

## Safety Data Sheet

according to UK REACH Regulation

### Sulfuric Acid 0.5 mol/l (1 N)

Revision date: 29.12.2022

Product code: 15294.xxxxx

Page 1 of 13

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

### 1.1. Product identifier

Sulfuric Acid 0.5 mol/l (1 N)

#### Further trade names

This MSDS covers this product in all container sizes.

UFI: 92CC-112P-C002-NEGS

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

#### Use of the substance/mixture

Use as laboratory reagent.

#### Uses advised against

Any non-intended use.

### 1.3. Details of the supplier of the safety data sheet

Company name:	MORPHISTO GmbH	
Street:	Schumannstr. 142/144	
Place:	D-63069 Offenbach	
Telephone:	+49 (0) 69 / 400 3019-60	Telefax: +49 (0) 69 / 400 3019-64
e-mail:	info@morphisto.de	
Contact person:	Morphisto GmbH	
e-mail:	info@morphisto.de	
Internet:	http://www.morphisto.de	

### 1.4. Emergency telephone number:

Poison Information Center Mainz, Germany, Tel: +49(0)6131/19240

## SECTION 2: Hazards identification

### 2.1. Classification of the substance or mixture

#### GB CLP Regulation

Met. Corr. 1; H290  
Skin Corr. 1A; H314  
Eye Irrit. 2; H319

Full text of hazard statements: see SECTION 16.

### 2.2. Label elements

#### GB CLP Regulation

#### Hazard components for labelling

Sulphuric acid 95%

Signal word: Danger

#### Pictograms:



#### Hazard statements

H290 May be corrosive to metals.  
H314 Causes severe skin burns and eye damage.

#### Precautionary statements

P260 Do not breathe dust/fume/gas/mist/vapours/spray.  
P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.

## Safety Data Sheet

according to UK REACH Regulation

### Sulfuric Acid 0.5 mol/l (1 N)

Revision date: 29.12.2022

Product code: 15294.xxxxx

Page 2 of 13

P301+P330+P331	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303+P361+P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310	Immediately call a POISON CENTER/doctor.

#### Additional advice on labelling

EUH071 - Corrosive to the respiratory tract.

#### 2.3. Other hazards

The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.

### SECTION 3: Composition/information on ingredients

#### 3.2. Mixtures

##### Chemical characterization

aqueous solution

##### Hazardous components

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	Classification (GB CLP Regulation)			
7732-18-5	AQUA (Water)			95 - < 100 %
	231-791-2			
7664-93-9	Sulphuric acid 95%			1 - < 5 %
	231-639-5	016-020-00-8		
	Met. Corr. 1, Skin Corr. 1A; H290 H314			

Full text of H and EUH statements: see section 16.

##### Specific Conc. Limits, M-factors and ATE

CAS No	EC No	Chemical name	Quantity
	Specific Conc. Limits, M-factors and ATE		
7732-18-5	231-791-2	AQUA (Water)	95 - < 100 %
	oral: LD50 = >89800 mg/kg		
7664-93-9	231-639-5	Sulphuric acid 95%	1 - < 5 %
	inhalation: LC50 = 0,375 mg/l (dusts or mists); oral: LD50 = 2140 mg/kg Skin Corr. 1A; H314: >= 15 - 100 Skin Irrit. 2; H315: >= 5 - < 15 Eye Irrit. 2; H319: >= 5 - < 15		

##### Further Information

Product does not contain listed SVHC substances > 0,1 % according to Regulation (EC) No. 1907/2006 Article 59 (REACH)

### SECTION 4: First aid measures

#### 4.1. Description of first aid measures

##### General information

First aider: Pay attention to self-protection! Remove affected person from the danger area and lay down. In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible). Remove contaminated, saturated clothing immediately.

