

SAFETY DATA SHEET
SULPHURIC ACID LRG 1.84 SG

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	SULPHURIC ACID LRG 1.84 SG
Product number	1215
REACH registration number	01-2119458838-20-XXXX
CAS number	7664-93-9
EC number	231-639-5

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

Identified uses	Laboratory reagent. Cleaning agent.
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
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)
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SECTION 2: Hazards identification**2.1. Classification of the substance or mixture****Classification (EC 1272/2008)**

Physical hazards	Not Classified
Health hazards	Skin Corr. 1A - H314 Eye Dam. 1 - H318
Environmental hazards	Not Classified

2.2. Label elements

EC number	231-639-5
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Pictogram



Signal word	Danger
Hazard statements	H314 Causes severe skin burns and eye damage.
Precautionary statements	<p>P260 Do not breathe vapour/ spray.</p> <p>P264 Wash contaminated skin thoroughly after handling.</p> <p>P280 Wear protective clothing, gloves, eye and face protection.</p> <p>P301+P330+P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.</p> <p>P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower.</p> <p>P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.</p> <p>P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.</p> <p>P310 Immediately call a POISON CENTER/ doctor.</p> <p>P321 Specific treatment (see medical advice on this label).</p> <p>P363 Wash contaminated clothing before reuse.</p> <p>P405 Store locked up.</p> <p>P501 Dispose of contents/ container in accordance with national regulations.</p>

2.3. Other hazards

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

SECTION 3: Composition/information on ingredients

3.1. Substances

Product name	SULPHURIC ACID LRG 1.84 SG
REACH registration number	01-2119458838-20-XXXX
CAS number	7664-93-9
EC number	231-639-5

SECTION 4: First aid measures

4.1. Description of first aid measures

General information	Get medical attention immediately. Show this Safety Data Sheet to the medical personnel. Chemical burns must be treated by a physician.
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. Place unconscious person on their side in the recovery position and ensure breathing can take place. When breathing is difficult, properly trained personnel may assist affected person by administering oxygen. Get medical attention.
Ingestion	Never give anything by mouth to an unconscious person. Rinse mouth thoroughly with water. Do not induce vomiting. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. Get medical attention.
Skin contact	It is important to remove the substance from the skin immediately. Take off immediately all contaminated clothing. Rinse immediately with plenty of water. Continue to rinse for at least 15 minutes and get medical attention. Chemical burns must be treated by a physician.

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Eye contact	Rinse immediately with plenty of water. Remove any contact lenses and open eyelids wide apart. Continue to rinse for at least 10 minutes. Get medical attention.
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	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: Severe irritation of nose and throat. Symptoms following overexposure may include the following: Corrosive to the respiratory tract.
Ingestion	May cause chemical burns in mouth, oesophagus and stomach. Symptoms following overexposure may include the following: Severe stomach pain. Nausea, vomiting.
Skin contact	Causes severe burns. Symptoms following overexposure may include the following: Pain or irritation. Redness. Blistering may occur.
Eye contact	Causes serious eye damage. Symptoms following overexposure may include the following: Pain. Profuse watering of the eyes. Redness.

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

Notes for the doctor	Treat symptomatically.
Specific treatments	No specific chemical antidote is known to be required after exposure to this product.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	The product is not flammable. 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	Reacts violently with water. Severe corrosive hazard. Water used for fire extinguishing, which has been in contact with the product, may be corrosive.
Hazardous combustion products	Thermal decomposition or combustion products may include the following substances: Oxides of sulphur.

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. Cool containers exposed to heat with water spray and remove them from the fire area if it can be done without risk. 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 chemical protective suit. Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing. Firefighter's clothing conforming to European standard EN469 (including helmets, protective boots and gloves) will provide a basic level of protection for chemical incidents.

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SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions	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. Avoid contact with skin and eyes. Avoid inhalation of vapours and spray/mists. Do not touch or walk into spilled material. Avoid contact with contaminated tools and objects.
For emergency responders	Wear appropriate clothing to prevent any possibility of liquid contact and repeated or prolonged vapour contact.

6.2. Environmental precautions

Environmental precautions	Avoid discharge to the aquatic environment. The product may affect the acidity (pH) of water which may have hazardous effects on aquatic organisms.
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6.3. Methods and material for containment and cleaning up

Methods for cleaning up	Wear protective clothing as described in Section 8 of this safety data sheet. This product is corrosive. Small Spillages: Wipe up with an absorbent cloth and dispose of waste safely. Large Spillages: Contain and absorb spillage with sand, earth or other non-combustible material. Place waste in labelled, sealed containers. Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority. Wash thoroughly after dealing with a spillage.
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6.4. Reference to other sections

Reference to other sections	For personal protection, see Section 8. For waste disposal, see Section 13.
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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. Immediate first aid is imperative. Do not handle broken packages without protective equipment. Do not reuse empty containers.
Advice on general occupational hygiene	Take off immediately all contaminated clothing. Wash promptly if skin becomes contaminated. 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. Wash contaminated clothing before reuse. Change work clothing daily before leaving workplace.

