

SAFETY DATA SHEET MARBLES REAGENT

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 MARBLES REAGENT

Product number 2418

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. Use only for intended applications.

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)

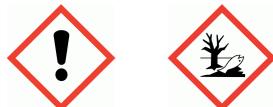
Physical hazards Not Classified

Health hazards Skin Irrit. 2 - H315 Eye Irrit. 2 - H319 STOT SE 3 - H335

Environmental hazards Aquatic Acute 1 - H400 Aquatic Chronic 2 - H411

2.2. Label elements

Pictogram



Signal word

Warning

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Hazard statements	H315 Causes skin irritation. H319 Causes serious eye irritation. H335 May cause respiratory irritation. H400 Very toxic to aquatic life. H411 Toxic to aquatic life with long lasting effects.
Precautionary statements	P261 Avoid breathing vapour/ spray. P273 Avoid release to the environment. P280 Wear protective gloves/ protective clothing/ eye protection/ face protection. 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.
Contains	HYDROCHLORIC ACID ...%
Supplementary precautionary statements	P264 Wash contaminated skin thoroughly after handling. P271 Use only outdoors or in a well-ventilated area. P302+P352 IF ON SKIN: Wash with plenty of water. P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing. P312 Call a POISON CENTER/ doctor if you feel unwell. 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. P391 Collect spillage. P403+P233 Store in a well-ventilated place. Keep container tightly closed. P405 Store locked up.

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 ...%	10-30%
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	

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COPPER SULPHATE	5-10%
CAS number: 7758-98-7	EC number: 231-847-6
M factor (Acute) = 10	M factor (Chronic) = 1
Classification Acute Tox. 4 - H302 Skin Irrit. 2 - H315 Eye Irrit. 2 - H319 Aquatic Acute 1 - H400 Aquatic Chronic 1 - H410	

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

Composition comments An aqueous solution of hydrochloric acid.

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. If it is suspected that volatile contaminants are still present around the affected person, first aid personnel should wear an appropriate respirator or self-contained breathing apparatus. Wash contaminated clothing thoroughly with water before removing it from the affected person, or wear gloves. It may be dangerous for first aid personnel to carry out mouth-to-mouth resuscitation.

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	A single exposure may cause the following adverse effects: Irritation of nose, throat and airway. Difficulty in breathing. Coughing. Prolonged inhalation of high concentrations may damage respiratory system.
Ingestion	May cause irritation. Nausea, vomiting.
Skin contact	Redness. Irritating to skin. Prolonged contact may cause dryness of the skin.

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Eye contact Irritating to eyes.

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

Notes for the doctor 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

Specific hazards Containers can burst violently or explode when heated, due to excessive pressure build-up.

Hazardous combustion products Thermal decomposition or combustion products may include the following substances: Harmful gases or vapours. Hydrogen chloride (HCl). Chlorine. Sulphurous gases (SO_x). Oxides of the following substances: Copper.

5.3. Advice for firefighters

Protective actions during firefighting Avoid breathing fire gases or vapours. Evacuate area. Keep upwind to avoid inhalation of gases, vapours, fumes and smoke. Ventilate closed spaces before entering them. 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. 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 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 vapours and spray/mists. Use suitable respiratory protection if ventilation is inadequate.

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

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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. 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. Handle all packages and containers carefully to minimise spills. Keep container tightly sealed when not in use. Avoid the formation of mists. 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.

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 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

COPPER SULPHATE (CAS: 7758-98-7)

PNEC

- Fresh water; 0.0078 mg/l

- Marine water; 0.0052 mg/l

- STP; 0.23 mg/l

- Sediment (Freshwater); 0.087 mg/l

- Sediment (Marinewater); 0.087 mg/l

- Soil; 65 mg/kg

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. Wear tight-fitting, chemical splash goggles or face shield. If inhalation hazards exist, a full-face respirator may be required instead.

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: Butyl rubber. Nitrile rubber. Polyvinyl chloride (PVC). The selected gloves should have a breakthrough time of at least 8 hours. Thickness: > 0.3 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.

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.

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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

Appearance	Liquid.
Colour	Blue.
Odour	Pungent.
pH	pH (concentrated solution): <1
Melting point	Not determined.
Initial boiling point and range	Not determined.
Flash point	Not relevant. The mixture is non-flammable.
Evaporation rate	Not determined.
Evaporation factor	Not determined.
Flammability (solid, gas)	No.
Upper/lower flammability or explosive limits	Not relevant.
Vapour pressure	Not determined.
Vapour density	Not determined.
Relative density	~ 1.12 @ 20°C
Bulk density	Not relevant.
Solubility(ies)	Miscible with water.
Partition coefficient	The product contains mainly inorganic substances which are not biodegradable.
Auto-ignition temperature	Not relevant.
Decomposition Temperature	Not determined.
Viscosity	Not determined.
Explosive properties	Not considered to be explosive.
Explosive under the influence of a flame	No
Oxidising properties	Not relevant. The mixture is not an oxidising material.

