

MATERIAL SAFETY DATA SHEET (MSDS)



PRODUCT NAME: SULPHURIC ACID

CAS No.: 7664-93-9

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

1.1. Product identifier

Product form	: Substance
Product name	: SULPHURIC ACID
Type of product	: Acid
Product Grades (Applicable)	: AR,ACS
Product Code	: S0002A (Pack size(s):- 2.5 Lt , 05 Lt
CAS No	: 7664-93-9
Formula	: H2SO4

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

1.2.1. Relevant identified uses	: Laboratory chemicals, Manufacture of substances
1.2.2. Uses advised against	: No additional information available

1.3. Details of the supplier of the safety data sheet

RYZE CHEMIE
W-68,Mankivli MIDC
Badlapur (E), Thane,
Maharashtra-421503
www.ryzechemie.com

1.4. Emergency Telephone Number

+91- 99-3006-04-04 :

SECTION 2: Hazards Identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Skin corrosion/irritation, H314

Category 1

Full text of classification categories and H statements : see section 16

Classification according to Directive 67/548/EEC or 1999/45/EC

Repr.Cat.1; R61


Repr.Cat.3; R62
Xn; R48/22
Xn; R48/22
R33
Full text of R-phrases: see section 16

Adverse physicochemical, human health and environmental effects

Causes severe skin burns and eye damage.

2.2. Label Elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP)	:	
		GHS05
Signal word (CLP)	:	Danger
Hazard statements (CLP)	:	H314 - Causes severe skin burns and eye damage
Precautionary statements (CLP)	:	P260 - Do not breathe dust/fume/gas/mist/vapours/ spray. P264 - Wash hands, forearms and face thoroughly after handling. P280 - Wear protective gloves/protective clothing/eye protection/face protection 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 P304+P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P321 - Specific treatment (see supplemental first aid instruction on this label). P405 - Store locked up. P501 - Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation P310 - Immediately call a POISON CENTER/doctor/...

2.3. Other hazards

Contains no PBT and/or vPvB substances $\geq 0.1\%$ assessed in accordance with REACH Annex XIII

SECTION 3: Composition/information on ingredients

3.1. Substance

Name : SULPHURIC ACID

CAS No : 7664-93-9
 EC-No. : 231-639-5
 EC Index-No. : 016-020-00-8

Name	Product identifier	%
SULPHURIC ACID 98%	CAS-No.: 7664-93-9 EC-No.: 231-639-5 EC Index-No.: 016-020-00-8	98

3.2. Mixture

Not applicable

SECTION 4: : First aid measures

4.1. Description of first aid measures

First-aid measures general : Call a physician immediately

First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing. Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/doctor.

First-aid measures after skin contact : Take off immediately all contaminated clothing. Rinse skin with water/shower. Immediately

First-aid measures after eye contact : Rinse cautiously with water for several minutes. Remove contact lenses,if present and easy to do Continue rinsing. Immediately call a POISON CENTER/doctor.

First-aid measures after ingestion : Rinse mouth. Do NOT induce vomiting. Call a poison center or a doctor if you feel unwell.

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

Symptoms/effects : Causes severe skin burns and eye damage.

SymptoSymptoms/effects after inhalation : Serious damage to eyes.

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

No additional information available

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Dry powder. Water spray. Foam. Carbon dioxide.

Unsuitable extinguishing media : Do not use extinguishing media containing water. Carbon dioxide (CO2). Foam.

5.2. Special hazards arising from the substance or mixture

Hazardous decomposition products in case of fire : Toxic fumes may be released.

5.3. Advice for firefighters

Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection Do not

attempt to take action without suitable protective equipment. Self-contained breathing apparatus.
Complete protective clothing

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Emergency procedures : Ventilate spillage area. Evacuate unnecessary personnel.
Avoid contact with skin and eyes. Do not breathe dust/
fume/gas/mist/vapours/spray.

6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. Use personal protective equipment as required. For further information refer to section 8: "Exposure controls/personal protection".

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Take up liquid spill into absorbent material. On land, sweep or shovel into suitable containers. Collect spillage.
Other information : Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

For further information refer to section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Ensure good ventilation of the work station. Do not breathe vapours. Avoid contact with skin and eyes. Provide good ventilation in process area to prevent formation of vapour. Do not breathe dust/fume/gas/mist/vapours/spray. Wear personal protective equipment.
Hygiene measures : Do not eat, drink or smoke when using this product. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Wash contaminated clothing before reuse. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures : NA
Storage conditions : Store in a well-ventilated place. Keep container tightly closed. Store locked up. Store in a well-ventilated place. Keep cool.

