

SAFETY DATA SHEET
HYDROCHLORIC ACID 2M

According to Regulation (EC) No 1907/2006, Annex II, as amended. Commission Regulation (EU) No 2015/830 of 28 May 2015.

SECTION 1: Identification of the substance/mixture and of the company/undertaking**1.1. Product identifier****Product name** HYDROCHLORIC ACID 2M**Product number** 1041**1.2. Relevant identified uses of the substance or mixture and uses advised against****Identified uses** Laboratory reagent.**Uses advised against** No specific uses advised against are identified.**1.3. Details of the supplier of the safety data sheet****Supplier**Reagent Chemical Services
11b - 13 Aston Fields Road
Whitehouse Industrial Estate
Runcorn
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)****Physical hazards** Met. Corr. 1 - H290**Health hazards** Not Classified**Environmental hazards** Not Classified**2.2. Label elements****Pictogram****Signal word** Warning**Hazard statements** H290 May be corrosive to metals.**Precautionary statements** P234 Keep only in original container.
P390 Absorb spillage to prevent material damage.

HYDROCHLORIC ACID 2M

2.3. Other hazards

This product does not contain any substances classified as PBT or vPvB.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

HYDROCHLORIC ACID ...%		5-10%
CAS number: 7647-01-0	EC number: 231-595-7	REACH registration number: 01-2119484862-27-0000

Classification

Met. Corr. 1 - H290
 Skin Corr. 1B - H314
 Eye Dam. 1 - H318
 STOT SE 3 - H335

The Full Text for all R-Phrases and Hazard Statements are Displayed in Section 16.

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.
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. Maintain an open airway. Loosen tight clothing such as collar, tie or belt. 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.
Ingestion	Rinse mouth thoroughly with water. Remove any dentures. Stop if the affected person feels sick as vomiting may be dangerous. Do not induce vomiting unless under the direction of medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Never give anything by mouth to an unconscious person. Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. Place unconscious person on their side in the recovery position and ensure breathing can take place. Maintain an open airway. Loosen tight clothing such as collar, tie or belt.
Skin contact	Rinse with water.
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.
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	See Section 11 for additional information on health hazards. The severity of the symptoms described will vary dependent on the concentration and the length of exposure.
Inhalation	Prolonged inhalation of high concentrations may damage respiratory system.
Ingestion	Gastrointestinal symptoms, including upset stomach. Ingestion may cause severe irritation of the mouth, the oesophagus and the gastrointestinal tract. Nausea, vomiting.
Skin contact	May cause irritation. Prolonged contact may cause dryness of the skin.
Eye contact	May cause temporary eye irritation.

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

HYDROCHLORIC ACID 2M

Notes for the doctor Treat symptomatically.

Specific treatments Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media The product is not flammable. Extinguish with alcohol-resistant foam, carbon dioxide, dry powder or water fog. Use fire-extinguishing media suitable for the surrounding 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

Hazardous combustion products Thermal decomposition or combustion products may include the following substances: Harmful gases or vapours. Chlorine.

5.3. Advice for firefighters

Protective actions during firefighting Avoid breathing fire gases or vapours. Evacuate area. 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. If a leak or spill has not ignited, use water spray to disperse vapours and protect men stopping the leak. 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 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.

For emergency responders Wear protective clothing as described in Section 8 of this safety data sheet. Wash thoroughly after dealing with a spillage.

6.2. Environmental precautions

Environmental precautions 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

HYDROCHLORIC ACID 2M

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. Approach the spillage from upwind. Small Spillages: If the product is soluble in water, dilute the spillage with water and mop it up. Alternatively, or if it is not water-soluble, absorb the spillage with an inert, dry material and place it in a suitable waste disposal container. Large Spillages: If leakage cannot be stopped, evacuate area. Flush spilled material into an effluent treatment plant, or proceed as follows. Contain and absorb spillage with sand, earth or other non-combustible material. Place waste in labelled, sealed containers. Clean contaminated objects and areas thoroughly, observing environmental regulations. The contaminated absorbent may pose the same hazard as the spilled material. Flush contaminated area with plenty of water. Wash thoroughly after dealing with a spillage. The requirements of the local water authority must be complied with if contaminated water is flushed directly to the sewer. 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. Handle all packages and containers carefully to minimise spills. Keep container tightly sealed when not in use. Avoid the formation of mists. 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.

