

SAFETY DATA SHEET SILVER NITRATE 0.1M

According to Regulation (EC) No 1907/2006, Annex II

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

1.1. Product identifier

Product name SILVER NITRATE 0.1M

Product number 1081

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

Identified uses Laboratory chemicals General chemical reagent

Uses advised against Processes that would lead to over-exposure of the operators. Any use other than the intended application.

1.3. Details of the supplier of the safety data sheet

Supplier

Reagent Chemical Services
 18 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 Skin Irrit. 2 - H315 Eye Irrit. 2 - H319

Environmental hazards Aquatic Acute 1 - H400 Aquatic Chronic 1 - H410

Classification (67/548/EEC or 1999/45/EC) N;R50/53.

Human health The product is irritating to eyes and skin. Inhalation of vapours or spray mists may irritate the throat and respiratory system.

Environmental The product is classed as very toxic to aquatic organisms and may cause long term adverse effects in the aquatic environment. The product is miscible with water and can spread in water systems.

Physicochemical May corrode metal surfaces on prolonged or repeated contact.

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2.2. Label elements

Pictogram



Signal word

Warning

Hazard statements

H290 May be corrosive to metals.
 H315 Causes skin irritation.
 H319 Causes serious eye irritation.
 H410 Very toxic to aquatic life with long lasting effects.

Precautionary statements

P273 Avoid release to the environment.
 P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
 P302+P352 IF ON SKIN: Wash with plenty of water.
 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

P234 Keep only in original container.
 P264 Wash contaminated skin thoroughly after handling.
 P321 Specific treatment (see medical advice on this label).
 P332+P313 If skin irritation occurs: Get medical advice/ attention.
 P337+P313 If eye irritation persists: Get medical advice/ attention.
 P362+P364 Take off contaminated clothing and wash it before reuse.
 P390 Absorb spillage to prevent material damage.
 P391 Collect spillage.
 P406 Store in corrosive resistant container with a resistant inner liner.

2.3. Other hazards

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

SECTION 3: Composition/information on ingredients

3.2. Mixtures

SILVER NITRATE		1-5%
CAS number: 7761-88-8	EC number: 231-853-9	REACH registration number: 01-2119513705-43-0000
M factor (Acute) = 1000	M factor (Chronic) = 100	
Classification	Classification (67/548/EEC or 1999/45/EC)	
Ox. Sol. 2 - H272	O;R8 C;R34 N;R50/53	
Skin Corr. 1B - H314		
Eye Dam. 1 - H318		
Aquatic Acute 1 - H400		
Aquatic Chronic 1 - H410		

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

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General information	CAUTION! First aid personnel must be aware of own risk during rescue! Always consider any dangers in the vicinity before approaching to treat the casualty. First aid personnel must protect themselves with all necessary personal protective equipment during the assistance of casualties. When breathing is difficult, properly trained personnel may assist the casualty by administering oxygen. Place unconscious person on the side in the recovery position and ensure breathing can take place. Never give anything by mouth to an unconscious person. If breathing has stopped perform CPR. Check airway for any blockages. If medical assistance is needed take as much detail as possible about the incident and hazardous materials involved with the casualty.
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. Get medical attention if any discomfort continues.
Ingestion	Rinse mouth thoroughly with water DO NOT induce vomiting. Get medical attention immediately.
Skin contact	Immediately remove contaminated clothing and wash before re-use. Rinse immediately with plenty of water. Get medical attention if any discomfort continues.
Eye contact	Promptly wash eyes with plenty of water or eye wash solution while lifting the eyelids. If possible remove any contact lenses and continue to wash. Get medical attention immediately.

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	Acute: Irritation of the respiratory system. Coughing. Delayed: May cause pulmonary edema.
Ingestion	Acute: Irritation of the digestive tract. Nausea, vomiting.
Skin contact	Acute: Irritating to skin Delayed: May produce dermatitis.
Eye contact	Acute: Irritating to eyes. Symptoms following overexposure may include the following: Redness. Pain. Delayed: May cause damage to the eyes. May cause conjunctivitis

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

Notes for the doctor	Have facilities in place to wash skin and eyes in case of exposure. Cases of eye contact and ingestion should be treated immediately.
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SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	The product is non-combustible. Use fire-extinguishing media suitable for the surrounding fire. Water spray, dry powder, carbon dioxide or alcohol resistant foam.
Unsuitable extinguishing media	Do not use water jet as this can spread the fire. Do not use carbon dioxide in enclosed spaces with insufficient ventilation. Do not apply water directly to sulphuric acid, this can have a violent and exothermic reaction.