##### After inhalation

Provide fresh air. Medical treatment necessary. Remove person to fresh air and keep comfortable for breathing. If breathing is irregular or stopped, administer artificial respiration. Where appropriate artificial ventilation. Call a physician immediately. In the case of lung irritation: Primary treatment using corticoide spray,

**Safety Data Sheet**

according to UK REACH Regulation

**Sulfuric Acid 0.5 mol/l (1 N)**

Revision date: 29.12.2022

Product code: 15294.xxxxx

Page 3 of 13

eg. Auxilison spray, Pulmicort-dosage-spray. (Auxilison and Pulmicort are registered trademarks.)

**After contact with skin**

After contact with skin, wash immediately with plenty of water and soap. Take off immediately all contaminated clothing and wash it before reuse. If skin irritation occurs: Get medical advice/attention. Rinse skin with water [or shower]. Call a physician immediately. Immediate medical treatment required because corrosive injuries that are not treated are hard to cure.

**After contact with eyes**

In case of contact with eyes flush immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart and consult an ophthalmologist. Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Consult an ophthalmologist.

**After ingestion**

Rinse mouth immediately and drink 1 glass of water. Adverse human health effects and symptoms: Gastric perforation. Do not allow a neutralisation agent to be drunk. Rinse mouth. Let water be drunk in little sips (dilution effect). Do NOT induce vomiting. Do not attempt to neutralise with alkalis, do not give active charcoal! Call a physician immediately.

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

Corrosion. Gastric perforation. vomiting. Cough. shortage of breath. Risk of serious damage to eyes. Danger of blindness!

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

Treat symptomatically. Treat symptomatically.

**SECTION 5: Firefighting measures****5.1. Extinguishing media****Suitable extinguishing media**

Co-ordinate fire-fighting measures to the fire surroundings.

**Unsuitable extinguishing media**

Full water jet

**5.2. Special hazards arising from the substance or mixture**

Non-flammable. In case of fire may be liberated: Sulphur oxides

**5.3. Advice for firefighters**

Wear a self-contained breathing apparatus and chemical protective clothing. Full protection suit. In case of fire: Wear self-contained breathing apparatus.  
In case of fire: Use acid-proof equipment only.  
In case of fire and/or explosion do not breathe fumes.

**Additional information**

Suppress gases/vapours/mists with water spray jet. Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.

**SECTION 6: Accidental release measures****6.1. Personal precautions, protective equipment and emergency procedures****General advice**

Provide adequate ventilation. Do not breathe gas/fumes/vapour/spray. Avoid contact with skin, eyes and clothes. Use personal protection equipment. Ventilate affected area. Remove persons to safety.

**For non-emergency personnel**

Clear danger zone. Follow emergency plan. Consult an expert.

**For emergency responders**

In case of fire: Use acid-proof equipment only.

**6.2. Environmental precautions**

Do not allow to enter into surface water or drains. Before discharge into sewage plants the product normally needs to be neutralised.

**Safety Data Sheet**

according to UK REACH Regulation

**Sulfuric Acid 0.5 mol/l (1 N)**

Revision date: 29.12.2022

Product code: 15294.xxxxx

Page 4 of 13

**6.3. Methods and material for containment and cleaning up****For containment**

Cover drains.

**For cleaning up**

Absorb with liquid-binding material (sand, diatomaceous earth, acid- or universal binding agents). Treat the recovered material as prescribed in the section on waste disposal.

**Other information**

Ventilate affected area. Clean contaminated objects and areas thoroughly observing environmental regulations.

**6.4. Reference to other sections**

Safe handling: see section 7

Personal protection equipment: see section 8

Disposal: see section 13

**SECTION 7: Handling and storage****7.1. Precautions for safe handling****Advice on safe handling**

If handled uncovered, arrangements with local exhaust ventilation have to be used. Do not breathe gas/fumes/vapour/spray. Provide adequate ventilation. Use extractor hood (laboratory). Avoid contact with skin, eyes and clothes. Wear suitable protective clothing. (See section 8.)

When diluting/dissolving, always have the water ready first, then slowly stir in the product. Always close containers tightly after the removal of product. Clear contaminated areas thoroughly.

