

Precautionary Statements - EU (§28, 1272/2008)

P280 - Wear protective gloves/protective clothing/eye protection/face protection.
 P260 - Do not breathe dust/fume/gas/mist/vapors/spray.
 P321 - Specific treatment (see Section 4).
 P303+P361+P353 - IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
 P280 - Wear eye protection/face protection.
 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 or doctor/physician.

Precautionary Statements

P260 - Do not breathe dust/fume/gas/mist/vapors/spray.
 P264 - Wash face, hands and any exposed skin thoroughly after handling.
 P301+P330+P331 - IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
 P303+P361+P353 - IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
 P363 - Wash contaminated clothing before reuse.
 P304+P340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
 P321 - Specific treatment (see supplemental first aid instructions on this label).
 P405 - Store locked up.
 P501 - Dispose of contents/container to an approved waste disposal plant.
 P280 - Wear protective gloves/protective clothing/eye protection/face protection.
 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 or doctor/physician.

Other Hazards

Section 3: COMPOSITION / INFORMATION ON INGREDIENTS

Mixture

Chemical Name	EC No	CAS No	Weight - %	Classification According to Directive 67/548/EEC or 1999/45/EC	Classification According to Regulation (EC) No. 1272/2008 [CLP]	REACH Registration Number
Sulfuric Acid	Present	7664-93-9	5-15	C; R35	Skin Corr. 1A (H314)	No data available

Full Text of R-Phrases See Section 16

Full Text of H- and EUH-Phrases See Section 16

Section 4: FIRST AID MEASURES

Description of First Aid Measures

General Advice

Immediate medical attention is required.

Inhalation

Remove victim to fresh air. If not breathing give artificial respiration. If breathing is difficult give oxygen. Get medical attention.

Skin Contact

Immediately remove contaminated clothing and shoes. Flush skin thoroughly with cool water for at least 15 minutes. Wash skin with soap and water. Wash clothing. If irritation persists, get medical attention.

Eye Contact

Immediately flush eyes in a directed stream of water for at least 15 minutes while lifting the upper and lower eyelids intermittently to ensure complete irrigation. Get medical attention immediately.

Ingestion

If conscious and alert, rinse mouth with water. Dilute by giving 1 or 2 glasses of water. Do not induce vomiting. Never give anything by mouth to an unconscious person. Get medical attention immediately.

Self-Protection of the First Aider

Use personal protective equipment as required. Avoid contact with skin, eyes or clothing.

Most Important Symptoms and Effects, Both Acute and Delayed**Symptoms**

May cause irritation of respiratory tract. May cause skin irritation. Will result in severe eye irritation and possible injury.

Indication of Any Immediate Medical Attention and Special Treatment Needed**Note to Physicians**

Treat symptomatically.

Section 5: FIREFIGHTING MEASURES**Extinguishing Media****Suitable Extinguishing Media**

Water spray, carbon dioxide (CO₂), dry chemical, alcohol foam.

Unsuitable Extinguishing Media

No information available.

Special Hazards Arising from the Substance or Mixture

Contact with metals may evolve flammable hydrogen gas. The product causes burn of eyes, skin and mucous membranes. Keep product and empty container away from heat and sources of ignition.

Advice for Firefighters

Firefighters should wear proper protective equipment and self-contained breathing apparatus with full face piece when fighting chemical fires. Move containers from fire area if it can be done without risk.

Section 6: ACCIDENTAL RELEASE MEASURES**Personal Precautions, Protective Equipment and Emergency Procedures****Personal Precautions**

Use personal protective equipment as required. Evacuate personnel to safe areas. Avoid contact with skin, eyes or clothing. Keep people away from and upwind of spill/leak.

For Emergency Responders

Use personal protection recommended in Section 8.

Environmental Precautions

Do not allow into any sewer, on the ground or into any body of water. Should not be released into the environment. Prevent further leakage or spillage if safe to do so. Prevent product from entering drains.

Methods and Material for Containment and Cleanup**Methods for Containment**

Prevent entry into waterways, sewers, basements or confined areas. Prevent further leakage or spillage if safe to do so.

Methods for Cleanup

Ventilate area. Wear protective equipment. Absorb spill with inert absorbent and place in a DOT-approved waste container. Prevent runoff from entering surface water. Comply with all regulations on spill reporting.

Reference to Other Sections**Other Information**

See Section 12: Ecological Information.

Section 7: HANDLING and STORAGE

Precautions for Safe Handling**Advice on Safe Handling**

Use personal protective equipment as required. Avoid contact with skin, eyes or clothing. Use only with adequate ventilation. Add product slowly to avoid splashing.

General Hygiene Considerations

Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product.

Conditions for Safe Storage, Including Any Incompatibilities**Storage Conditions**

Keep container tightly closed in a dry and well-ventilated place. Keep in properly labeled containers.

Specific End Use(s)**Risk Management Measures**

The information required is contained in this Safety Data Sheet.