5.2. Special hazards arising from the substance or mixture

Specific hazards	In case of fire, toxic and corrosive vapours or fumes may be formed. Product containers can melt in the heat of a fire. Packaging materials will be combustible and provide fuel for the fire.
Hazardous combustion products	The product is not combustible but can decompose in the event of a fire to produce toxic and corrosive gases, fumes and vapours. Nitrous gases (NOx).

5.3. Advice for firefighters

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Protective actions during firefighting	Evacuate and keep non-emergency personnel away from the fire area until it is properly extinguished with no danger of re-ignition. Be aware of dangers from other hazardous substances in the immediate area. Prevent run-off from entering drains and watercourses.
Special protective equipment for firefighters	Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions	The following is given as general advice, precautions and procedures should reflect the extent of a spillage and the situation. Have emergency procedures in place for treating spillages, evacuating the area and informing the emergency services if necessary. Avoid ingestion, inhalation of vapours and contact with skin and eyes. Spill control personnel should wear personal protective clothing and equipment as described in section 8 of this datasheet. Non-emergency personnel should be kept away from the area of spillage.
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6.2. Environmental precautions

Environmental precautions	Avoid unauthorised discharge to the environment. Do not discharge into drains or watercourses or onto the ground. Clean up any spillages immediately, prevent material from spreading and entering drains or sewage systems. If spillages to land cannot be treated safely or if contamination will occur the Environment Agency must be alerted immediately. Large spillages or uncontrolled discharge to water systems must be alerted to the Environmental Agency or other regulatory body. If the product has entered a foul drain or sewage system in significant amounts to cause a hazard then the local water treatment company must be informed.
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6.3. Methods and material for containment and cleaning up

Methods for cleaning up	Small spillages should be absorbed with an inert, non-combustible absorbent. Large Spillages: Dam and absorb spillages with sand, earth or other inert material. Fit drain covers where they are available if the spillage is likely to enter the drainage system. Collect and place in suitable waste disposal containers and seal securely. For waste disposal, see Section 13. Containers with collected spillage must be properly labelled with correct contents and hazard symbol. Flush contaminated area with plenty of water. Take care as floors and other surfaces may become slippery. Wash thoroughly after dealing with a spillage.
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6.4. Reference to other sections

Reference to other sections	Refer to sections 8 and 13 for additional information.
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SECTION 7: Handling and storage

7.1. Precautions for safe handling

Usage precautions	Avoid spilling the product. Avoid ingestion of the product, inhalation of any vapours/mists when produced and contact with skin and eyes. Do not eat, drink or smoke when handling. Wash at the end of each work shift, before eating, drinking, smoking and using the toilet. Do not mix with incompatible substances or mixtures. Remove contaminated clothing/footwear/equipment before entering eating areas or places that would expose others to the product. Do not use in areas close to drainage systems unless measures are in place to prevent access of product. Ensure emergency procedures are in place to treat spillages and cope with other situations such as evacuation.
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7.2. Conditions for safe storage, including any incompatibilities

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Storage precautions	If the product is transferred to another container, this should be made of a compatible material that will not be affected preferably plastic or glass. Do not use metal containers. The packaging manufacturer will advise on suitable packaging. Store in a stable situation to avoid spillages. It is advisable to store in a bunded area or use other protective measures such as a sump pallet or storage tray. Store away from heat, direct sunlight and moisture. Avoid extreme temperatures, advisable to store between 5 and 30 C.
Storage class	Corrosive storage.
7.3. Specific end use(s)	
Specific end use(s)	The identified uses for this product are detailed in Section 1.2.
Usage description	Use product under conditions described in this datasheet. Avoid exposure of operators and others who may be affected by its use. Avoid overuse of the product which would create waste and potential spillages. Always use recommended personal protective equipment. Only use the product for its intended use in a safe manner, do not use for other purposes.

