Safety data sheet
according to 1907/2006/EC, Article 31

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

· **1.1 Product identifier**

· **Trade name: sulphuric acid 95 - 97%**

· **Article number:** 3163
· **CAS Number:**
7664-93-9
· **EC number:**
231-639-5
· **Index number:**
016-020-00-8
· **Application of the substance / the mixture** Laboratory chemicals

· **1.3 Details of the supplier of the safety data sheet**
· **Manufacturer/Supplier:**
PANREAC QUIMICA S.L.U.
C/Garraf 2
Polígono Pla de la Bruguera
E-08211 Castellar del Vallès (Barcelona)
Tel. (+34) 937 489 400
Fax. (+34) 937 489 401
e-mail: product.safety@itwreagents.com

· **Further information obtainable from:** email: product.safety@panreac.com
· **1.4 Emergency telephone number:**
Single telephone number for emergency calls: 112 (EU)
Tel.: (+34) 937 489 499

SECTION 2: Hazards identification

· **2.1 Classification of the substance or mixture**
· **Classification according to Regulation (EC) No 1272/2008**

Met. Corr.1	H290 May be corrosive to metals.
Skin Corr. 1A	H314 Causes severe skin burns and eye damage.
Eye Dam. 1	H318 Causes serious eye damage.

· **2.2 Label elements**
· **Labelling according to Regulation (EC) No 1272/2008**
The substance is classified and labelled according to the GB CLP regulation.

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· **Hazard pictograms**

GHS05

· **Signal word** Danger
· **Hazard statements**
H290 May be corrosive to metals.
H314 Causes severe skin burns and eye damage.
· **Precautionary statements**

P280	Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.
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.
P321	Specific treatment (see on this label).
P405	Store locked up.
P501	Dispose of contents/container in accordance with local/regional/national/international regulations.

· **2.3 Other hazards**
· **Results of PBT and vPvB assessment**
· **PBT:** Not applicable.
· **vPvB:** Not applicable.

SECTION 3: Composition/information on ingredients

· **3.1 Substances**
· **CAS No. Description**
7664-93-9 sulphuric acid 95 - 97%
· **Identification number(s)** 016-020-00-8
· **EC number:** 231-639-5
· **Index number:** 016-020-00-8

SECTION 4: First aid measures

· **4.1 Description of first aid measures**
· **General information:**
Personal protection for the First Aider.
Involve doctor immediately.
· **After inhalation:** In case of unconsciousness place patient stably in side position for transportation.
· **After skin contact:**
Call a doctor immediately.
Immediately wash with water and soap and rinse thoroughly.
· **After eye contact:** Rinse opened eye for several minutes under running water. Then consult a doctor.
· **After swallowing:**
make victim drink water (maximum of 2 drinking glasses)
Call a doctor immediately.
· **4.2 Most important symptoms and effects, both acute and delayed**
Breathing difficulty

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Coughing
Nausea
Gastric or intestinal disorders

· **4.3 Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

SECTION 5: Firefighting measures

· **5.1 Extinguishing media**
· **Suitable extinguishing agents:**
CO_2, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
· **5.2 Special hazards arising from the substance or mixture**
In case of fire, the following can be released:
Sulphur oxides (SOx)
Non-combustible.
· **5.3 Advice for firefighters**
· **Protective equipment:** Wear self-contained respiratory protective device.
· **Additional information**
Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.
Contain escaping vapours with water.

SECTION 6: Accidental release measures

· **6.1 Personal precautions, protective equipment and emergency procedures**
Wear protective equipment. Keep unprotected persons away.
Avoid substance contact.
Do not inhale steams/aerosols.
· **6.2 Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
· **6.3 Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Use neutralising agent.
Dispose contaminated material as waste according to section 13.
Ensure adequate ventilation.
Clean up affected area.
· **6.4 Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

SECTION 7: Handling and storage

· **7.1 Precautions for safe handling**
When diluting always pour product into water and not vice versa.
Ensure good ventilation/exhaustion at the workplace.
Prevent formation of aerosols.
· **Information about fire - and explosion protection:** The product is not flammable.

