



# SAFETY DATA SHEET

Issue Date 09-Jan-2015

Revision Date 09-Jan-2015

Version 1

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

### 1.1. Product identifier

Safety data sheet number 920044

Product Name Sulphuric Acid

Index number 016-020-00-8

Trade Name Sulphuric Acid 77%-100%

EC No. 7664-93-9

CAS No. 231-639-5

Chemical Name Sulphuric acid

Synonyms Dihydrogen Sulfate; Oil of vitriol; Vitriol Brown Oil; Acide sulfurique; 60 Deg Technical; 66 Deg Technical; 93% Technical; 1.835 Electrolyte; 98 % Technical; 99 % Technical; 100 % Technical.

Formula  $H_2SO_4$

Molecular weight 98.08 g/mol

ITEM #	MSDS #

**CONTROLLED DOCUMENT  
IF STAMPED IN RED**

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

Recommended Use Chemical industries. Water treatment chemical. Manufacture of pulp, paper and paper products. Fertilizer.

Uses advised against Not available.

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

Manufacturer

- Norfalco Inc., 6000 Lombardo Center, The Genesis Bldg, Suite 650 Seven hills, OH 44131.
- NorFalco Sales Inc.-A Glencore company, 6755 Mississauga Road, Suite 304, Mississauga, Ontario L5N 7Y2.
- Noranda Income Limited Partnership (CEZinc), Salaberry-de-Valleyfield (Quebec) Canada J6T 6L4.
- Horne Smelter-A Glencore company, Rouyn-Noranda (Quebec) J9X 5B6.
- Brunswick Smelting-A Glencore company, Belledune, New Brunswick E0B 1 G0.
- Sudbury integrated Nickel Operations-A Glencore company, Falconbridge, Ontario P0M 1S0.

Website [www.norfalco.com](http://www.norfalco.com).

Contact Point André Auger, Administrative assistant. 1-905-542-6901 (Mississauga).

E-mail address [Request.Norfalco@glencore-ca.com](mailto:Request.Norfalco@glencore-ca.com)

### 1.4. Emergency telephone number

Emergency Telephone Medical emergency in Canada : 1-418-656-8090  
Glencore 24/24 7/7 : 1-760-476-3962 (333261)

Transportation Emergency  
Telephone

Canada: 1-877-ERP-ACID (377-2243)  
CANUTEC: 1-613-996-6666.  
USA: 1-800-424-9300 CHEMTREC

## SECTION 2: Hazards identification

### 2.1. Classification of the substance or mixture

**Regulation (EC) No 1272/2008**

Full text of H- and EUH-phrases: see section 16

<b>Skin corrosion/irritation</b>
----------------------------------

Category 1 H314
-----------------

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

Full text of R-phrases: see section 16

### Hazard symbols

C - Corrosive

### R-code(s)

C;R35

### 2.2. Label elements

#### Product identifier



Hazard pictograms : Corrosive

Signal word : Danger

Contains : sulfuric acid

H314 - Causes severe skin burns and eye damage

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

P260-Do not breathe dust fume/ gas/ mist vapors/ spray.

P264-Wash hands, face and skin 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): 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.

P310-Immediately call a POISON CENTER or doctor/physician.

P321-Specific treatment (see on this label).

P305+P351+P338-IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P501-Dispose of contents/container in full compliance with Federal, Provincial and local regulations.

**2.3. Other hazards**

Extremely corrosive. Harmful or fatal if swallowed. Harmful if inhaled. Severe eyes and skin irritation. Possibility of damage to the upper respiratory tract and lung tissues.

**Environmental hazard:** Strong acid. Highly toxic to plants and to aquatic organisms.  
Not a PBT or vPvB substance or mixture.