SECTION 8: Exposure Controls/personal protection

8.1. Control parameters

Occupational exposure limits

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Long-term exposure limit (8-hour TWA): WEL 0.01 As Ag mg/m³

WEL = Workplace Exposure Limit

Biological limit values	No information available., No information available., No information available.
DNEL	Industry - Inhalation; Long term systemic effects: 0.016 (Silver Nitrate) mg/m ³ No information available for DNEL of the mixture. Consumer - Oral; Long term systemic effects: 0.031 (Silver Nitrate) mg/kg/day Consumer - Inhalation; Long term systemic effects: 0.0063 (Silver Nitrate) mg/m ³
PNEC	- Fresh water; 0.04 µg/L (Silver Nitrate) Industry - Dermal; Long term systemic effects 22 mg/kg/day No information available for the mixture. - Marine water; 0.86 µg/L (Silver Nitrate) mg/l - STP; 0.025 mg/L (Silver Nitrate) mg/l - Sediment (Freshwater); 438.13 mg/kg (Silver Nitrate) mg/kg - Sediment (Marinewater); 438.13 mg/kg (Silver Nitrate) mg/kg - Soil; 0.794 mg/kg (Silver Nitrate)

SILVER NITRATE (CAS: 7761-88-8)

DNEL	Workers - Inhalation; Long term systemic effects: 0.016 mg/m ³ General population - Inhalation; Long term systemic effects: 0.006 mg/m ³ 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

Appropriate engineering controls	Provide adequate ventilation and appropriate extraction to avoid occupational exposure. If vapours or mists are generated, work in a fume cupboard.
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Eye/face protection	Wear approved chemical safety goggles conforming to EN 166.
Hand protection	Use full length gloves. Butyl rubber. Nitrile rubber. Polyvinyl chloride (PVC). Viton rubber (fluoro rubber). For gloves involving total immersion 1.0mm thickness (if available) are recommended, at least 0.5mm and breakthrough time of >480 minutes. For splash resistance use minimum 0.5mm thickness and breakthrough time > 240 minutes. Gloves should conform to EN 374 (Chemical and Micro-organisms hazards). 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. It should be noted that liquid may penetrate the gloves. Frequent changes are recommended. Gloves showing signs of degradation should be changed to avoid skin contamination. Gloves should have a breakthrough time sufficient for the amount of handling but allow dexterity for safe movement and handling. When removing used gloves apply proper technique by avoiding skin contact with the outer surface. When packages of the product are being handled during storage or transport it is advisable to wear protective gloves to prevent damage to the skin.
Other skin and body protection	Wear suitable protective clothing during transport, handling and storage operations connected with the product. Protective clothing should conform to the general requirements of EN 340:2003. Also consider EN 13034:2005; EN 14605:2005; EN 943:2002 dependent upon the situation resulting in exposure. When treating spillages it is recommended to wear protective boots. Safety footwear should conform to standards EN 344 - 347. Consult with the supplier as to the compatibility of protective clothing and footwear. Wear rubber or plastic apron and full length gauntlets if handling large amounts. Provide eyewash station and safety shower. If there is a risk of splashing then wear a face shield.
Hygiene measures	Wash at the end of each work shift and before eating, smoking and using the toilet. When using do not eat, drink or smoke. Promptly remove contaminated clothing and wash before reuse. Remove contaminated clothing when entering eating areas or other places that could lead to contamination of others with the product.
Respiratory protection	Wear suitable respiratory protection when vapours or mists are generated and there is inadequate ventilation or extraction. Use respirator fitted with a cartridge suitable for inorganic vapours, type B and E is recommended. When a particulate respirator is used it is recommended to use at least Type P2, preferably P3. Respiratory protection should conform to the following standards. BS EN 136: Full face masks. BS EN 140: Half-face masks. BS EN 143: Particulates. When the concentration of atmospheric vapours is sufficient to cause skin irritation it is advisable to wear full face respiratory protection. CAUTION: Air purifying respirators do not protect the user in oxygen deficient atmospheres, use air supplied system. Powered air respirators should meet requirements of EN146 and EN12941. Airline fed respirators should meet the requirements of EN 270 and EN1835. Consult with the supplier as to the compatibility of the equipment with the chemical of concern. Respiratory protection should be maintained in a proper condition and inspected at the frequency specified by current legislation.

SECTION 9: Physical and Chemical Properties

9.1. Information on basic physical and chemical properties

Appearance	Liquid.
Colour	Colourless.
Odour	Odourless.
Odour threshold	Not applicable. Not applicable.
pH	Not determined.
Melting point	Not determined.
Initial boiling point and range	Not determined.