7.2. Conditions for safe storage, including any incompatibilities

Storage precautions	Store in tightly-closed, original container in a dry, cool and well-ventilated place. Store away from the following materials: Alkalis. Protect containers from damage. Bund storage facilities to prevent soil and water pollution in the event of spillage.
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

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8.1. Control parameters

DNEL	Industry - Inhalation; Short term : 0.1 mg/m ³ Industry - Inhalation; Long term : 0.05 mg/m ³
PNEC	- Fresh water; 0.0025 mg/l - Marine water; 0.00025 mg/l - STP; 8.8 mg/l - Sediment; 0.002 (freshwater) mg/kg - Sediment; 0.002 (marine water) mg/kg

8.2. Exposure controls

Protective equipment



Appropriate engineering controls

Provide adequate general and local exhaust ventilation. Personal protective equipment should only be used if worker exposure cannot be controlled adequately by the engineering control measures.

Eye/face protection

Wear tight-fitting, chemical splash goggles or face shield. Personal protective equipment for eye and face protection should comply with European Standard EN166.

Hand protection

Wear protective gloves. To protect hands from chemicals, gloves should comply with European Standard EN374. 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. 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. For exposure up to 8 hours, wear gloves made of the following material: Viton rubber (fluoro rubber). Thickness: ~ 0.4 mm Frequent changes are recommended.

Other skin and body protection

Wear suitable protective equipment for prolonged exposure and/or high concentrations of vapours, spray or mist.

Hygiene measures

Provide eyewash station and safety shower. 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. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reuse. Clean equipment and the work area every day. Warn cleaning personnel of any hazardous properties of the product.

Respiratory protection

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 and combination filter cartridges should comply with European Standard EN14387. Wear a respirator fitted with the following cartridge: Acid gas filter. Check that the respirator fits tightly and the filter is changed regularly.

Environmental exposure controls

Keep container tightly sealed when not in use. Store in a demarcated bunded area to prevent release to drains and/or watercourses.

SECTION 9: Physical and Chemical Properties

9.1. Information on basic physical and chemical properties

Appearance	Liquid.
Colour	Colourless.

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Odour	Odourless.
Odour threshold	Not determined.
pH	pH (concentrated solution): <1
Melting point	Approx. -1.1 (98% Sulphuric acid)°C
Initial boiling point and range	330°C
Flash point	Technically not feasible.
Evaporation rate	No information available.
Evaporation factor	No information available.
Flammability (solid, gas)	Scientifically unjustified.
Upper/lower flammability or explosive limits	Scientifically unjustified.
Vapour pressure	49 Pa @ °C
Vapour density	No information available.
Relative density	Approx. 1.84 @ 20c°C
Bulk density	Not applicable.
Solubility(ies)	Miscible with water.
Partition coefficient	Not relevant.
Auto-ignition temperature	Not determined.
Decomposition Temperature	Not determined.
Viscosity	22.5 (95% sulphuric acid) mPa s @ 20°C
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.

9.2. Other information

Other information None.

SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity The reactivity data for this product will be typical of those for the following class of materials: Strong acids.

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 In contact with some metals can generate hydrogen gas, which can form explosive mixtures with air. Reactions with the following materials may generate heat: Water, moisture. The following materials may react violently with the product: Strong alkalis.

10.4. Conditions to avoid

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Conditions to avoid Never add water directly to this product as it may cause a vigorous reaction or boiling. When exposed to air, this product will absorb moisture.

10.5. Incompatible materials

Materials to avoid Avoid contact with the following materials: Alkalis. Amines.

10.6. Hazardous decomposition products

Hazardous decomposition products Does not decompose when used and stored as recommended. Thermal decomposition or combustion products may include the following substances: Oxides of the following substances: Sulphur.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity - oral

Acute toxicity oral (LD₅₀ mg/kg) 2,140.0

Species Rat

Notes (oral LD₅₀) Estimated value.

Acute toxicity - dermal

Notes (dermal LD₅₀) Corrosive to skin.

Acute toxicity - inhalation

Acute toxicity inhalation (LC₅₀ vapours mg/l) 0.85

Species Rat

Notes (inhalation LC₅₀) REACH dossier information.

ATE inhalation (vapours mg/l) 0.85

Skin corrosion/irritation

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

Extreme pH ≤ 2 Corrosive.

Serious eye damage/irritation

Serious eye damage/irritation Corrosivity to eyes is assumed.

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.

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Reproductive toxicity - development	Based on available data the classification criteria are not met.
<u>Specific target organ toxicity - single exposure</u>	
STOT - single exposure	Not classified as a specific target organ toxicant after a single exposure.
<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.
General information	
	The severity of the symptoms described will vary dependent on the concentration and the length of exposure.
Inhalation	Corrosive to the respiratory tract. Symptoms following overexposure may include the following: Severe irritation of nose and throat.
Ingestion	May cause chemical burns in mouth, oesophagus and stomach. Symptoms following overexposure may include the following: Severe stomach pain. Nausea, vomiting.
Skin contact	Causes severe burns. Symptoms following overexposure may include the following: Pain or irritation. Redness. Blistering may occur.
Eye contact	Causes serious eye damage. Symptoms following overexposure may include the following: Pain. Profuse watering of the eyes. Redness.
Route of entry	Ingestion Inhalation Skin and/or eye contact
Target organs	No specific target organs known.