Packaging materials : NA

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1 National occupational exposure and biological limit values

No additional information available

8.1.2. Recommended monitoring procedures

No additional information available

8.1.3. Air contaminants formed

No additional information available

8.1.4. DNEL and PNEC

No additional information available

8.1.5. Control banding

No additional information available

8.2. Exposure controls

Hand protection	: Protective gloves
Eye protection	: Chemical goggles or safety glasses
Skin and body protection	: Wear suitable protective clothing
Respiratory protection	: Wear respiratory protection

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Appearance	: Colourless.
Molecular mass	: 98.08 g/mol
Colour	: Clear Colorless.
Odour	: Odourless.
Odour threshold	: No data available
pH	: 1.2 (5 g/L)
pH solution concentration	: No data available
Relative evaporation rate	: No data available
Melting point	: No data available
Freezing point	: No data available
Boiling point	: 290 °C
Flash point	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: No data available
Vapour pressure	: 1.33 hPa at 145.8°C
Relative vapour density at 20 °C	: No data available

Relative density	: 3.39 (Air = 1.0)
Density	: 1.84 g/cm ³ at 25°C
Relative gas density	: No data available
Solubility	: Water: Miscible in water
Partition coefficient n-octanol/water (Log Pow)	: No data available
Viscosity, kinematic	: 12.5 mm ² /s
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidising properties	: No data available
Explosive limits	: No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

Thermal decomposition generates : Corrosive vapours.

10.2. Chemical Stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

Direct sunlight. Air contact. Moisture.

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

Thermal decomposition generates : Corrosive vapours.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral)	: Not classified
Acute toxicity (dermal)	: Not classified
Acute toxicity (inhalation)	: Not classified
Skin corrosion/irritation	: Causes severe skin burns and eye damage.
Serious eye damage/irritation	: Assumed to cause serious eye damage
Respiratory or skin sensitisation	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified
STOT-single exposure	: Not classified
STOT-repeated exposure	: Not classified
Aspiration hazard	: Not classified
Potential adverse human health	: NA

effects and symptoms

SULPHURIC ACID 98% EXTRA PURE (7664-93-9)	
Viscosity, kinematic	12.5 mm ² /s

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general	:	Before neutralisation, the product may represent a danger to aquatic org
Ecology - Water		
Hazardous to the aquatic environment, short-term(acute)	:	No additional information available
Hazardous to the aquatic environment, long-term (chronic)	:	No additional information available

12.2. Persistence and degradability

No additional information available

12.3. Bioaccumulative potential

No additional information available

12.4. Mobility in soil

No additional information available

12.5. Results of PBT and vPvB assessment

No additional information available

12.6. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste treatment methods	:	Dispose of contents/container in accordance with licensed collector's sorting instructions
Product/Packaging disposal recommendations		Dispose of contents/container to hazardous or special I waste collection point, in accordance with local, regional, national and/or international regulation.
Additional information	:	NA

SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

14.1. UN number

UN-No. (ADR)	:	UN 1830
UN-No. (IMDG)	:	UN 1830
UN-No.(IATA)	:	UN 1830
UN-No.(ADN)	:	UN 1830
UN-No. (RID)	:	UN 1830

14.2. UN proper shipping name

Proper Shipping Name (ADR)	: SULPHURIC ACID
Proper Shipping Name (IMDG)	: SULPHURIC ACID
Proper Shipping Name (IATA)	: Sulphuric acid
Proper Shipping Name (ADN)	: SULPHURIC ACID
Proper Shipping Name (RID)	: SULPHURIC ACID
Transport document description (ADR)	: UN 1830 SULPHURIC ACID, 8, II, (E)
Transport document description (IMDG)	: UN 1830 SULPHURIC ACID, 8, II
Transport document description (IATA)	: UN 1830 Sulphuric acid, 8, II
Transport document description (ADN)	: UN 1830 SULPHURIC ACID, 8, II
Transport document description (RID)	: UN 1830 SULPHURIC ACID, 8, II

14.3. Transport hazard class(es)

ADR

Transport hazard class(es) (ADR)	: 8
Danger labels (ADR)	: 8



IMDG

Transport hazard class(es) (IMDG)	: 8
Danger labels (IMDG)	: 8



IATA

Transport hazard class(es) (IATA)	: 8
Hazard labels (IATA)	: 8



ADN

Transport hazard class(es) (ADN)	: 8
Hazard labels (ADN)	: 8



RID

Transport hazard class(es) (RID)	: 8
Hazard labels (RID)	: 8



14.4. Packing group

Packing group (ADR)	: II
Packing group (IMDG)	: II
Packing group (IATA)	: II
Packing group (ADN)	: II
Packing group (RID)	: II

14.5. Environmental hazards

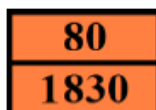
Dangerous for the environment	: No
Marine pollutant	: No
Other information	: No supplementary information available

14.6. Special precautions for user

Overland transport	:
Classification code (ADR)	: C1
Limited quantities (ADR)	: 1 LT