9.2. Other information

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Other information	None.
Refractive index	Not determined.
Particle size	Not relevant.
Molecular weight	Not relevant.
Volatility	Not determined.
Saturation concentration	Not determined.
Critical temperature	Not relevant.
Volatile organic compound	Not relevant.

SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity The following materials may react with the product: Acids. Alkalis. Chemically-active metals.

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. In contact with some metals can generate hydrogen gas, which can form explosive mixtures with air.

10.4. Conditions to avoid

Conditions to avoid Avoid heat.

10.5. Incompatible materials

Materials to avoid Alkalis. Acids. Chemically-active metals. 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

Acute toxicity - oral

Acute toxicity oral (LD₅₀ mg/kg) 481.0

Species Rat

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

ATE oral (mg/kg) 58,823.53

Acute toxicity - dermal

Acute toxicity dermal (LD₅₀ mg/kg) 2,000.0

Species Rat

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

Acute toxicity - inhalation

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Species	Rat
Notes (inhalation LC₅₀)	Based on available data the classification criteria are not met.
<u>Skin corrosion/irritation</u>	
Animal data	Irritating.
Extreme pH	≤ 2 Corrosive.
<u>Serious eye damage/irritation</u>	
Serious eye damage/irritation	Causes serious eye irritation.
<u>Respiratory sensitisation</u>	
Respiratory sensitisation	Based on available data the classification criteria are not met.
<u>Skin sensitisation</u>	
Skin sensitisation	Based on available data the classification criteria are not met.
<u>Germ cell mutagenicity</u>	
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.
<u>Carcinogenicity</u>	
Carcinogenicity	Based on available data the classification criteria are not met.
IARC carcinogenicity	None of the ingredients are listed or exempt.
<u>Reproductive toxicity</u>	
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.
<u>Specific target organ toxicity - single exposure</u>	
STOT - single exposure	STOT SE 3 - H335 May cause respiratory irritation.
Target organs	Respiratory system, lungs
<u>Specific target organ toxicity - repeated exposure</u>	
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.
<u>General information</u>	
General information	The severity of the symptoms described will vary dependent on the concentration and the length of exposure.
Inhalation	A single exposure may cause the following adverse effects: Irritation of nose, throat and airway. Difficulty in breathing. Coughing. Prolonged inhalation of high concentrations may damage respiratory system.
Ingestion	May cause irritation. Nausea, vomiting.
Skin contact	Redness. Irritating to skin.
Eye contact	Irritating to eyes.
Route of entry	Ingestion Inhalation Skin and/or eye contact
Target organs	Respiratory system, lungs

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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
<u>Reproductive toxicity</u>	
Reproductive toxicity - fertility	Scientifically unjustified. REACH dossier information.
Reproductive toxicity - development	This substance has no evidence of toxicity to reproduction.
<u>Specific target organ toxicity - single exposure</u>	
STOT - single exposure	No specific test data are available.
<u>Specific target organ toxicity - repeated exposure</u>	
STOT - repeated exposure	No specific test data are available.
<u>Aspiration hazard</u>	
Aspiration hazard	Not anticipated to present an aspiration hazard, based on chemical structure.
<u>General information</u>	
General information	Corrosive to skin.

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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.

COPPER SULPHATE

Acute toxicity - oral

Acute toxicity oral (LD₅₀ mg/kg) 481.0

Species Rat

ATE oral (mg/kg) 481.0

Acute toxicity - dermal

Acute toxicity dermal (LD₅₀ mg/kg) 2,000.0

Species Rat

ATE dermal (mg/kg) 5,000.0

Inhalation	Dust may irritate the respiratory system. Symptoms following overexposure may include the following: Coughing.
Ingestion	May cause irritation. Symptoms following overexposure may include the following: Stomach pain. Nausea, vomiting. Diarrhoea.
Skin contact	Irritating to skin.
Eye contact	Causes burns. A single exposure may cause the following adverse effects: Corneal damage.
Acute and chronic health hazards	Found to cause cancer in laboratory animals.

