

MATERIAL SAFETY DATA SHEET

[As per Schedule 5 of the Gujarat Factories (Amended) Rules-1995 under rule 68-J, 2(2) & 2(3)]

SAFETY DATA SHEET

1. CHEMICAL IDENTITY

Chemical Name	SULPHURIC ACID		Chemical Classification	Inorganic Acid
Synonyms	Battery Acid, Spent Sulphuric Acid.		Trade Name	
Formula	H₂SO₄		C.A.S.No.	7664-93-9
Regulated Identifications	Shipping Name		SULPHURIC ACID	
	Codes/Label			
	Hazardous Waste I.D.No.		16	
	Hazchem No.		2P	
Hazardous Ingredients		C.A.S. No.	Hazardous Ingredients	C.A.S. No.
1	SULPHURIC ACID	7664-93-9		

2. PHYSICAL AND CHEMICAL DATA

BOILING Range / Point °C	Physical State	Appearance
290 °C	Liquid	Colourless, Oily
Melting/Freezing Point °C	Vapour Pressure at 35°C	Odour
10/3 °C	1 mm Hg at 145°C	Odourless
Vapour Density (Air =1)	Solubility in water at 30°C	Others
Not Available	Soluble in all Miscible	Miscible with Alcohol.
Specific Gravity (Water=1)	pH	
1.84 at 20°C (liq.)	<1	

3. FIRE AND EXPLOSION HAZARD DATA

Flammability	LEL	Flash Point °C	
No	Not Pertinent %	Not Pertinent (OC)	
TDG Flammability	UEL	Flash Point °C	
N.A.	Not Pertinent %	Not Pertinent (CC)	
Autoignition Temperature °C	Not Pertinent	Combustible Liquid	No
Explosion Sensitivity to Impact	Stable	Flammable Material	No
Explosion Sensitivity to Static Electricity	Stable	Pyrophoric Material	No
Hazardous Combustion Product	Emits Toxic Fumes of SO_x	Explosive Material	No
		Oxidiser	Yes
Hazardous Polymerisation	Will not occur	Organic Peroxide	No
Others		Corrosive Material	Yes

4. REACTIVE DATA

Chemical Stability	Stable
Incompatibility with other Material	Organic Chlorates, Carbides, Fulminates, Picrates, Metals.
Reactivity	Powerful Acidic Oxidiser, ignites or explodes on contact with many materials like Acetic Acid Acetone.
Hazardous Reaction Products	(Acetone + HNO₃), (Acetone + K₂CR₂O₇), Acetonitrile, Acrylonitrile, React with many metals to form flammable Hydrogen Gas which forms explosive mixture with Air.

5.HEALTH HAZARDS DATA

Routes of Entry	Contact, Inhalation, Ingestion, Skin & Eyes			
Effects of Exposure/ Symptoms	Can Cause severe irritation or damage to Mouth, Throat, Nose and Lungs, Burn to Skin by contact. Swallowing may cause injury or death, exposure cause bronchitis.			
Emergency Treatment	Immediately flush with water for 15 Minutes. Remove the victim to fresh air give plenty of water for drink, do not induce vomiting, seek medical aid.			
	TLV (ACGIH)		STEL	
	ppm	1 mg/m ³	ppm	Not Listed mg/m ³
	Permissible Exposure Limit		Odour Threshold	
	ppm	1 mg/m ³	>0.25 ppm	>1 mg/m ³
LD ₅₀ (Oral Rat)	Not Listed			mg/Kg
NFPA Hazard	Health	Flammability	Reactivity	Special
Signals	3	0	2	

6.PREVENTIVE MEASURES

Personal Protective Equipment	Useful Face Piece, Acid Gas Cartridge, Gas Mask, Chemical Safety Goggles or Face Shield, PVC Suit, Rubber Hand Gloves, Rubber Gum Boots, Avoid contact with liquid. Don't eat or drink at work place.			
Handling & Storage Precautions	Prevent spillage, Hydrogen Evaluated by contact of metals prevent fire. Store in cool, dry area, Away from direct sunlight, use corrosion resistant material away from oxidisers, Acids of 98% store in M.S. or C.I. Tanks / Drums			

7.EMERGENCY / FIRST AID MEASURES

FIRE	Fire Extinguishing Media	Don't use water, does not burn, Dry Chemical Powder or CO ₂ Extinguisher for material burning.
	Special Procedure	Keeps the containers cool by spraying of water, if exposed heat or flame.
	Unusual Hazardous	Poisonous gas may be produced.
EXPOSURE	First Aid Measures	If inhaled, remove the victim to fresh air area, provide artificial respiration or oxygen if required, if eyes are affected wash with plenty of water for 15 mins. or more. If skin is affected remove contaminated clothes and shoes and wash the affected are
	Antidotes / Dosages	Magnesia, Glycerol paste.
SPILLS	Steps to be Taken	Shut off leak if without risk.
	Waste Disposal Method	Neutralise with soda ash, lime, clean with water.

8.ADDITIONAL INFORMATION / REFERENCES

Contain leaking liquid on sand or earth, do not absorb on saw dust or other combustibles.

9.MANUFACTURERS / SUPPLIERS DATA

Name of Firm	 Tata Chemicals Ltd.,	Contact Person in Emergency	Safety & Fire Dept
Mailing Address	Mithapur - 361345	Local Bodies Involved	--
Telephone / Telex Nos.	(02892) 223439	Standard Packing	--

10.DISCLAIMER

Reasonable care has been taken in the preparation of the information contained in this Material Safety Data Sheet and is given in good faith. However, Tata Chemicals Limited, Mithapur assumes no responsibility as to the accuracy or suitability of such information and no warranty, expressed or implied, is made.