**Risk phrases :**

R35-Causes severe burns

**Safety phrase :**

S1-Store locked up

S26- In case of contact with eyes, rinse immediately with plenty of water and seek medical advice

S30- Never add water to this product

S45- In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

**WHMIS classification (Canada)**

CLASS D-1A: Very toxic material causing immediate and serious effects

CLASS E : Corrosive material

**SECTION 3: Composition/information on ingredients****3.1 Substances**

Chemical Name	EC No.	CAS No.	Weight-%	Classification GHS /CLP (Regulation (EC) No. 1272/2008)
Sulfuric acid	231-639-5	7664-93-9	77-100	Skin Corr. 1A (H314)

**Additional information**

All concentrations are in percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

**SECTION 4: First aid measures****4.1. Description of first aid measures**

<b>General advice</b>	Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves.
<b>Inhalation</b>	If not breathing, give artificial respiration. Take precautions to avoid secondary contamination by residual acids. Difficult breathing : Give oxygen.
<b>Skin contact</b>	Rinse skin with water/shower for 15 minutes (Pay particular attention to : Folds, crevices, creases, groin). While the patient is being transported to a medical facility, continue the application of cold, wet compresses. <i>Notes to physicians : If medical treatment must be delayed, repeat the flushing with tepid water or soak the affected area with tepid water to help remove the last traces of sulfuric acid. Creams or ointments SHOULD NOT be applied before or during the washing phase of the treatment. Call a physician if irritation persists. Wash contaminated clothing before reusing.</i>
<b>Eye contact</b>	Consult a physician. If medical treatment must be delayed, repeat the flushing with tepid water or soak the affected area with tepid water to help remove the last traces of sulfuric acid
<b>Ingestion</b>	Do not induce vomiting. Conscious and alert person : Rinse mouth with water and give 1/2 to 1 cup of water or milk to dilute material. Spontaneous vomiting : Keep head below hips to prevent aspiration ; Rinse mouth and give 1/2 to 1 cup of water or milk. UNCONSCIOUS person : DO NOT induce vomiting or give any liquid. Immediately obtain medical attention.

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

**Symptoms** Corrosive to the eyes and may cause severe damage including blindness. Causes burns.

---

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

**Note to physicians** Treat symptomatically. Symptoms may be delayed.

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

ERG (Emergency Response Guidebook) : Guide 137

When material is not involved in fire, do not use water on material itself.

**Small Fire** Dry chemical or CO<sub>2</sub>. Move containers from fire area if you can do it without risk.

**Large Fire** Flood fire area with large quantities of water, while knocking down vapors with water fog. If insufficient water supply: knock down vapors only.

**Fire involving Tanks or Car/Trailer Loads :**

Cool containers with flooding quantities of water until well after fire is out. Do not get water inside containers. Withdraw immediately in case of rising sound from venting safety devices or discoloration of tank. ALWAYS stay away from tanks engulfed in fire.

**Unsuitable extinguishing media**

No information available

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

Non-combustible.

Hazardous combustion products: Releases of sulfur dioxide at extremely high temperatures.

Fire hazard : Not flammable

**Explosion hazard** : Reacts with most metals, especially when dilute : Hydrogen gas release (Extremely flammable, explosive). Risk of explosion if acid combined with water, organic materials or base solutions in enclosed spaces (Vaccum trucks, tanks). Mixing acids of different strengths/concentrations can also pose an explosive risk in an enclosed space/container.

**5.3. Advice for firefighters**

Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Move containers from fire area if you can do it without risk.

Evacuate personnel to a safe area. Keep personnel removed and upwind of fire. Generates heat upon addition of water, with possibility of spattering. Wear full protective clothing. Runoff from fire control may cause pollution. Neutralize run-off with lime, soda ash, etc., to prevent corrosion of metals and formation of hydrogen gas. Wear self-contained breathing apparatus if fumes or mists are present.

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

Ensure adequate ventilation, especially in confined areas. Ventilate affected area. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Wear protective gloves/protective clothing and eye/face protection.

**For emergency responders**

keep unnecessary personnel away. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Use personal protection recommended in Section 8.

**6.2. Environmental precautions**

Prevent further leakage or spillage if safe to do so. Do not contaminate water.

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

**Methods for containment** Dike large spills, and cautiously dilute and neutralize with lime or soda ash, and transfer to waste water treatment system. Prevent liquid from entering sewers, waterways, or low areas. If this product is spilled and not recovered, or is recovered as a waste for treatment or disposal, the Reportable Quantity (U.S. DOT) is 1 000 lbs and 5 l or 5 kg (Section 8 TOG Canada) (Based on the sulfuric acid content of the solution spilled). Comply with Federal, State, and local regulations on reporting releases.

