<tr>
<td>Initial boiling point and range</td>
<td>Not determined</td>
</tr>
<tr>
<td>Flash point</td>
<td>Scientifically unjustified.</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>Not determined</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>No specific test data are available.</td>
</tr>
<tr>
<td>Upper/lower flammability or explosive limits</td>
<td>No specific test data are available.</td>
</tr>
<tr>
<td>Vapour pressure</td>
<td>Scientifically unjustified.</td>
</tr>
<tr>
<td>Vapour density</td>
<td>Not determined</td>
</tr>
</tbody>
</table>
SILVER NITRATE LRG

Relative density 4.35 @ 20°C
Solubility(ies) > 710 g/l water @ 25°C
Partition coefficient Scientifically unjustified.
Auto-ignition temperature Scientifically unjustified.
Decomposition Temperature ~440°C
Viscosity Scientifically unjustified.
Explosive properties Scientifically unjustified. Not considered to be explosive.
Oxidising properties Ox. Sol. 1 (mean burning time < that of a 3:2 mixture, by mass of potassium bromate and cellulose).

9.2. Other information
Other information None.
Molecular weight 169.87

SECTION 10: Stability and reactivity

10.1. Reactivity
Reactivity The following materials may react with the product: Reducing agents. Ammonia Flammable/combustible materials.

10.2. Chemical stability
Stability Stable at normal ambient temperatures and when used as recommended. Stable under the prescribed storage conditions.

10.3. Possibility of hazardous reactions
Possibility of hazardous reactions May generate heat. Will not polymerise.

10.4. Conditions to avoid
Conditions to avoid Avoid heat. Freezing. Avoid generation and spreading of dust. Avoid the accumulation of dust. Avoid contact with the following materials: Reducing agents.

10.5. Incompatible materials
Materials to avoid Reducing agents. Flammable/combustible materials. May be corrosive to metals.

10.6. Hazardous decomposition products
Hazardous decomposition products Does not decompose when used and stored as recommended.

SECTION 11: Toxicological information

11.1. Information on toxicological effects
Toxicological effects The toxicity of this substance has been assessed during REACH registration.
Acute toxicity - oral Notes (oral LD₅₀) Based on available data the classification criteria are not met. LD₅₀ >2000 mg/kg, Oral, Rat
Acute toxicity - dermal Notes (dermal LD₅₀) Based on available data the classification criteria are not met. LD₅₀ >2000 mg/kg, Dermal, Rat
Acute toxicity - inhalation
SILVER NITRATE LRG

Notes (inhalation LC₅₀)  Based on available data the classification criteria are not met. LC50 >750µg/m³ @ 4hrs , Inhalation, Rat

Skin corrosion/irritation  Corrosive to skin.

Animal data  Skin Corr. 1B - H314 Causes severe burns.

Serious eye damage/irritation  Eye Dam. 1 - H318 Corrosive to skin. Corrosivity to eyes is assumed.

Respiratory sensitisation  Based on available data the classification criteria are not met.

Skin sensitisation  Based on available data the classification criteria are not met.

Germ cell mutagenicity  Based on available data the classification criteria are not met.

Genotoxicity - in vitro  Based on available data the classification criteria are not met.

Genotoxicity - in vivo  Based on available data the classification criteria are not met.

Carcinogenicity  Based on available data the classification criteria are not met.

IARC carcinogenicity  None of the ingredients are listed or exempt.

Reproductive toxicity  Based on available data the classification criteria are not met.

Specific target organ toxicity - single exposure  Not classified as a specific target organ toxicant after a single exposure.

Specific target organ toxicity - repeated exposure  Not classified as a specific target organ toxicant after repeated exposure.

Aspiration hazard  Not relevant. Solid.

General information  The severity of the symptoms described will vary dependent on the concentration and the length of exposure.

Inhalation  Severe irritation of nose and throat. Symptoms following overexposure may include the following: Corrosive to the respiratory tract. Chemical burns.

Ingestion  Nausea, vomiting. Severe stomach pain. Symptoms following overexposure may include the following: May cause chemical burns in mouth, oesophagus and stomach.

Skin contact  Pain or irritation. Redness. Symptoms following overexposure may include the following: Causes severe burns. Blistering may occur.

Eye contact  Causes serious eye damage. Symptoms following overexposure may include the following: Pain. Profuse watering of the eyes. Redness.

Route of entry  Ingestion Inhalation Skin and/or eye contact

Target organs  No specific target organs known.
**SECTION 12: Ecological Information**

**Ecotoxicity**

Very toxic to aquatic life with long lasting effects.

**12.1. Toxicity**

**Toxicity**

Aquatic Acute 1 - H400 Very toxic to aquatic life. Aquatic Chronic 1 - H410 Very toxic to aquatic life with long lasting effects.

**Acute aquatic toxicity**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>LE(C)₅₀</td>
<td>0.0001 &lt; L(E)C50 ≤ 0.001</td>
</tr>
<tr>
<td>M factor (Acute)</td>
<td>1000</td>
</tr>
</tbody>
</table>

**Acute toxicity - fish**

LC₅₀, 96 hours: 0.00012 mg/l, Pimephales promelas (Fat-head Minnow)

**Acute toxicity - aquatic invertebrates**

LC₅₀, 48 hours: 0.00022 mg/l, Daphnia magna

**Acute toxicity - microorganisms**

NOEC, : 0.025 mg/l,

**Chronic aquatic toxicity**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>M factor (Chronic)</td>
<td>100</td>
</tr>
</tbody>
</table>

**Chronic toxicity - fish early life stage**

EC₀, 217 days: 0.19 µg/L,

**Chronic toxicity - aquatic invertebrates**

, 21 days: EC10 = 2.14µg/L Silver, Daphnia magna

**12.2. Persistence and degradability**

**Persistence and degradability**

The product contains inorganic substances which are not biodegradable.