Section 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Guidelines

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Sulfuric Acid 7664-93-9	TWA: 0.2 mg/m ³ thoracic fraction	TWA: 1 mg/m ³ (vacated) TWA: 1 mg/m ³	IDLH: 15 mg/m ³ TWA: 1 mg/m ³

ACGIH TLV Threshold Limit Value.

OSHA PEL Permissible Exposure Limit.

NIOSH IDLH Immediately Dangerous to Life or Health.

Exposure Guidelines

Vacated limits revoked by the Court of Appeals decision in AFL-CIO v. OSHA, 965 F.2d 962 (11th Cir., 1992).

Engineering Controls

Ensure adequate ventilation, especially in confined areas. Eyewash stations. Showers.

Personal Protective Equipment (PPE)**Eye/Face Protection**

Tight sealing safety goggles. If a splashing hazard exists, a face shield is recommended. It is generally recognized that contact lenses should not be worn when working with chemicals because contact lenses may contribute to the severity of an eye injury.

Skin Protection

Wear chemical resistant gloves such as butyl rubber, natural rubber, neoprene or nitrile. Suitable protective clothing. Protective shoes or boots.

Respiratory Protection

If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Respiratory protection must be provided in accordance with current local regulations.

General Hygiene Considerations

Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product.

Section 9: PHYSICAL and CHEMICAL PROPERTIES

Information on Basic Physical and Chemical Properties

Physical State	Liquid
Appearance	Dark blue
Odor	Distinctive
Odor Threshold	No information available

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
pH	< 1	
Melting Point/Freezing Point	Not established	
Boiling Point/Boiling Range	Not established	
Flash Point	Not established	
Evaporation Rate	Not established	
Flammability (solid, gas)	Not applicable	
Flammability Limits in Air		
Upper Flammability Limit	Not applicable	
Lower Flammability Limit	Not applicable	
Vapor Pressure	Not established	
Vapor Density	Not established	
Specific Gravity	1.07 - 1.09	
Water Solubility	Completely soluble	
Solubility(ies)	No information available	
Partition Coefficient (n-octanol/water)	Not applicable	
Auto-Ignition Temperature	Not applicable	
Decomposition Temperature	Not established	
Kinematic Viscosity	Not established	
Dynamic Viscosity	Not established	
<u>Other Information</u>		
VOC Content (%)	Not applicable	

Section 10: STABILITY and REACTIVITY

Reactivity

Stable at normal temperatures and pressure.

Chemical Stability

Stable under normal conditions.

Possibility of Hazardous Reactions

Hazardous Polymerization

Hazardous polymerization does not occur.

Possibility of Hazardous Reactions

None under normal processing.

Conditions to Avoid

Avoid storage with incompatible materials, freezing temperatures and excessive heat.

Incompatible Materials

Organic materials. Combustible materials. Active metals. Alkalis. Cyanides, Sulfides. Amines. Nitrates.

Hazardous Decomposition Products

Thermal decomposition may generate carbon monoxide, carbon dioxide, sulfur oxides and nitrogen oxides. smoke and fumes. Will react with cyanide salts to generate poisonous hydrogen cyanide gas. Will react with sulfides to produce poisonous hydrogen sulfide gas.

Section 11: TOXICOLOGICAL INFORMATION

Acute Toxicity

Product Information.

Inhalation

Vapors and mists are corrosive to the nose, throat and mucous membranes. Bronchitis, pulmonary edema and chemical pneumonitis may occur. Irritation, coughing, chest pain and difficulty in breathing may occur with brief exposure while prolonged exposure may result in more severe irritation and tissue damage.

Eye Contact

Liquid and mists are extremely corrosive to the eyes. Brief contact of vapors will be severely irritating. Brief contact of the liquid or mists will severely damage the eyes. Prolonged contact may cause permanent eye injury which may be followed by blindness.

Skin Contact

Mists and liquid are corrosive to the skin. Liquid and mists will burn the skin. Prolonged liquid contact will burn or destroy surrounding tissue.

Ingestion

Vapors, mists and liquid are extremely corrosive to the mouth and throat. Swallowing the liquid burns the tissues, causes severe abdominal pain, nausea, vomiting and collapse.

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Sulfuric Acid	2140 mg/kg (Rat)		= 510 mg/m ³ (Rat) 2 h

Chronic Toxicity

Chronic acid exposure may cause erosion of tooth enamel, respiratory and mucous membrane irritation. Long term exposures seldom occur due to the corrosive properties of the acid(s).