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. Store away from the following materials: Alkalis. Keep only in the original container. Keep container tightly closed, in a cool, well ventilated place. Keep containers upright. Protect containers from damage. 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

Chemical 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

HYDROCHLORIC ACID ...%

Long-term exposure limit (8-hour TWA): WEL 1 ppm 2 mg/m³ gas and aerosol mists

Short-term exposure limit (15-minute): WEL 5 ppm 8 mg/m³ gas and aerosol mists

WEL = Workplace Exposure Limit

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HYDROCHLORIC ACID ...% (CAS: 7647-01-0)

DNEL

Workers - Inhalation; Long term local effects: 8 mg/m³

Workers - Inhalation; Short term local effects: 15 mg/m³

General population - Inhalation; Long term local effects: 8 mg/m³

General population - Inhalation; Short term local effects: 15 mg/m³

8.2. Exposure controls

Protective equipment



Appropriate engineering controls

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.

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. Unless the assessment indicates a higher degree of protection is required, the following protection should be worn: Tight-fitting safety glasses.

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. Frequent changes are recommended. It is recommended that gloves are made of the following material: Nitrile rubber. Butyl rubber. The breakthrough time for any glove material may be different for different glove manufacturers. 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.

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. Gas filter, type E.

Environmental exposure controls

Keep container tightly sealed when not in use.

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SECTION 9: Physical and Chemical Properties

9.1. Information on basic physical and chemical properties

Appearance	Liquid.
Colour	Colourless.
Odour	Pungent.
pH	pH (concentrated solution): 1
Melting point	Not determined.
Initial boiling point and range	Not determined.
Flash point	Scientifically unjustified.
Evaporation rate	Not determined.
Evaporation factor	Not determined.
Flammability (solid, gas)	Technical impossibility to obtain the data.
Upper/lower flammability or explosive limits	Not relevant.
Vapour pressure	Not determined.
Vapour density	Not determined.
Relative density	~ 1.0 - 1.05 @ 20°C
Bulk density	Not relevant.
Solubility(ies)	Miscible with water.
Partition coefficient	No specific test data are available.
Auto-ignition temperature	Not relevant.
Decomposition Temperature	No specific test data are available.
Viscosity	Not determined.
Explosive properties	Not considered to be explosive.
Explosive under the influence of a flame	No
Oxidising properties	Does not meet the criteria for classification as oxidising.
Comments	Information given is applicable to the product as supplied.

9.2. Other information

Other information	None.
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SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity	May be corrosive to metals. The following materials may react with the product: Alkalis. Oxidising agents.
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10.2. Chemical stability

Stability	Stable at normal ambient temperatures and when used as recommended. Stable under the prescribed storage conditions.
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HYDROCHLORIC ACID 2M

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 excessive heat for prolonged periods of time. Avoid contact with incompatible materials stated in section 10.5.

10.5. Incompatible materials

Materials to avoid Alkalis. Amines. Mild steel. Aluminium. May be corrosive to metals. Sulphides Cyanides

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

Acute toxicity - oral

Notes (oral LD₅₀) Based on available data the classification criteria are not met.

Acute toxicity - dermal

Notes (dermal LD₅₀) Based on available data the classification criteria are not met.

Acute toxicity - inhalation

Notes (inhalation LC₅₀) Based on available data the classification criteria are not met.

Skin corrosion/irritation

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

Extreme pH ≤ 2 Corrosive.

Serious eye damage/irritation

Serious eye damage/irritation Based on available data the classification criteria are not met.

Respiratory sensitisation

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

Skin sensitisation

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

Germ cell mutagenicity

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

Carcinogenicity

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

IARC carcinogenicity

None of the ingredients are listed or exempt.