Excepted quantities (ADR) : E2
 Packing instructions (ADR) : P0001, IBC02
 Special packing provisions (ADR) : 520
 Mixed packing provisions (ADR) : MP15
 Portable tank and bulk container instructions (ADR) : T8
 Portable tank and bulk container special provisions (ADR) : TP2
 Tank code (ADR) : L4BN
 Vehicle for tank carriage : AT
 Transport category (ADR) : 2
 Special provisions for carriage - Bulk (ADR) : NA
 Special provisions for carriage - Loading, unloading and handling (ADR) : NA
 Special provisions for carriage - Operation (ADR) : NA
 Hazard identification number (Kemler No.) : 80

Orange plates :



Tunnel restriction code (ADR) : E
 EAC code : 2P
- Transport by sea
 Limited quantities (IMDG) : 1 Lt
 Excepted quantities (IMDG) : E2
 Packing instructions (IMDG) : P001
 IBC packing instructions (IMDG) : IBC02
 Tank instructions (IMDG) : T8
 Tank special provisions (IMDG) : TP2
 EmS-No. (Fire) : F-A
 EmS-No. (Spillage) : S-B
 Stowage category (IMDG) : C
 Segregation (IMDG) : SGG1A, SG36, SG49
 MFAG-No : 137

- Air transport

PCA Excepted quantities (IATA) : E2
 PCA Limited quantities (IATA) : Y840
 PCA limited quantity max net quantity (IATA) : 0.5Lt
 PCA packing instructions (IATA) : 851
 PCA max net quantity (IATA) : 1L
 CAO packing instructions (IATA) : 855
 CAO max net quantity (IATA) : 30L
 ERG code (IATA) : 8L

- Inland waterway transport

Classification code (ADN) : C1
 Limited quantities (ADN) : 1 L
 Excepted quantities (ADN) : E2
 Equipment required (ADN) : PP, EP

Special provisions (AND)	: 520
Number of blue cones/lights (ADN)	: 0
- Rail transport	
Classification code (RID)	: C1
Limited quantities (RID)	: 1 Lt
Excepted quantities (RID)	: E2
Packing instructions (RID)	: P001, IBC02
Mixed packing provisions (RID)	: MP15
Special provisions (RID)	: 520
Portable tank and bulk container instructions (RID)	: T8
Portable tank and bulk container special provisions (RID)	: TP2
Tank codes for RID tanks (RID)	: L4BN
Transport category (RID)	: 2
Colis express (express parcels) (RID)	: CE6
Hazard identification number (RID)	: 80

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

SECTION 15: Regulatory information

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

15.1.1. EU-Regulations

REACH Annex XVII (Restriction List)

EU restriction list (REACH Annex XVII)	
Reference code	Applicable on
3(b)	SULPHURIC ACID 98% EXTRA PURE

REACH Annex XIV (Authorisation List)

Not listed on REACH Annex XIV (Authorisation List)

REACH Candidate List (SVHC)

Listed on the PIC list (Regulation EU 649/2012): Lead(II) acetate trihydrate

PIC Regulation (Prior Informed Consent)

Not listed on the POP list (Regulation EU 2019/1021)

POP Regulation (Persistent Organic Pollutants)

Not listed on the POP list (Regulation EU 2019/1021)

Ozone Regulation (1005/2009)

Not listed on the Ozone Depletion list (Regulation EU 1005/2009)

Explosives Precursors Regulation (2019/1148)

Contains no substance(s) listed on the Explosives Precursors list
 (Regulation EU 2019/1148 on the marketing and use of explosives precursors)

Drug Precursors Regulation (273/2004)

Contains no substance(s) listed on the Drug Precursors list (Regulation EC 273/2004 on the manufacture and the placing on market of certain substances used in the illicit manufacture of narcotic drugs and psychotropic substances

15.1.2. National regulations

Germany

- Water hazard class (WGK) : WGK 1, Slightly hazardous to water (Classification according to AwSV; ID No. 182).
- 12th Ordinance Implementing the Federal Immission Control Act - 12.BImSchV : Is not subject of the 12. BImSchV (Hazardous Incident Ordinance

Denmark

- Recommendations Danish Regulation : Young people below the age of 18 years are not allowed to use the product.

15.2. Chemical safety assessment

No additional information available

SECTION 16: Other information

Abbreviations and acronyms:	
ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE	Acute Toxicity Estimate
BCF	Bioconcentration factor
BLV	Biological limit value
BOD	Biochemical oxygen demand (BOD)
COD	Chemical oxygen demand (COD)
DMEL	Derived Minimal Effect level
DNEL	Derived-No Effect Level
EC-No.	European Community number
EC50	Median effective concentration
EN	European Standard
IARC	International Agency for Research on Cancer
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
LC50	Median lethal concentration

purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.