· **7.2 Conditions for safe storage, including any incompatibilities**
· **Storage:**
· **Requirements to be met by storerooms and receptacles:** Provide acid-resistant floor.
· **Information about storage in one common storage facility:**
Store away from foodstuffs and feedstuffs
Do not store near flammable materials.

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Store away from water.
Store away from metals.
· **Further information about storage conditions:**
This product is hygroscopic.
Keep container tightly sealed.
Open receptacle only under localised extractor facilities.
Protect from humidity and water.
Store under lock and key and with access restricted to technical experts or their assistants only.
· **Recommended storage temperature:** Room Temperature
· **Storage class:** 8 B
· **7.3 Specific end use(s)** No further relevant information available.

SECTION 8: Exposure controls/personal protection

· **8.1 Control parameters**

· **Ingredients with limit values that require monitoring at the workplace:**	
7664-93-9 sulphuric acid 95 - 97%	
WEL	Long-term value: 0.05* mg/m³ *mist: defined as thoracic fraction

· **DNELs**		
Inhalative	Acute - local effects, worker	0.1 mg/m3
	Long-term - local effects, worker	0.05 mg/m3

· **PNECs**	
Aquatic compartment - freshwater	0.0025 mg/L
Aquatic compartment - marine water	0.00025 mg/L
Aquatic compartment - sediment in freshwater	0.002 mg/kg
Aquatic compartment - sediment in marine water	0.002 mg/kg
Sewage treatment plant	8.8 mg/L

· **Additional information:** The lists valid during the making were used as basis.

· **8.2 Exposure controls**
· **Appropriate engineering controls** No further data; see section 7.
· **Individual protection measures, such as personal protective equipment**
· **General protective and hygienic measures:**
Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing
Wash hands before breaks and at the end of work.
Avoid contact with the eyes and skin.
· **Respiratory protection:**
In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.
Use suitable respiratory protective device only when aerosol or mist is formed.
· **Recommended filter device for short term use:** Combination filter B-P2
· **Hand protection**

Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

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· **Material of gloves**
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.
· **Penetration time of glove material**
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
· **For the permanent contact gloves made of the following materials are suitable:**
Fluorocarbon rubber (Viton)
Recommended thickness of the material: ≥ 0.7 mm
Value for the permeation: Level ≥ 480 min
· **As protection from splashes gloves made of the following materials are suitable:**
Butyl rubber, BR
Recommended thickness of the material: ≥ 0.7 mm
Value for the permeation: Level ≥ 120 min
· **Eye/face protection**

Gauze goggles

· **Body protection:**
Use protective suit.
Acid resistant protective clothing

SECTION 9: Physical and chemical properties

· **9.1 Information on basic physical and chemical properties**	
· **General Information**	
· **Physical state**	Fluid
· **Colour:**	Colourless
· **Odour:**	Odourless
· **Odour threshold:**	Not determined.
· **Melting point/freezing point:**	-20 °C
· **Boiling point or initial boiling point and boiling range**	330 °C
· **Flammability**	Not applicable.
· **Lower and upper explosion limit**	
· **Lower:**	Not determined.
· **Upper:**	Not determined.
· **Flash point:**	Not applicable.
· **Decomposition temperature:**	Not determined.
· **pH**	<1 (5%)
· **Viscosity:**	
· **Kinematic viscosity**	Not determined.
· **Dynamic at 20 °C:**	23 mPas
· **Solubility**	
· **water:**	Fully miscible.
· **Partition coefficient n-octanol/water (log value)**	Not determined.
· **Vapour pressure at 20 °C:**	<0.0001 hPa
· **Density and/or relative density**	
· **Density at 20 °C:**	1.84 g/cm³
· **Relative density**	Not determined.
· **Vapour density**	Not determined.

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· **9.2 Other information**	
· **Appearance:**	
· **Form:**	Liquid
· **Important information on protection of health and environment, and on safety.**	
· **Ignition temperature:**	Not determined.
· **Explosive properties:**	Product does not present an explosion hazard.
· **Molecular weight**	98.07 g/mol
· **Change in condition**	
· **Evaporation rate**	Not determined.