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Flash point	Not applicable.
Evaporation rate	Not determined.
Evaporation factor	Not determined.
Upper/lower flammability or explosive limits	Not applicable.
Vapour pressure	Not determined.
Vapour density	Not determined.
Relative density	1.012 g/ml @ @ 20°C
Bulk density	Not applicable. Only applicable to solids.
Solubility(ies)	Not determined. Miscible with water.
Partition coefficient	Not determined.
Auto-ignition temperature	Not applicable.
Decomposition Temperature	Not determined.
Viscosity	Not determined.
Explosive properties	Not applicable.
Oxidising properties	Does not meet the criteria for classification as oxidising.
Comments	Not determined means the product was not tested for these properties. 'Not applicable' means the property does not apply to the product.

9.2. Other information

Other information All available information has been included in section 9.1.

SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity May react with reducing agents or ammonia.

10.2. Chemical stability

Stability Stable when stored in sealed container at normal temperatures and in a suitable location.

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions Silver nitrate can form explosive compounds with ammonia. Will not polymerise.

10.4. Conditions to avoid

Conditions to avoid Avoid heat, direct sunlight and moisture. Avoid storage in freezing conditions. Avoid storage with incompatible materials. Avoid storage in an unstable manner or in a situation that would result in exposure to the product. Avoid leaving the container open when not in use. Avoid transfer to a metal container or incompatible plastic container.

10.5. Incompatible materials

Materials to avoid Reducing agents Ammonia.

10.6. Hazardous decomposition products

Hazardous decomposition products Does not decompose when used and stored as recommended. See section 5 for thermal decomposition products.

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SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity - oral

Notes (oral LD₅₀) OECD Guideline 401, Acute Oral Toxicity. Refers to silver sulphate.

Acute toxicity - dermal

Notes (dermal LD₅₀) Scientifically unjustified. Refers to silver nitrate

Acute toxicity - inhalation

Notes (inhalation LC₅₀) Scientifically unjustified. Refers to silver nitrate

Skin corrosion/irritation

Animal data Erythema/eschar score: No information available Oedema score: No information available.

Serious eye damage/irritation

Serious eye damage/irritation Irritating

Skin sensitisation

Skin sensitisation Not sensitising.

Germ cell mutagenicity

Genotoxicity - in vitro Chromosome aberration: Negative., With and without metabolic activation. Refers to silver sulphate.

Genotoxicity - in vivo Chromosome aberration: Negative., Refers to silver. Micronucleus assay on rats.

Carcinogenicity

Carcinogenicity Not available.

Reproductive toxicity

Reproductive toxicity - fertility Not available.

Reproductive toxicity - development Maternal toxicity: - LOAEL: 30 mg/kg/day, Oral, Rat Refers to silver acetate. Maternal toxicity was observed. There were no embryonic or teratogenic effects.

Specific target organ toxicity - single exposure

STOT - single exposure Not available.

Specific target organ toxicity - repeated exposure

STOT - repeated exposure LOAEL 125 mg/kg, Oral, Rat Test material was silver nanoparticles.

Target organs Liver

Aspiration hazard

Aspiration hazard Not determined.

General information

Effects will be dependent upon the concentration and length of time of exposure. Higher concentrations will produce more pronounced effects.

Inhalation

Vapours or mists in high concentration may cause irritation to the respiratory system.

Ingestion

Small amounts can cause a feeling of nausea, larger amounts may produce vomiting. May irritate mouth, throat and gastrointestinal tract.

Skin contact

Irritating to skin.

Eye contact

Irritating to eyes. Redness. Prolonged or repeated contact may cause damage to the eye.

SECTION 12: Ecological Information

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12.1. Toxicity

Acute toxicity - fish	LC50, 96 hours: 1.2 µg/L , Pimephales promelas (Fat-head Minnow) Freshwater, semi-static.
Acute toxicity - aquatic invertebrates	, 48 hours: 0.22µg.L , Daphnia magna Freshwater, semi-static. LC50 value. Refers to dissolved silver.
Acute toxicity - aquatic plants	Not available.
Acute toxicity - microorganisms	EC ₁₀₀ , Industry - Dermal; Long term systemic effects 22 mg/kg/day : 100 µg/L , Industry - Dermal; Long term systemic effects 22 mg/kg/day Pseudomonas aeruginosa, 8 hours, freshwater, static.
Acute toxicity - terrestrial	Not available. OECD 222, Eisenia fetida, long-term, 28 day, NOEC 226 mg/kg soil, mortality. Based on elemental silver.
Chronic toxicity - fish early life stage	, 28 days: 0.39 µg/L Ag. , Pimephales promelas (Fat-head Minnow) Freshwater, flow through. EC10, growth.
Short term toxicity - embryo and sac fry stages	Not available.
Chronic toxicity - aquatic invertebrates	Industry - Dermal; Long term systemic effects 22 mg/kg/day, 21 days: 2.14 µg/L (growth) , Daphnia magna EC 10, semi-static, freshwater.
Toxicity to soil	OECD 216, 28 days, NOEC 0.13 mg Ag /kg soil; Nitrogen transformation rate.
Toxicity to terrestrial plants	OECD 208: Emergence and survival, Lactuca Sativa, 17 days, NOEC 7.14 mg/kg, element Ag.