**Stability (hydrolysis)**

Scientifically unjustified.

**12.3. Bioaccumulative potential**

**Bioaccumulative potential**

BCF: ~ 70, Cyprinus carpio (Common carp)

**Partition coefficient**

Scientifically unjustified.

**12.4. Mobility in soil**

**Mobility**

The product is water-soluble and may spread in water systems.

**Adsorption/desorption coefficient**

Soil - : Kd = 4023 L/kg (Median) @ °C

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

**Results of PBT and vPvB assessment**

This substance is not classified as PBT or vPvB according to current EU criteria.

**12.6. Other adverse effects**

**Other adverse effects**

None known.

**SECTION 13: Disposal considerations**

**13.1. Waste treatment methods**
GENERAL INFORMATION

The generation of waste should be minimised or avoided wherever possible. Reuse or recycle products wherever possible. This material and its container must be disposed of in a safe way. Disposal of this product, process solutions, residues and by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any local authority requirements. When handling waste, the safety precautions applying to handling of the product should be considered. Care should be taken when handling emptied containers that have not been thoroughly cleaned or rinsed out. Empty containers or liners may retain some product residues and hence be potentially hazardous.

DISPOSAL METHODS

Do not empty into drains. Dispose of surplus products and those that cannot be recycled via a licensed waste disposal contractor. Waste, residues, empty containers, discarded work clothes and contaminated cleaning materials should be collected in designated containers, labelled with their contents. Incineration or landfill should only be considered when recycling is not feasible.

SECTION 14: TRANSPORT INFORMATION

GENERAL

For limited quantity packaging/limited load information, consult the relevant modal documentation using the data shown in this section.

14.1. UN NUMBER

UN No. (ADR/RID) 1493
UN No. (IMDG) 1493
UN No. (ICAO) 1493
UN No. (ADN) 1493

14.2. UN PROPER SHIPPING NAME

Proper shipping name (ADR/RID) SILVER NITRATE
Proper shipping name (IMDG) SILVER NITRATE
Proper shipping name (ICAO) SILVER NITRATE
Proper shipping name (ADN) SILVER NITRATE

14.3. TRANSPORT HAZARD CLASS(ES)

ADR/RID class 5.1
ADR/RID classification code O2
ADR/RID label 5.1
IMDG class 5.1
ICAO class/division 5.1
ADN class 5.1

Transport labels

14.4. PACKING GROUP

ADR/RID packing group II
IMDG packing group II
SILVER NITRATE LRG

ADN packing group  II
ICAO packing group  II

14.5. Environmental hazards
Environmentally hazardous substance/marine pollutant

14.6. Special precautions for user
Always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

EmS  F-A, S-Q
ADR transport category  2
Hazard Identification Number (ADR/RID)  50
Tunnel restriction code (E)

14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not applicable.

SECTION 15: Regulatory information

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

National regulations
Health and Safety at Work etc. Act 1974 (as amended).
The Carriage of Dangerous Goods and Use of Transportable Pressure Equipment Regulations 2009 (SI 2009 No. 1348) (as amended) ["CDG 2009"].
EH40/2005 Workplace exposure limits.

EU legislation

Authorisations (Title VII Regulation 1907/2006)
No specific authorisations are known for this product.

Restrictions (Title VIII Regulation 1907/2006)
No specific restrictions on use are known for this product.

15.2. Chemical safety assessment
No chemical safety assessment has been carried out.

Inventories
EU - EINECS/ELINCS
None of the ingredients are listed or exempt.

SECTION 16: Other information
SILVER NITRATE LRG

Abbreviations and acronyms used in the safety data sheet
ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road.
ADN: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways.
RID: European Agreement concerning the International Carriage of Dangerous Goods by Rail.
IATA: International Air Transport Association.
IMDG: International Maritime Dangerous Goods.
CAS: Chemical Abstracts Service.
ATE: Acute Toxicity Estimate.
LC₅₀: Lethal Concentration to 50 % of a test population.
LD₅₀: Lethal Dose to 50% of a test population (Median Lethal Dose).
EC₅₀: 50% of maximal Effective Concentration.
PBT: Persistent, Bioaccumulative and Toxic substance.
vPvB: Very Persistent and Very Bioaccumulative.

Classification abbreviations and acronyms
Met. Corr. = Corrosive to metals
Ox. Sol. = Oxidising solid
Eye Dam. = Serious eye damage
Skin Corr. = Skin corrosion
Aquatic Acute = Hazardous to the aquatic environment (acute)
Aquatic Chronic = Hazardous to the aquatic environment (chronic)

General information
This datasheet is not intended to be a replacement for a full risk assessment, these should always be carried out by competent persons.

Key literature references and sources for data

Classification procedures according to Regulation (EC) 1272/2008

Training advice
Only trained personnel should use this material.

Revision comments
Full revision

Revision date
10/12/2018

Revision
3

Supersedes date
06/12/2010

SDS number
20642

Hazard statements in full
H272 May intensify fire; oxidiser.
H290 May be corrosive to metals.
H314 Causes severe skin burns and eye damage.
H318 Causes serious eye damage.
H400 Very toxic to aquatic life.
H410 Very toxic to aquatic life with long lasting effects.

This 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. Such information is, to the best of the company's knowledge and belief, accurate and reliable as of the date indicated. However, no warranty, guarantee or representation is made to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability of such information for his own particular use.