· **Information with regard to physical hazard classes**	
· **Explosives**	Void
· **Flammable gases**	Void
· **Aerosols**	Void
· **Oxidising gases**	Void
· **Gases under pressure**	Void
· **Flammable liquids**	Void
· **Flammable solids**	Void
· **Self-reactive substances and mixtures**	Void
· **Pyrophoric liquids**	Void
· **Pyrophoric solids**	Void
· **Self-heating substances and mixtures**	Void
· **Substances and mixtures, which emit flammable gases in contact with water**	Void
· **Oxidising liquids**	Void
· **Oxidising solids**	Void
· **Organic peroxides**	Void
· **Corrosive to metals**	May be corrosive to metals.
· **Desensitised explosives**	Void

SECTION 10: Stability and reactivity

· **10.1 Reactivity** No further relevant information available.
· **10.2 Chemical stability**
· **Thermal decomposition / conditions to be avoided:** Heating.
· **10.3 Possibility of hazardous reactions**
Acts as an oxidising agent on organic materials such as wood, paper and fats.
· **10.4 Conditions to avoid** No further relevant information available.
· **10.5 Incompatible materials:**
A risk of explosion and/or of toxic gas formation exists with the following substances:
alkali metals
alkali compounds
ammonia
alkaline earth metals
alkaline earth compounds
metal alloys
phosphorus oxides
phosphorus
hydrides
halogen-halogen compounds
oxyhalogenic compounds

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permanganates
nitrates
carbides
organic solvents
acetylidene
nitriles
nitrides
organic nitro compounds
anilines
peroxides
picrates
lithium silicide

· **10.6 Hazardous decomposition products:** In the event of fire: See chapter 5
· **Additional information:**
hygroscopic
has a corrosive effect
Incompatible with:
metals
animal tissues
vegetable tissues
Hydrogen may form upon contact with metals (danger of explosion!).

SECTION 11: Toxicological information

· **11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008**
· **Acute toxicity** Based on available data, the classification criteria are not met.
· **LD/LC50 values relevant for classification:**
Quantitative data on the toxicological effect of this product are not available.

· Components	Type	Value	Species
Oral	LD50	2,140 mg/kg (rat)	
Inhalative	LC50/2 h	510 mg/l (rat)	

· **Skin corrosion/irritation** Causes severe skin burns and eye damage.
· **Serious eye damage/irritation** Causes serious eye damage.
· **After inhalation:** Strong caustic effect on skin and mucous membranes.
· **11.2 Information on other hazards**
· **Endocrine disrupting properties** Substance is not listed.

SECTION 12: Ecological information

· **12.1 Toxicity**
· **Aquatic toxicity:** No further relevant information available.

· Type of test	Effective concentration	Method	Assessment
EC50	2,500 mg/l (Bakterien)		
	1.2 mg/l (fish)		
EC50/96 h	10 mg/l (Aquatic plants)		
EC50/24 h	29 mg/l (daphnia magna) (bezogen auf die Reinsubstanz)		

· **12.2 Persistence and degradability** No further relevant information available.
· **12.3 Bioaccumulative potential** No further relevant information available.
· **12.4 Mobility in soil** No further relevant information available.

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· **12.5 Results of PBT and vPvB assessment**
· **PBT:** Not applicable.
· **vPvB:** Not applicable.
· **12.6 Endocrine disrupting properties**
The product does not contain substances with endocrine disrupting properties.
· **12.7 Other adverse effects**
· **Additional ecological information:**
· **General notes:**
Do not allow product to reach ground water, water course or sewage system.
Water hazard class 1 (German Regulation) (Assessment by list): slightly hazardous for water
Must not reach sewage water or drainage ditch undiluted or unneutralised.
Rinse off of bigger amounts into drains or the aquatic environment may lead to decreased pH-values. A low pH-value harms aquatic organisms. In the dilution of the use-level the pH-value is considerably increased, so that after the use of the product the aqueous waste, emptied into drains, is only low water-dangerous.

SECTION 13: Disposal considerations

· **13.1 Waste treatment methods**
· **Recommendation**
Chemicals must be disposed of in compliance with the respective national regulations.
Must not be disposed together with household garbage. Do not allow product to reach sewage system.

· **Uncleaned packaging:**
· **Recommendation:**
Disposal must be made according to official regulations.
Packagings that may not be cleansed are to be disposed of in the same manner as the product.