**Advice on protection against fire and explosion**

Usual measures for fire prevention.

**Advice on general occupational hygiene**

Remove contaminated, saturated clothing immediately. Draw up and observe skin protection programme.

Wash hands and face before breaks and after work and take a shower if necessary. When using do not eat, drink, smoke, sniff. Remove contaminated, saturated clothing immediately. Draw up and observe skin protection programme. Wash hands and face before breaks and after work and take a shower if necessary.

When using do not eat, drink, smoke, sniff. Always close containers tightly after the removal of product. Do not eat, drink or smoke when using this product.

**Further information on handling**

Wear personal protection equipment (refer to section 8). Take off contaminated clothing and wash it before reuse. Contaminated work clothing should not be allowed out of the workplace. Street clothing should be stored separately from work clothing. When using do not eat, drink, smoke, sniff. Wash hands and face before breaks and after work and take a shower if necessary. Draw up and observe skin protection programme. Protect skin by using skin protective cream.

**7.2. Conditions for safe storage, including any incompatibilities****Requirements for storage rooms and vessels**

Keep container tightly closed. Keep locked up. Store in a place accessible by authorized persons only. Provide adequate ventilation as well as local exhaust at critical locations. Metal. Keep container tightly closed in a cool, well-ventilated place. Keep/Store only in original container.

Make sure spills can be contained, e.g. in sump pallets or kerbed areas.

Keep away from: alkali Unsuitable container/equipment material: Metal, base

**Hints on joint storage**

Do not store together with: Explosives. Oxidizing solids. Oxidizing liquids. Organic peroxides. Self-reactive substances and mixtures. Radioactive substances. Infectious substances.

**Further information on storage conditions**

Protect against: UV-radiation/sunlight., Heat, Frost, Humidity Recommended storage temperature: 15-25°C.

**7.3. Specific end use(s)**

## Safety Data Sheet

according to UK REACH Regulation

### Sulfuric Acid 0.5 mol/l (1 N)

Revision date: 29.12.2022

Product code: 15294.xxxxx

Page 5 of 13

See section 1.

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

#### Exposure limits (EH40)

CAS No	Substance	ppm	mg/m <sup>3</sup>	fibres/ml	Category	Origin
7664-93-9	Sulphuric acid (mist)	-	0.05		TWA (8 h)	WEL

#### DNEL/DMEL values

CAS No	Substance	Exposure route	Effect	Value
7664-93-9	Sulphuric acid 95%			
Worker DNEL, long-term		inhalation	systemic	0,05 mg/m <sup>3</sup>
Worker DNEL, acute		inhalation	local	0,1 mg/m <sup>3</sup>

#### PNEC values

CAS No	Substance	Value
7664-93-9	Sulphuric acid 95%	
Freshwater		0,03 mg/l
Marine water		0 mg/l
Freshwater sediment		0,002 mg/kg
Marine sediment		0,002 mg/kg
Micro-organisms in sewage treatment plants (STP)		8,8 mg/l

### 8.2. Exposure controls



#### Appropriate engineering controls

If handled uncovered, arrangements with local exhaust ventilation have to be used. Do not breathe gas/fumes/vapour/spray. Technical measures and the application of suitable work processes have priority over personal protection equipment. Provide washing facilities at the workplace, provide an eye shower or eyewash bottle and mark them. Provide adequate ventilation as well as local exhaust at critical locations. Use extractor hood (laboratory).

#### Individual protection measures, such as personal protective equipment

##### Eye/face protection

Suitable eye protection: goggles. Safety goggles with side protection. In case of increased risk add protective face shield. (EN 166)

##### Hand protection

When handling with chemical substances, protective gloves must be worn with the CE-label including the four control digits. The quality of the protective gloves resistant to chemicals must be chosen as a function of the specific working place concentration and quantity of hazardous substances. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves. Wear suitable gloves.