Reproductive toxicity

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

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

Specific target organ toxicity - single exposure

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

Specific target organ toxicity - repeated exposure

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STOT - repeated exposure	Not classified as a specific target organ toxicant after repeated exposure.
<u>Aspiration hazard</u>	
Aspiration hazard	Based on available data the classification criteria are not met.
General information	The severity of the symptoms described will vary dependent on the concentration and the length of exposure.
Inhalation	Prolonged inhalation of high concentrations may damage respiratory system.
Ingestion	Gastrointestinal symptoms, including upset stomach. Nausea, vomiting. May cause irritation.
Skin contact	Prolonged contact may cause dryness of the skin.
Eye contact	May cause temporary eye irritation.
Route of entry	Ingestion Inhalation Skin and/or eye contact
Target organs	No specific target organs known.

HYDROCHLORIC ACID ...%

Toxicological effects	The toxicity of this substance has been assessed during REACH registration.
<u>Acute toxicity - oral</u>	
Notes (oral LD₅₀)	Scientifically unjustified. REACH dossier information.
<u>Acute toxicity - dermal</u>	
Notes (dermal LD₅₀)	Scientifically unjustified. REACH dossier information.
<u>Acute toxicity - inhalation</u>	
Acute toxicity inhalation (LC₅₀ dust/mist mg/l)	8.3
Species	Rat
Notes (inhalation LC₅₀)	REACH dossier information.
<u>Skin corrosion/irritation</u>	
Animal data	Corrosive to skin. REACH dossier information.
<u>Serious eye damage/irritation</u>	
Serious eye damage/irritation	Causes serious eye damage. REACH dossier information.
<u>Respiratory sensitisation</u>	
Respiratory sensitisation	Scientifically unjustified.
<u>Skin sensitisation</u>	
Skin sensitisation	Not sensitising. REACH dossier information.
<u>Germ cell mutagenicity</u>	
Genotoxicity - in vitro	Negative. REACH dossier information.
Genotoxicity - in vivo	No specific test data are available. REACH dossier information.
<u>Carcinogenicity</u>	
Carcinogenicity	NOAEL <10 ppm, Inhalation, Rat

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Reproductive toxicity

Reproductive toxicity - fertility Scientifically unjustified. REACH dossier information.

Reproductive toxicity - development This substance has no evidence of toxicity to reproduction.

Specific target organ toxicity - single exposure

STOT - single exposure No specific test data are available.

Specific target organ toxicity - repeated exposure

STOT - repeated exposure No specific test data are available.

Aspiration hazard

Aspiration hazard Not anticipated to present an aspiration hazard, based on chemical structure.

General information Corrosive to skin.

Inhalation Irritating to respiratory system.

Ingestion Corrosive. Small amounts may cause serious damage.

Skin contact Causes burns.

Eye contact This product is strongly corrosive. Causes serious eye damage.

SECTION 12: Ecological Information

Ecotoxicity The product may affect the acidity (pH) of water which may have hazardous effects on aquatic organisms.

HYDROCHLORIC ACID ...%

Ecotoxicity The product may affect the acidity (pH) of water which may have hazardous effects on aquatic organisms.

12.1. Toxicity

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

Chronic toxicity - fish early life stage Not available.
No supplied or registered information

HYDROCHLORIC ACID ...%

Acute toxicity - fish LC₅₀, 96 hours: pH 3.5 - 3.25 , Lepomis macrochirus (Bluegill)

Acute toxicity - aquatic invertebrates EC₅₀, 48 hours: pH 4.92 , Daphnia magna

Acute toxicity - aquatic plants EC₅₀, 72 hours: pH 4.7 , Freshwater algae

Acute toxicity - microorganisms EC₅₀, 3 hours: pH 5 - 5.5 , Activated sludge

Acute toxicity - terrestrial Not available.

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Chronic toxicity - fish early life stage	Not determined.
Short term toxicity - embryo and sac fry stages	Not determined.
Chronic toxicity - aquatic invertebrates	Scientifically unjustified.

12.2. Persistence and degradability

Persistence and degradability The product contains inorganic substances which are not biodegradable.