**Methods for cleaning up** Clean up in accordance with all applicable regulation.

**6.4. Reference to other sections**

Use personal protection recommended in Section 8. For waste disposal, see section 13.

**SECTION 7: Handling and Storage****7.1. Precautions for safe handling**

**Advice on safe handling** DO NOT get in eyes, on skin, or on clothing. Avoid breathing vapours or mist. Wear approved respirators if adequate ventilation cannot be provided. Wash thoroughly after handling. Ingestion or inhalation : Seek medical advice immediately and provide medical personnel with a copy of this SDS. NEVER add water to acid. Avoid aerosol formation.

**General Hygiene Considerations** Use personal protection recommended in Section 8. Wash hands thoroughly after handling. Handle in accordance with good industrial hygiene and safety practice.

**7.2. Conditions for safe storage, including any incompatibilities**

**Storage Conditions** Sulfuric acid must be stored in containers or tanks that have been specially designed for use with sulfuric acid. DO NOT add water or other products to contents in containers as violent reactions will result with resulting high heat, pressure and/or generation of hazardous acid mists. P405-Store locked up. Keep containers away from heat, sparks, and flame. All closed containers must be safely vented before each opening. For more information on sulfuric acid tanks, truck tanks and tank cars including safe unloading information go to [www.norfalco.com](http://www.norfalco.com).

**Packaging materials** Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination.

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

**Specific use(s)** For detailed information, see section 1.

**Risk Management Methods (RMM)** The information required is contained in this Material Safety Data Sheet.

**SECTION 8: Exposure controls/personal protection****8.1. Control parameters**

Chemical Name	ACGIH (U.S.A.) TLV-TWA (mg/m <sup>3</sup> )	OSHA (U.S.A.) PEL-TWA (mg/m <sup>3</sup> )
Sulfuric acid 7664-93-9	0.2	1

Sulfuric acid : Exposure limits may be different in other jurisdictions.

NIOSH REL-TWA (≤10 hours) : 1 mg/m<sup>3</sup>.

IDLH : 15 mg/m<sup>3</sup>

*Consult local authorities for acceptable exposure limits.*

**8.2. Exposure controls****Engineering Controls**

Good general ventilation should be provided to keep vapour and mist concentrations below the exposure limits.

**Personal protective equipment**

Chemical splash goggles ; Full-length face shield/chemical splash goggles combination ; Acid-proof gauntlet gloves, and boots ; Long sleeve wool, acrylic, or polyester clothing under an acid proof suit ; Appropriate NIOSH respiratory protection if acid mist is present. An apron can be used in place of acid proof suit in laboratory environment, or in handling small volumes of sulfuric acid. A formal risk assessment should be performed before following this recommendation to ensure exposure is minimized. In case of emergency or where there is a strong possibility of considerable exposure, wear a complete acid suit with hood, boots, and gloves. If acid vapour or mist are present and exposure limits may be exceeded, wear appropriate NIOSH respiratory protection.

**Environmental exposure controls** No information available.

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

<u>Physical state</u>	liquid	<u>Odor</u>	Odorless
<u>Appearance</u>	Oily, Clear to turbid	<u>Odor threshold</u>	No data available
<u>Color</u>	Colorless to light grey	<u>Remarks • Method</u>	
<u>Property</u>	<u>Values</u>		
pH	< 1	No information available	
Melting point / freezing point	-35 °C to 11 °C (-31°F to 52°F)		
Boiling point / boiling range	193 °C to 327 °C (379°F to 621°F) @ 760mm Hg	No information available	
Flash point		No information available	
Evaporation rate		No information available	
Flammability (solid, gas)		No information available	
Flammability Limit in Air			
Upper flammability limit:		No information available	
Lower flammability limit:		No information available	
Vapor pressure	<0.3 mmHg @ 25 °C (77 °F) < 0.6 mm hg @ 38 °C (100 °F)		
Vapor density		No information available	
Water solubility		No information available	
Solubility(ies)	Miscible		
Partition coefficient		No information available	
Autoignition temperature		No information available	
Decomposition temperature		No information available	
Kinematic viscosity		No information available	
Dynamic viscosity	22.5 cP at 20°C (68°F)	For Sulphuric acid 93 %	
Explosive properties		Not explosive	
Oxidizing properties		Not an oxidizer	
<b>9.2. Other information</b>			
Softening point		No information available	
Molecular weight	98.08 g/mol		
Volatility	< 1 (Butyl acetate = 1.0)	No information available	
Bulk density		No information available	