Suitable material:

FKM (fluororubber). - Thickness of glove material: 0,4 mm

**Safety Data Sheet**

according to UK REACH Regulation

**Sulfuric Acid 0.5 mol/l (1 N)**

Revision date: 29.12.2022

Product code: 15294.xxxxx

Page 6 of 13

 Breakthrough time  $\geq$  8 h

The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

Before using check leak tightness / impermeability. Protect skin by using skin protective cream. Draw up and observe skin protection programme.

**Skin protection**

Use of protective clothing. Lab apron. Material, acid-resistant

Minimum standard for preventive measures while handling with working materials are specified in the TRGS 500 (D).

**Respiratory protection**

In case of inadequate ventilation wear respiratory protection.

Respiratory protection necessary at:

exceeding exposure limit values

insufficient ventilation

generation/formation of aerosols

Suitable respiratory protective equipment: Combination filtering device (EN 14387) Type: ABEK-P2.

Identification color: white/brown/yellow/green.

The filter class must be suitable for the maximum contaminant concentration (gas/vapour/aerosol/particulates) that may arise when handling the product. If the concentration is exceeded, self-contained breathing apparatus must be used.

**Environmental exposure controls**

Do not allow uncontrolled discharge of product into the environment.

**SECTION 9: Physical and chemical properties**
**9.1. Information on basic physical and chemical properties**

Physical state:	Liquid	
Colour:	colourless, clear	
Odour:	stinging	
Melting point/freezing point:		not determined
Boiling point or initial boiling point and boiling range:		100 °C
Flammability		
Solid/liquid:		not applicable
Gas:		not applicable
Lower explosion limits:		not determined
Upper explosion limits:		not determined
Flash point:		not determined
Auto-ignition temperature:		not determined
Decomposition temperature:		not determined
pH-Value (at 20 °C):		<2
Viscosity / kinematic:		not determined
Water solubility:		miscible
Solubility in other solvents		not determined
Partition coefficient n-octanol/water:		not determined
Vapour pressure:		23 hPa
(at 20 °C)		
Vapour pressure:		123 hPa
(at 50 °C)		
Density (at 20 °C):		1,02 g/cm <sup>3</sup>
Relative vapour density:		not determined

**9.2. Other information**

**Safety Data Sheet**

according to UK REACH Regulation

**Sulfuric Acid 0.5 mol/l (1 N)**

Revision date: 29.12.2022

Product code: 15294.xxxxx

Page 7 of 13

**Information with regard to physical hazard classes**

Explosive properties

The product is not: Explosive.

Sustaining combustion:

No data available

Self-ignition temperature

Solid:

not determined

Gas:

not determined

Oxidizing properties

none

**Other safety characteristics**

Evaporation rate:

not determined

Solvent separation test:

not determined

Solvent content:

AQUA (Water) 95,28 %

Solid content:

not determined

Pour point:

not determined

Viscosity / dynamic:

not determined

Flow time:

not determined

**SECTION 10: Stability and reactivity****10.1. Reactivity**

Corrosive to metals. Possibility of hazardous reactions. Oxidizing agents, strong.

**10.2. Chemical stability**

The product is chemically stable under recommended conditions of storage, use and temperature. Thermal decomposition: Keep away from heat.

**10.3. Possibility of hazardous reactions**

Base, Peroxides, Oxidizing agent. Exothermic reaction with: alkali. Reducing agent. aldehydes. Alkali metals. Carbide. Alkaline earth metals. peroxides. Phosphorus oxides. Water. Hydrogen peroxide. Nitrates. Perchlorates. Chromium oxides. Ammonia. Nitrile. metals. organic materials. Chlorates. Bromate. permanganates, e.g. potassium permanganate

**10.4. Conditions to avoid**

Protect from direct sunlight.

Keep away from heat.

**10.5. Incompatible materials**

Metal. Keep away from: Base, Oxidizing agent, Peroxides. alkali, Reducing agent, organic materials. metals. Amines.