HYDROCHLORIC ACID ...%

Persistence and degradability	The product is expected to be biodegradable.
Phototransformation	Not relevant. Substance is inorganic.
Stability (hydrolysis)	Not relevant.
Biodegradation	Scientifically unjustified.
Biological oxygen demand	Not relevant.
Chemical oxygen demand	Not relevant.

12.3. Bioaccumulative potential

Bioaccumulative potential No data available on bioaccumulation.

Partition coefficient No specific test data are available.

HYDROCHLORIC ACID ...%

Bioaccumulative potential	The product is not bioaccumulating.
Partition coefficient	Scientifically unjustified.

12.4. Mobility in soil

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

HYDROCHLORIC ACID ...%

Mobility	The product is miscible with water and may spread in water systems.
Adsorption/desorption coefficient	Scientifically unjustified.
Henry's law constant	Not determined.
Surface tension	Scientifically unjustified.

12.5. Results of PBT and vPvB assessment

Results of PBT and vPvB assessment This product does not contain any substances classified as PBT or vPvB.

HYDROCHLORIC ACID ...%

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Results of PBT and vPvB assessment This product does not contain any substances classified as PBT or vPvB.

12.6. Other adverse effects

Other adverse effects None known.

HYDROCHLORIC ACID ...%

Other adverse effects Not determined.

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)	1789
UN No. (IMDG)	1789
UN No. (ICAO)	1789
UN No. (ADN)	1789

14.2. UN proper shipping name

Proper shipping name (ADR/RID)	HYDROCHLORIC ACID
Proper shipping name (IMDG)	HYDROCHLORIC ACID
Proper shipping name (ICAO)	HYDROCHLORIC ACID
Proper shipping name (ADN)	HYDROCHLORIC ACID

14.3. Transport hazard class(es)

ADR/RID class	8
ADR/RID classification code	C1
ADR/RID label	8
IMDG class	8

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ICAO class/division 8

ADN class 8

Transport labels



14.4. Packing group

ADR/RID packing group III

IMDG packing group III

ADN packing group III

ICAO packing group III

14.5. Environmental hazards

Environmentally hazardous substance/marine pollutant

No.

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-B

ADR transport category 3

Hazard Identification Number (ADR/RID) 80

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	Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) (as amended). Commission Regulation (EU) No 2015/830 of 28 May 2015. Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures (as amended).
Authorisations (Title VII Regulation 1907/2006)	No specific authorisations are known for this product.

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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

Abbreviations and acronyms used in the safety data sheet	<p>ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road.</p> <p>ADN: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways.</p> <p>RID: European Agreement concerning the International Carriage of Dangerous Goods by Rail.</p> <p>IATA: International Air Transport Association.</p> <p>ICAO-TI: Technical Instructions for the Safe Transport of Dangerous Goods by Air.</p> <p>IMDG: International Maritime Dangerous Goods.</p> <p>CAS: Chemical Abstracts Service.</p> <p>ATE: Acute Toxicity Estimate.</p> <p>LC₅₀: Lethal Concentration to 50 % of a test population.</p> <p>LD₅₀: Lethal Dose to 50% of a test population (Median Lethal Dose).</p> <p>EC₅₀: 50% of maximal Effective Concentration.</p> <p>PBT: Persistent, Bioaccumulative and Toxic substance.</p> <p>vPvB: Very Persistent and Very Bioaccumulative.</p>
Classification abbreviations and acronyms	Met. Corr. = Corrosive to metals
General information	Only trained personnel should use this material.
Key literature references and sources for data	Source: European Chemicals Agency, http://echa.europa.eu/
Classification procedures according to Regulation (EC) 1272/2008	Met. Corr. 1 - H290: : Expert judgement.
Training advice	Only trained personnel should use this material.
Revision date	17/12/2019
Revision	5
Supersedes date	20/10/2017
SDS number	11777
SDS status	Approved.
Hazard statements in full	<p>H290 May be corrosive to metals.</p> <p>H314 Causes severe skin burns and eye damage.</p> <p>H318 Causes serious eye damage.</p> <p>H335 May cause respiratory irritation.</p>

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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.