SECTION 12: Ecological Information

HYDROCHLORIC ACID ...%

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

COPPER SULPHATE

Ecotoxicity Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

12.1. Toxicity

Toxicity Aquatic Acute 1 - H400 Very toxic to aquatic life. Aquatic Chronic 2 - H411 Toxic to aquatic life with long lasting effects.

HYDROCHLORIC ACID ...%

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Acute toxicity - fish	LC ₅₀ , 96 hours: pH 3.5 - 3.25 , Lepomis macrochirus (Bluegill)
Acute toxicity - aquatic invertebrates	EC ₅₀ , 48 hours: pH 4.92 , Daphnia magna
Acute toxicity - aquatic plants	EC ₅₀ , 72 hours: pH 4.7 , Freshwater algae
Acute toxicity - microorganisms	EC ₅₀ , 3 hours: pH 5 - 5.5 , Activated sludge
Acute toxicity - terrestrial	Not available.
Chronic toxicity - fish early life stage	Not determined.
Short term toxicity - embryo and sac fry stages	Not determined.
Chronic toxicity - aquatic invertebrates	Scientifically unjustified.

COPPER SULPHATE

Acute aquatic toxicity

LE(C)₅₀	0.01 < L(E)C ₅₀ ≤ 0.1
M factor (Acute)	10
Acute toxicity - fish	LC ₅₀ , 96 hours: 0.0384 mg/l, Pimephales promelas (Fat-head Minnow)
<u>Chronic aquatic toxicity</u>	
M factor (Chronic)	1

12.2. Persistence and degradability

Persistence and degradability	The product contains inorganic substances which are not biodegradable.
Phototransformation	Scientifically unjustified.
Stability (hydrolysis)	Scientifically unjustified.
Biodegradation	Scientifically unjustified.
Biological oxygen demand	Not relevant.
Chemical oxygen demand	Not relevant.

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.

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Chemical oxygen demand Not relevant.

12.3. Bioaccumulative potential

Bioaccumulative potential No data available on bioaccumulation.

Partition coefficient The product contains mainly inorganic substances which are not biodegradable.

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.

Adsorption/desorption coefficient Not determined.

Henry's law constant Not determined.

Surface tension Not determined.

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 ...%

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

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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)	3264
UN No. (IMDG)	3264
UN No. (ICAO)	3264
14.2. UN proper shipping name	
Proper shipping name (ADR/RID)	CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S.(HYDROCHLORIC ACID, COPPER SUPHATE)
Proper shipping name (IMDG)	CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S.(HYDROCHLORIC ACID, COPPER SUPHATE)
Proper shipping name (ICAO)	CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S.(HYDROCHLORIC ACID, COPPER SUPHATE)
Proper shipping name (ADN)	CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S.(HYDROCHLORIC ACID, COPPER SUPHATE)
14.3. Transport hazard class(es)	
ADR/RID class	8
ADR/RID label	8
IMDG class	8
ICAO class/division	8
Transport labels	
	
14.4. Packing group	
ADR/RID packing group	II
IMDG packing group	II
ICAO packing group	II

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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-B

Emergency Action Code 2X

Hazard Identification Number 80
(ADR/RID)

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.

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).
Guidance	Workplace Exposure Limits EH40.

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

MARBLES REAGENT

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	<p>Eye Irrit. = Eye irritation</p> <p>Skin Irrit. = Skin irritation</p> <p>STOT SE = Specific target organ toxicity-single exposure</p> <p>Aquatic Acute = Hazardous to the aquatic environment (acute)</p> <p>Aquatic Chronic = Hazardous to the aquatic environment (chronic)</p>
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/
Classification procedures according to Regulation (EC) 1272/2008	STOT SE 3 - H335: Skin Irrit. 2 - H315: Eye Irrit. 2 - H319: : Calculation method. Aquatic Acute 1 - H400: Aquatic Chronic 2 - H411: : Calculation method.
Training advice	Only trained personnel should use this material.
Revision comments	Full revision
Revision date	12/06/2019
Revision	4
Supersedes date	25/09/2014
SDS number	11213
SDS status	Approved.
Hazard statements in full	<p>H290 May be corrosive to metals.</p> <p>H302 Harmful if swallowed.</p> <p>H314 Causes severe skin burns and eye damage.</p> <p>H315 Causes skin irritation.</p> <p>H318 Causes serious eye damage.</p> <p>H319 Causes serious eye irritation.</p> <p>H335 May cause respiratory irritation.</p> <p>H400 Very toxic to aquatic life.</p> <p>H410 Very toxic to aquatic life with long lasting effects.</p> <p>H411 Toxic to aquatic life with long lasting effects.</p>

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