**10.6. Hazardous decomposition products**

In case of fire may be liberated: Sulphur oxides

**SECTION 11: Toxicological information****11.1. Information on hazard classes as defined in GB CLP Regulation****Acute toxicity**

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

**Safety Data Sheet**

according to UK REACH Regulation

**Sulfuric Acid 0.5 mol/l (1 N)**

Revision date: 29.12.2022

Product code: 15294.xxxxx

Page 8 of 13

CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
7732-18-5	AQUA (Water)				
	oral	LD50 mg/kg	>89800	Rat	Food Research. Vol. 21, Pg. 348, 1956
7664-93-9	Sulphuric acid 95%				
	oral	LD50 mg/kg	2140	Rat.	ECHA Dossier
	inhalation (4 h) dust/mist	LC50 mg/l	0,375	Rat.	ECHA Dossier

**Irritation and corrosivity**

Causes severe skin burns and eye damage.

Causes serious eye irritation.

**Sensitising effects**

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

**Carcinogenic/mutagenic/toxic effects for reproduction**

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

Sulphuric acid (CAS No. 7664-93-):

Developmental toxicity/teratogenicity:

Method: OECD Guideline 414 (Prenatal Developmental Toxicity Study)

Species: Rabbit

Exposure time: 29d

 Result: NOAEC = 19,3 mg/m<sup>3</sup>

Literature information: ECHA Dossier

**STOT-single exposure**

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

**STOT-repeated exposure**

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

Sulphuric acid (CAS No. 7664-93-):

Subacute inhalation toxicity:

Method: OECD Guideline 412 (Repeated Dose Inhalation Toxicity: 28/14-Day)

Species: Rat

Exposure time: 28d

 Result: LOAEC = 0,3 mg/m<sup>3</sup>

Literature information: ECHA Dossier

**Aspiration hazard**

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

**Specific effects in experiment on an animal**

There are no data available on the mixture itself.

**11.2. Information on other hazards**
**Further information**

The mixture is classified as hazardous according to regulation (EC) No 1272/2008 [CLP].

**SECTION 12: Ecological information**
**12.1. Toxicity**

The product is not: Ecotoxic.



**Safety Data Sheet**

according to UK REACH Regulation

**Sulfuric Acid 0.5 mol/l (1 N)**

Revision date: 29.12.2022

Product code: 15294.xxxxx

Page 9 of 13

CAS No	Chemical name					
	Aquatic toxicity	Dose	[h]   [d]	Species	Source	Method
7664-93-9	Sulphuric acid 95%					
	Acute fish toxicity	LC50 mg/l	16-28	96 h	Lepomis macrochirus	ECHA Dossier
	Acute algae toxicity	ErC50 mg/l	>100	72 h	Desmodesmus subspicatus	ECHA Dossier
	Acute crustacea toxicity	EC50 mg/l	>100	48 h	Daphnia magna	ECHA Dossier

**12.2. Persistence and degradability**

The methods for determining the biological degradability are not applicable to inorganic substances.

**12.3. Bioaccumulative potential**

No indication of bioaccumulation potential.

**12.4. Mobility in soil**

The product has not been tested.

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

The substances in the mixture do not meet the PBT/vPvB criteria according to UK REACH.

The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.

**12.6. Endocrine disrupting properties**

This product does not contain a substance that has endocrine disrupting properties with respect to non-target organisms as no components meets the criteria.

**Further information**

Avoid release to the environment.

**SECTION 13: Disposal considerations**
**13.1. Waste treatment methods**
**Disposal recommendations**

Do not allow to enter into surface water or drains. Dispose of waste according to applicable legislation. Consult the local waste disposal expert about waste disposal. Non-contaminated packages may be recycled. According to (EWC) European Waste Catalogue, allocation of waste identity numbers/waste descriptions must be carried out in a specific way for every industry and process.