Carcinogenicity

The table below indicates whether each agency has listed any ingredient as a carcinogen

Chemical Name	ACGIH	IARC	NTP	OSHA
Sulfuric Acid	A2	Group 1	Known	X

ACGIH (American Conference of Governmental Industrial Hygienists)

A2 - Suspected Human Carcinogen

IARC (International Agency for Research on Cancer)

Group 1 - Carcinogenic to Humans

NTP (National Toxicology Program)

Known - Known Carcinogen

OSHA (Occupational Safety and Health Administration of the US Department of Labor)

X - Present

Target Organ Effects

Eyes, Respiratory system, Skin, Teeth

Section 12: ECOLOGICAL INFORMATION

Toxicity

Chemical Name	Toxicity to Algae	Toxicity to Fish	Toxicity to Daphnia and Other Aquatic Invertebrates
Sulfuric Acid		500: 96 h Brachy danio rerio mg/L LC50 static	29: 24 h Daphnia magna mg/L EC50

Persistence and Degradability

No information available.

Bio-Accumulative Potential

No information available.

Mobility in Soil

No information available.

Results of PBT and vPvB Assessment

No information available.

Other Adverse Effects

No information available

Section 13: DISPOSAL CONSIDERATIONS**Waste Treatment Methods****Waste from Residues/Unused Products**

Consult appropriate federal, state and local regulatory agencies to ascertain proper disposal procedures. Do not discharge into waterways or sewer systems. Disposal will depend on the nature of waste material.

Contaminated Packaging

Empty containers retain product residues, all labeled hazardous precautions must be observed. Do not reuse container.

Waste Codes/Waste Designations According to EWC/AVV

Waste codes should be assigned by the user based on the application for which the product was used.

Other Information

No information available.

Section 14: TRANSPORT INFORMATION**DOT (US)**

Proper Shipping Name	Corrosive liquid, acidic, inorganic, N.O.S., (Sulfuric Acid)
Hazard Class	8
UN/ID Number	UN3264
Packing Group	PGIII
Emergency Response Guide Number	154

IMDG

UN/ID Number	UN3264
Proper Shipping Name	Corrosive liquid, acidic, inorganic, N.O.S., (Sulfuric Acid)
Hazard Class	8
Packing Group	PGIII

IATA

UN/ID Number	UN3264
Proper Shipping Name	Corrosive liquid, acidic, inorganic, N.O.S., (Sulfuric Acid)
Hazard Class	8
Packing Group	PGIII

Section 15: REGULATORY INFORMATION**International Inventories**

All of the components in this product are on or exempt from the following inventories: U.S.A. (TSCA), Canada (DSL/NDL), Europe (EINECS/ELINCS/NLP), Japan (ENCS), China (IECSC), Korea (ECL), Philippines (PICCS), Australia (AICS)

International Inventory Legend

- TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
- DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
- EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
- ENCS - Japan Existing and New Chemical Substances
- IECSC - China Inventory of Existing Chemical Substances
- KECL - Korean Existing and Evaluated Chemical Substances
- PICCS - Philippines Inventory of Chemicals and Chemical Substances
- AICS - Australian Inventory of Chemical Substances

US Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

Chemical Name	CAS No.	Weight - %	SARA 313 – Threshold Values %
Sulfuric Acid	7664-93-9	5-15	1.0

SARA 311/312 Hazard Categories

Acute Health Hazard	Yes
Chronic Health Hazard	No
Fire Hazard	No
Sudden Release of Pressure Hazard	No
Reactive Hazard	No

CWA (Clean Water Act)

This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

Chemical Name	CWA – Reportable Quantities	CWA – Toxic Pollutants	CWA – Priority Pollutants	CWA – Hazardous Substances
Sulfuric Acid	1000 lb			X

CAA (Clean Air Act), Section 112 Hazardous Air Pollutants (HAPs) (see 40 CFR 61)

This product does not contain any substances which are listed hazardous air pollutants (HAPS) under Section 112 of the Clean Air Act.

CERCLA

This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302).

Chemical Name	Hazardous Substances RQs	CERCLA/SARA RQ	Reportable Quantity (RQ)
Sulfuric Acid	1000 lb		RQ 1000 lb final RQ RQ 454 kg final RQ

US State Regulations

California Proposition 65

This product contains the following Proposition 65 chemicals.

Chemical Name	California Proposition 65
Sulfuric Acid	Carcinogen

US State Right-to-Know Regulations

Chemical Name	Massachusetts	New Jersey	Pennsylvania
Sulfuric Acid	X	X	X

International Regulations

Chemical Name	Carcinogenicity	Exposure Limits
Sulfuric Acid	A2	Mexico: TWA 1 mg/m ³

CANADA

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the Safety Data Sheet (SDS) contains all the information required by the CPR.

Section 16: OTHER INFORMATION**Full Text of R-Phrases Referred to Under Sections 2 and 3**

R35 - Causes severe burns

Full Text of H-Statements Referred to Under Sections 2 and 3

H314 - Causes severe skin burns and eye damage

Issue Date

18-Jun-2014

Revision Date

Not Applicable

Revision Notes

Not Applicable.

This Safety Data Sheet (SDS) complies with the requirements of Regulation (EC) No. 1907/2006

Disclaimer

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