SECTION 12: Ecological Information

Ecotoxicity	The product may affect the acidity (pH) of water which may have hazardous effects on aquatic organisms.
<u>12.1. Toxicity</u>	
Toxicity	Based on available data the classification criteria are not met.
Acute toxicity - fish	LC50, 96 hours: > 16 mg/l, Lepomis macrochirus (Bluegill)
Acute toxicity - aquatic invertebrates	EC ₅₀ , 48 hours: >100 mg/l, Daphnia magna
Acute toxicity - aquatic plants	EC ₅₀ , 72 hours: > 100 mg/l, Scenedesmus subspicatus
Acute toxicity - microorganisms	NOEC, 37 days: 26000 mg/l, Activated sludge
Acute toxicity - terrestrial	Not available.
Chronic toxicity - fish early life stage	NOEC, : 0.31 mg/l, Freshwater fish
Short term toxicity - embryo and sac fry stages	Not determined.
Chronic toxicity - aquatic invertebrates	NOEC, : 0.15 mg/l, Marinewater invertebrates
<u>12.2. Persistence and degradability</u>	

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Persistence and degradability	The product contains inorganic substances which are not biodegradable.
Phototransformation	Scientifically unjustified.
Stability (hydrolysis)	Scientifically unjustified.
Biodegradation	The product contains mainly inorganic substances which are not biodegradable.
Biological oxygen demand	No information available.
Chemical oxygen demand	No information available.

12.3. Bioaccumulative potential

Bioaccumulative potential	No data available on bioaccumulation.
Partition coefficient	Not relevant.

12.4. Mobility in soil

Mobility	The product is water-soluble and may spread in water systems.
Henry's law constant	No specific test data are available.
Surface tension	Scientifically unjustified.

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	None known.
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SECTION 13: Disposal considerations

13.1. Waste treatment methods

General information	When handling waste, the safety precautions applying to handling of the product should be considered. 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.
Disposal methods	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. Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority.

SECTION 14: Transport information

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

UN No. (ADR/RID)	1830
UN No. (IMDG)	1830
UN No. (ICAO)	1830
UN No. (ADN)	1830

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14.2. UN proper shipping name

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

14.3. Transport hazard class(es)

ADR/RID class	8
ADR/RID classification code	C1
ADR/RID label	8
IMDG class	8
ICAO class/division	8
ADN class	8

Transport labels



14.4. Packing group

ADR/RID packing group	II
IMDG packing group	II
ADN packing group	II
ICAO packing group	II

14.5. Environmental hazards

Environmentally hazardous substance/marine pollutant
No.

14.6. Special precautions for user

Ensure that persons transporting the product know what to do in the event of an accident or spillage.

IMDG Code segregation group	1. Acids
EmS	F-A, S-B
ADR transport category	2
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.

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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). Health and Safety at Work etc. Act 1974 (as amended).
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). Commission Regulation (EU) No 2015/830 of 28 May 2015.
Guidance	Workplace Exposure Limits EH40.
Authorisations (Title VII Regulation 1907/2006)	No specific authorisations are known for this product.
Restrictions (Title VIII Regulation 1907/2006)	No specific restrictions on use are known for this product.

15.2. Chemical safety assessment

A chemical safety assessment has been carried out.

Inventories

EU - EINECS/ELINCS

All the ingredients are listed or exempt.

SECTION 16: Other information

Abbreviations and acronyms used in the safety data sheet	ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road. ADN: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways. RID: European Agreement concerning the International Carriage of Dangerous Goods by Rail. IATA: International Air Transport Association. ICAO-TI: Technical Instructions for the Safe Transport of Dangerous Goods by Air. IMDG: International Maritime Dangerous Goods. ATE: Acute Toxicity Estimate. CAS: Chemical Abstracts Service. DNEL: Derived No Effect Level. PNEC: Predicted No Effect Concentration. LC ₅₀ : Lethal Concentration to 50 % of a test population. LD ₅₀ : Lethal Dose to 50% of a test population (Median Lethal Dose). EC ₅₀ : 50% of maximal Effective Concentration. PBT: Persistent, Bioaccumulative and Toxic substance. vPvB: Very Persistent and Very Bioaccumulative.
Classification abbreviations and acronyms	Eye Dam. = Serious eye damage Skin Corr. = Skin corrosion
General information	Only trained personnel should use this material.
Key literature references and sources for data	Source: European Chemicals Agency, http://echa.europa.eu/

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Classification procedures according to Regulation (EC) 1272/2008	Eye Dam. 1 - H318: Weight of evidence. Skin Corr. 1A - H314: On basis of test data.
Training advice	Read and follow manufacturer's recommendations.
Revision date	22/12/2017
Revision	4
Supersedes date	15/10/2013
SDS number	21075
Hazard statements in full	H314 Causes severe skin burns and eye damage. H318 Causes serious eye damage.

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.