Control report for waste code/ waste marking according to (EWC) European Waste Catalogue:

**List of Wastes Code - residues/unused products**

060704 WASTES FROM INORGANIC CHEMICAL PROCESSES; wastes from the MFSU of halogens and halogen chemical processes; solutions and acids, for example contact acid; hazardous waste

**List of Wastes Code - used product**

060704 WASTES FROM INORGANIC CHEMICAL PROCESSES; wastes from the MFSU of halogens and halogen chemical processes; solutions and acids, for example contact acid; hazardous waste

**List of Wastes Code - contaminated packaging**

060704 WASTES FROM INORGANIC CHEMICAL PROCESSES; wastes from the MFSU of halogens and halogen chemical processes; solutions and acids, for example contact acid; hazardous waste

**Contaminated packaging**

Wash with plenty of water. Completely emptied packages can be recycled. Handle contaminated packages in the same way as the substance itself.

**SECTION 14: Transport information**
**Land transport (ADR/RID)**
**14.1. UN number or ID number:**

UN 2796

**Safety Data Sheet**

according to UK REACH Regulation

**Sulfuric Acid 0.5 mol/l (1 N)**

Revision date: 29.12.2022

Product code: 15294.xxxxx

Page 10 of 13

**14.2. UN proper shipping name:** SULPHURIC ACID  
**14.3. Transport hazard class(es):** 8  
**14.4. Packing group:** II  
 Hazard label: 8



Classification code: C1  
 Limited quantity: 1 L  
 Excepted quantity: E2  
 Transport category: 2  
 Hazard No: 80  
 Tunnel restriction code: E

**Inland waterways transport (ADN)**

**14.1. UN number or ID number:** UN 2796  
**14.2. UN proper shipping name:** Sulphuric acid  
**14.3. Transport hazard class(es):** 8  
**14.4. Packing group:** II  
 Hazard label: 8



Classification code: C1  
 Limited quantity: 1 L  
 Excepted quantity: E2

**Marine transport (IMDG)**

**14.1. UN number or ID number:** UN 2796  
**14.2. UN proper shipping name:** SULPHURIC ACID  
**14.3. Transport hazard class(es):** 8  
**14.4. Packing group:** II  
 Hazard label: 8



Special Provisions: -  
 Limited quantity: 1 L  
 Excepted quantity: E2  
 EmS: F-A, S-B

**Air transport (ICAO-TI/IATA-DGR)**

**14.1. UN number or ID number:** UN 2796  
**14.2. UN proper shipping name:** SULPHURIC ACID  
**14.3. Transport hazard class(es):** 8  
**14.4. Packing group:** II  
 Hazard label: 8



Limited quantity Passenger: 0.5 L  
 Passenger LQ: Y840  
 Excepted quantity: E2  
 IATA-packing instructions - Passenger:

851

**Safety Data Sheet**

according to UK REACH Regulation

**Sulfuric Acid 0.5 mol/l (1 N)**

Revision date: 29.12.2022

Product code: 15294.xxxxx

Page 11 of 13

IATA-max. quantity - Passenger:	1 L
IATA-packing instructions - Cargo:	855
IATA-max. quantity - Cargo:	30 L

**14.5. Environmental hazards**

ENVIRONMENTALLY HAZARDOUS: No

**14.6. Special precautions for user**

Warning: strongly corrosive. Refer to section 6-8

**14.7. Maritime transport in bulk according to IMO instruments**

not relevant

**SECTION 15: Regulatory information****15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture****EU regulatory information**

Restrictions on use (REACH, annex XVII):

Entry 3, Entry 75

Information according to 2012/18/EU (SEVESO III): Not subject to 2012/18/EU (SEVESO III)

**Additional information**The mixture is classified as hazardous according to regulation (EC) No 1272/2008 [CLP].  
REACH 1907/2006 Appendix XVII: 3**National regulatory information**

Employment restrictions: Observe restrictions to employment for juveniles according to the 'juvenile work protection guideline' (94/33/EC).

Water hazard class (D): 1 - slightly hazardous to water

**15.2. Chemical safety assessment**

Chemical safety assessments for substances in this mixture were not carried out.