GRADE	Boiling point		Freezing point		Density
	DEG°C	DEG°F	DEG°C	DEG°F	
60 DEG TECHNICAL	193	380	-12	10	1.706
66 DEG or 93% TECHNICAL	279	535	-35	-31	1.835
1.835 ELECTROLYTE	279	535	-35	-31	1.835
98 % TECHNICAL	327	621	-2	29	1.844
99 % TECHNICAL	310	590	4	40	1.842
100 % TECHNICAL	274	526	11	51	1.839

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

Reacts violently with water, organic substances and base solutions with evolution of heat and hazardous mists.

### 10.2. Chemical stability

Stable under normal conditions, at ambient temperature.

### 10.3. Possibility of hazardous reactions

#### Possibility of Hazardous Reactions

Hazardous polymerization does not occur. Reacts violently with water.

### 10.4. Conditions to avoid

Heat, sources of ignition.

### 10.5. Incompatible materials

Vigorous reactions with : Water ; alkaline solutions ; Metals, metal powder ; Carbides ; Chlorates ; Fulminates; nitrates; Picrates ; Strong oxidizing, reducing, or combustible organic materials. Hazardous gases are evolved on contact with chemicals such as cyanides, sulfides, and carbides. Sulfuric acid reacts with metal to produce hydrogen, a flammable and potentially explosive gas. Hydrogen reacts with sulfides and generates hydrogen sulfide (Highly toxic gas). *NEVER add water directly to sulfuric acid because a violent exothermic reaction may occur.*

### 10.6. Hazardous decomposition products

Possibility of decomposition if heated and in contact with sources of ignition. Release of toxic gases and vapours (Sulfur oxides (SO<sub>2</sub>, SO<sub>3</sub>)).

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

Route of entries: Ingestion. Inhalation. Skin and eye contacts.

**Acute toxicity** ORAL acute (LD50): 2 140 mg/kg (Rat). INHALATION acute (LC50, 2 hours): 510 mg/m<sup>3</sup> (Rat) ; 320 mg/m<sup>3</sup> (Mouse). (RTECS).

**Acute effects** May be fatal if inhaled or ingested in large quantity. Liquids or acid mists: May produce tissue damage: Mucous membranes (Eyes, mouth, respiratory tract). Extremely dangerous by eyes (conjunctivitis, permanent eye damage) and skin contact (Corrosive) (Severe skin burns, scars). Severe irritant for eyes : Inflammation (Redness, watering, itching). Very dangerous in case of inhalation at high concentrations (Mists) : May produce severe irritation of respiratory tract (Coughing, shortness of breath, choking). Maintain observation of the patient for delayed onset of pulmonary oedema.