SECTION 14: Transport information

· **14.1 UN number or ID number**	
· **ADR, IMDG, IATA**	UN1830
· **14.2 UN proper shipping name**	
· **ADR, IMDG, IATA**	SULPHURIC ACID
· **14.3 Transport hazard class(es)**	
· **ADR**	

· **Class**	8 (C1) Corrosive substances.
· **Label**	8
· **IMDG, IATA**	

· **Class**	8 Corrosive substances.
· **Label**	8

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· **14.4 Packing group**	
· **ADR, IMDG, IATA**	II
· **14.5 Environmental hazards:**	Not applicable.
· **14.6 Special precautions for user**	Warning: Corrosive substances.
· **Hazard identification number (Kemler code):**	80
· **EMS Number:**	F-A,S-B
· **Segregation groups**	(SGG1a) Strong acids
· **Stowage Category**	C
· **Stowage Code**	SW15 For metal drums, stowage category B.
· **Segregation Code**	SG36 Stow "separated from" SGG18-alkalis. SG49 Stow "separated from" SGG6-cyanides
· **14.7 Maritime transport in bulk according to IMO instruments**	Not applicable.
· **Transport/Additional information:**	
· **ADR**	
· **Limited quantities (LQ)**	1L
· **Excepted quantities (EQ)**	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· **Transport category**	2
· **Tunnel restriction code**	E
· **IMDG**	
· **Limited quantities (LQ)**	1L
· **Excepted quantities (EQ)**	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· **UN "Model Regulation":**	UN 1830 SULPHURIC ACID, 8, II

SECTION 15: Regulatory information

· **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**

· **Directive 2012/18/EU**
· **Named dangerous substances - ANNEX I** Substance is not listed.
· **15.2 Chemical safety assessment:** A Chemical Safety Assessment has been carried out.

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SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Abbreviations and acronyms:**
ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
GHS: Globally Harmonised System of Classification and Labelling of Chemicals
EINECS: European Inventory of Existing Commercial Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
DNEL: Derived No-Effect Level (UK REACH)
PNEC: Predicted No-Effect Concentration (UK REACH)
LC50: Lethal concentration, 50 percent

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LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
Met. Corr.1: Corrosive to metals – Category 1
Skin Corr. 1A: Skin corrosion/irritation – Category 1A
Eye Dam. 1: Serious eye damage/eye irritation – Category 1
· *** Data compared to the previous version altered.**

Annex: Exposure scenario

· **Short title of the exposure scenario** Formulation and packing/repacking of substances and mixtures
· **Description of the activities / processes covered in the Exposure Scenario**
See section 1 of the annex to the Safety Data Sheet.
· **Conditions of use**
· **Duration and frequency** 5 workdays/week.
· **Physical parameters**
· **Physical state** Fluid
· **Concentration of the substance in the mixture** Raw material.
· **Other operational conditions**
· **Other operational conditions affecting environmental exposure** No special measures required.
· **Other operational conditions affecting worker exposure**
Avoid contact with eyes.
Avoid contact with the skin.
· **Other operational conditions affecting consumer exposure** No special measures required.
· **Other operational conditions affecting consumer exposure during the use of the product**
Not applicable.
· **Risk management measures**
· **Worker protection**
· **Organisational protective measures** No special measures required.
· **Technical protective measures** Ensure that suitable extractors are available on processing machines
· **Personal protective measures**
Do not inhale gases / fumes / aerosols.
Avoid contact with the skin.
Avoid contact with the eyes.
Tightly sealed goggles
Protective gloves
The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation
· **Measures for consumer protection** Ensure adequate labelling.
· **Environmental protection measures**
· **Water**
Generally, prior to the introduction of wastewater into wastewater treatment plants a neutralisation is required.
· **Disposal measures** Ensure that waste is collected and contained.
· **Disposal procedures**
Must not be disposed together with household garbage. Do not allow product to reach sewage system.
· **Waste type** Partially emptied and uncleaned packaging
· **Exposure estimation**
· **Consumer** Not relevant for this Exposure Scenario.
· **Guidance for downstream users** No further relevant information available.