**SECTION 16: Other information****Changes**Rev. 1.00; 11.04.2016, Initial release  
Rev. 1,10; 9.04.2021; Revision Ch. 1 - 16.**Abbreviations and acronyms**

ADR: Accord européen sur le transport des marchandises dangereuses par Route

CAS Chemical Abstracts Service

DNEL: Derived No Effect Level

IARC: INTERNATIONAL AGENCY FOR RESEARCH ON CANCER

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)

ICAO: International Civil Aviation Organization

ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO)

GHS: Globally Harmonized System of Classification and Labelling of Chemicals

GefStoffV: Gefahrstoffverordnung (Ordinance on Hazardous Substances, Germany)

LOAEL: Lowest observed adverse effect level

LOAEC: Lowest observed adverse effect concentration

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

NOAEL: No observed adverse effect level

NOAEC: No observed adverse effect level

**Safety Data Sheet**

according to UK REACH Regulation

**Sulfuric Acid 0.5 mol/l (1 N)**

Revision date: 29.12.2022

Product code: 15294.xxxxx

Page 12 of 13

NTP: National Toxicology Program  
 N/A: not applicable  
 OSHA: Occupational Safety and Health Administration  
 PNEC: predicted no effect concentration  
 PBT: Persistent bioaccumulative toxic  
 RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail )  
 SARA: Superfund Amendments and Reauthorization Act  
 SVHC: substance of very high concern  
 TRGS Technische Regeln fuerGefahrstoffe  
 TSCA: Toxic Substances Control Act  
 VOC: Volatile Organic Compounds  
 VwVwS: Verwaltungsvorschrift wassergefaehrdender Stoffe  
 WGK: Wassergefaehrdungsklasse  
 CLP: Classification, labelling and Packaging  
 REACH: Registration, Evaluation and Authorization of Chemicals  
 GHS: Globally Harmonised System of Classification, Labelling and Packaging of Chemicals  
 UN: United Nations  
 CAS: Chemical Abstracts Service  
 DNEL: Derived No Effect Level  
 DMEL: Derived Minimal Effect Level  
 PNEC: Predicted No Effect Concentration  
 ATE: Acute toxicity estimate  
 LL50: Lethal loading, 50%  
 EL50: Effect loading, 50%  
 EC50: Effective Concentration 50%  
 ErC50: Effective Concentration 50%, growth rate  
 NOEC: No Observed Effect Concentration  
 BCF: Bio-concentration factor  
 PBT: persistent, bioaccumulative, toxic  
 vPvB: very persistent, very bioaccumulative  
 ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)  
 RID: Regulations concerning the international carriage of dangerous goods by rail  
 ADN: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways (Accord européen relatif au transport international des marchandises dangereuses par voies de navigation intérieures)  
 EmS: Emergency Schedules  
 MFAG: Medical First Aid Guide  
 MARPOL: International Convention for the Prevention of Marine Pollution from Ships  
 IBC: Intermediate Bulk Container  
 For abbreviations and acronyms, see table at <http://abbrev.esdscom.eu>  
 For abbreviations and acronyms, see: ECHA Guidance on information requirements and chemical safety assessment, chapter R.20 (Table of terms and abbreviations).

**Classification for mixtures and used evaluation method according to GB CLP Regulation**

Classification	Classification procedure
Met. Corr. 1; H290	Calculation method
Skin Corr. 1A; H314	Calculation method
Eye Irrit. 2; H319	Calculation method

**Relevant H and EUH statements (number and full text)**

H290 May be corrosive to metals.  
 H314 Causes severe skin burns and eye damage.  
 H319 Causes serious eye irritation.

**Safety Data Sheet**

according to UK REACH Regulation

**Sulfuric Acid 0.5 mol/l (1 N)**

Revision date: 29.12.2022

Product code: 15294.xxxxx

Page 13 of 13

**Further Information**

The information is based on the present level of our knowledge. It does not, however, give assurance of product properties and establishes no contract legal rights. The receiver of our product is singularly responsible for adhering to existing laws and regulations. The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material.

---

*(The data for the hazardous ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)*