<b>Chronic effects</b>	<p>Target organs for acute and chronic overexposure (NIOSH 90-117) : Respiratory system, eyes, skin, teeth.</p> <p><b>Acid mists</b> : Overexposure to strong inorganic mists containing sulfuric acid : Possibility of laryngeal cancer (HSBD, IARC). Possibility of irritation of the nose and throat with sneezing, sore throat or runny nose. Headache, nausea and weakness. Gross overexposure : Possibility of irritation of nose, throat, and lungs with cough, difficulty breathing or shortness of breath ; Pulmonary edema with cough, wheezing, abnormal lung sounds, possibly progressing to severe shortness of breath and bluish discoloration of the skin. Symptoms may be delayed. Repeated or prolonged exposure to mists may cause : Corrosion of teeth.</p> <p><b>Contact (Skin)</b> : Possibility of corrosion, burns or ulcers. Contact with a 1 % solution: Possibility of slight irritation with itching, redness or swelling. Repeated or prolonged exposure (Mist) : Possibility of irritation with itching, burning, redness, swelling or rash.</p> <p><b>Contact (Eye)</b> : Possibility of corrosion or ulceration (Blindness may result). Repeated or prolonged exposure (Mist) : Possibility of eye irritation with tearing, pain or blurred vision.</p> <p><b>Ingestion</b> : Immediate effects of overexposure : Burns of the mouth, throat, esophagus and stomach, with severe pain, bleeding, vomiting, diarrhea and collapse of blood pressure. Damage may appear days after exposure.</p>
<b>Serious eye damage/eye irritation</b>	Risk of serious damage to eyes. Effects of exposure on eye may include pain, redness, severe deep burns and loss of vision.
<b>Irritation - Sensitization</b>	Severe irritation: 5 mg/30 s, rinsing (eyes, rabbit). (RTECS). Sensitisation: Not known.
<b>Germ cell mutagenicity</b>	Cytogenetic analysis : 4 mmol/l (Ovaries, Hamster). (RTECS). Not teratogenic (Mice, rabbits)..
<b>Carcinogenicity</b>	Strong inorganic acid mists containing sulfuric acid: PROVEN (Human, Group 1, IARC) SUSPECTED (Human, Group A2, ACGIH) ; Group X (NTP) ; Classification not applicable to sulfuric acid and sulfuric acid solutions.
<b>Reproductive toxicity</b>	Inhalation (Lo CT) : 20 mg/m <sup>3</sup> /7 hour (6-18 days pregnant) reproductive effects: Specific developmental abnormalities (Musculoskeletal system) (Rabbit). (RTECS).
<b>STOT - single exposure</b>	Test data conclusive but not sufficient for classification.
<b>STOT - repeated exposure</b>	Test data conclusive but not sufficient for classification.
<b>Other adverse effects</b>	Be aware that symptoms of lung oedema (shortness of breath) may develop up to 24 hours after exposure.
<b>Aspiration hazard</b>	Not classified.

*Eating, drinking and smoking must be prohibited in areas where this material is handled and processed.  
Wash hands and face before eating, drinking and smoking.*

## SECTION 12: Ecological information

### 12.1. Toxicity

Aquatic toxicity : Slightly to moderately toxic.

Toxicity to aquatic life increases with lowering pH. At pH lower than 5, only a few fish species can survive and at pH lower than 4, aquatic life is rare.

Chemical Name	Algae/aquatic plants	Fish	Crustacean
Sulfuric acid	-	Bluegill Sunfish ( <i>Lepomis macrochirus</i> ) 16 mg/l (LC50 ; 48 hours)	Flea water ( <i>Daphnia magna</i> ) > 100 mg/l. (EC50, 48 h)

EYE : Concentrated compound is corrosive. 10 % solution : Moderate eye irritant.

SKIN : Concentrated compound is corrosive. 10 % solution: Slight skin irritant.

Single and repeated exposure : Irritation of the respiratory tract ; Corrosion of the respiratory tract ; Lung damage ; Labored breathing ; Altered respiratory rate ; Pulmonary oedema.

### 12.2. Persistence and degradability

Sulfate ion : Ubiquitous in the environment. Metabolized by micro-organisms and plants.

### 12.3. Bioaccumulative potential

The product is not bioaccumulating.

Sulfate ion : Ubiquitous in the environment. Metabolized by micro-organisms and plants without bioaccumulation.

### 12.4. Mobility in soil The product is water soluble and naturally present in soil as sulfate ions.

#### **Mobility in soil**

Easy soil seeping under rain action

#### **Mobility**

The product is water soluble and may spread in water systems.

### 12.5. Results of PBT and vPvB assessment

Not a PBT or vPvB substance or mixture.

### 12.6. Other adverse effects

The product may affect the acidity (pH-factor) in water with risk of harmful effects to aquatic.

Due to the product's composition, particular attention must be taken for transportation and storage. Protect from rain because the run-off water will become acidic and may be harmful to flora and fauna.

## **SECTION 13: Disposal considerations**

### 13.1. Waste treatment methods

**Waste from residues/unused products** Cleaned-up material may be an hazardous waste on *Resource Conservation and Recovery Act* (RCRA) on disposal due to the corrosivity characteristic. DO NOT flush to surface water or sanitary sewer system. Comply with Federal, State, and local regulations. If approved, neutralize and transfer to waste treatment system.