12.2. Persistence and degradability

Phototransformation	Not available.
Stability (hydrolysis)	Scientifically unjustified.
Biodegradation	Water - : Other justification Water - : Other justification Water - : Other justification
Biological oxygen demand	Not available.
Chemical oxygen demand	Not available.

12.3. Bioaccumulative potential

Bioaccumulative potential	Silver can bioaccumulate in living organisms. BCF: ~ 70, Cyprinus carpio (Common carp) Steady state after approx. 30 days, exposure concentration was approx. 0.14 to 0.28 ppb. The liver showed the highest concentration factor.
Partition coefficient	Not determined.

12.4. Mobility in soil

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Mobility	Silver nitrate is soluble in water and may travel through soil layers if discharged in large or continuous amounts, it can be absorbed into soil. Nitrates are found naturally occurring in soil.
Adsorption/desorption coefficient	Water - : Kd measured between 159 and >4700 L/kg. @ 20°C Data for 497 european soils, median value of 4023 L/kg.
Henry's law constant	Not available.
Surface tension	Not determined.

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.
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12.6. Other adverse effects

Other adverse effects	Will affect drinking water supplies. May effect germination and growth rates of plants if soil contamination occurs.
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SECTION 13: Disposal considerations

13.1. Waste treatment methods

General information	Any waste material is classed as hazardous waste, it should only be disposed of through licenced waste handlers and treatment sites. Do not allow unauthorised disposal to the environment. If operators are exposed to vapours during the disposal process then suitable respiratory protection should be worn. All other personal protective equipment as described in section 8 should be worn.
Disposal methods	Uncleaned empty containers should be treated as hazardous waste. Avoid unauthorised disposal. Do not dump illegally onto land or into water. When dealing with waste always consider the waste management hierarchy of Prevention, Preparation for re-use, Recycling, Recovery and Disposal. It is advisable to minimise waste at source if possible, then re-use, recover or recycle wherever possible before considering waste disposal options.

SECTION 14: Transport information

14.1. UN number

UN No. (ADR/RID)	3264
UN No. (IMDG)	3264
UN No. (ICAO)	3264
UN No. (ADN)	3264

14.2. UN proper shipping name

Proper shipping name (ADR/RID)	CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (SILVER NITRATE)
Proper shipping name (IMDG)	CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (SILVER NITRATE)
Proper shipping name (ICAO)	CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (SILVER NITRATE)
Proper shipping name (ADN)	CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (SILVER NITRATE)

14.3. Transport hazard class(es)

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

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IMDG class	8
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****14.6. Special precautions for user**

EmS	F-A, S-B
ADR transport category	3
Emergency Action Code	2X
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	Control of Substances Hazardous to Health Regulations 2002 (as amended). The Chemicals (Hazard Information and Packaging for Supply) Regulations 2009 (SI 2009 No. 716).
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). 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). Regulation (EU) 453/2010.

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Guidance Approved Classification and Labelling Guide (CHIP 4)
ECHA Guidance on the Compilation of Safety Data Sheets, September 2011.

15.2. Chemical safety assessment

Information from the manufacturer of the raw material has not been received regarding Chemical Safety Assessments, Exposure Scenarios or a Chemical Safety Report.

SECTION 16: Other information

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	Source: European Chemicals Agency, http://echa.europa.eu/
Revision comments	Change to section 14
Revision date	02/08/2017
Revision	4
Supersedes date	05/06/2013
SDS number	10780
Risk phrases in full	R34 Causes burns. R50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. R8 Contact with combustible material may cause fire.
Hazard statements in full	H272 May intensify fire; oxidiser. H290 May be corrosive to metals. H314 Causes severe skin burns and eye damage. H315 Causes skin irritation. H318 Causes serious eye damage. H319 Causes serious eye irritation. H400 Very toxic to aquatic life. H410 Very toxic to aquatic life with long lasting effects.