**Contaminated packaging** Since emptied containers retain product residue, follow label warnings even after containers is emptied.

**Other Information** No information available. Disposal should be in accordance with applicable regional, national and local laws and regulations.

**SECTION 14: Transport information****Proof of classification**

Classification of Sulfuric Acid as a Class 8 corrosive completed on January 9<sup>th</sup> 2015.  
 Based on existing studies, Sulfuric acid is corrosive if in contact with skin or eyes, or if inhaled or ingested. Classified corrosive based on the classification method used in the *UN manual Tests and Criteria, referred to by Transport Canada, section 37, Test Methods and Criteria Related to Substances of Class 8*. As the substance has been shown to be corrosive to skin under the criteria of the OECD guideline 404, it has been concluded that Sulphuric acid is also corrosive to metal and therefore falls under class 8. Test references: *OECD; SIDS Initial Assessment Reports for Sulfuric Acid (CAS No: 7664-93-9) for 11th SIAM (January 2001)*.

**TDG (Canada)** Class 8 Corrosive  
**Reportable Quantity** 5 l or 5 kg

**PIN** UN1830 SULFURIC ACID PGII

**DOT (USA)**

**UN/ID no.** 1830  
**Proper shipping name** SULPHURIC ACID with more than 51 % acid  
**Hazard Class** 8  
**Subsidiary hazard - class**  
**Packing Group** II  
**DOT/IMO label** CORROSIVE  
**Reportable Quantity** 1000 lbs (454 kg)  
**Shipping containers** Tank Cars, Tank Trucks, Vessel

**IMDG**

**UN/ID no.** 1830  
**Proper shipping name** SULPHURIC ACID with more than 51 % acid  
**Hazard Class** 8  
**Subsidiary hazard - class**  
**Packing Group** II  
**Marine pollutant** No  
**Environmental hazard** No  
**EmS-No.** F-A, S-B

**ERG** Guide 137

**IMSBC Code** Not applicable

**MARPOL** Non marine pollutant

Read safety instructions, SDS and emergency procedures before handling.

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

**CEPA DSL (Canada)** CANADIAN ENVIRONMENTAL PROTECTION ACT (CEPA): On the Domestic Substances List (DSL) ; Acceptable for use under the provisions of CEPA  
 Reportable Quantity : 5 l or 5 kg  
 Sulfuric Acid is a Class B Drug Precursor under *Health Canada's Controlled Drugs and Substances Act* and *Precursor Control Regulations*

**USA** CERCLA Section 103 Hazardous substances (40 CFR 302.4); SARA Section 302 Extremely Hazardous Substances (40 CFR 355) : Yes; SARA Section 313, Toxic Chemicals (40 CFR 372.65) ; US: TSCA Inventory : Listed : Sulfuric acid (RQ) : 1 000 pounds (454 kg)

Sulfuric Acid is subject to reporting requirements of Section 313, *Title III of the Superfund Amendments and Reauthorization Act of 1986* (SARA). 40 CFR Part 372.

Certain companies must report emissions of Sulfuric Acid as required under *The Comprehensive Environmental Response, Compensation and Liability Act of 1980* (CERCLA), 40 CFR Part 302

For more information call the *SARA Hotline 800-424-9346*.

Strong Inorganic Acid Mists Containing Sulfuric Acid: Chemical listed effective March 14, 2003 to the *State of California, Proposal 65*.

*U.S. FDA Food Bioterrorism Regulations* : These regulations apply to Sulfuric Acid when being distributed, stored or used for Food or Food Processing.

TSCA (EPA, Toxic Substance Control Act) Chemical Inventory (40 CFR710) : Listed.

Classifications HCS Corrosive liquid  
(U.S.A.)

**European Union** Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work

#### Authorizations and/or restrictions on use in EU:

This product does not contain substances subject to authorization (Regulation (EC) No. 1907/2006 (REACH), Annex XIV) This product does not contain substances subject to restriction (Regulation (EC) No. 1907/2006 (REACH), Annex XVII)

**Persistent Organic Pollutants** Not applicable

**Ozone-depleting substances (ODS) regulation (EC) 1005/2009** Not applicable

#### International Inventories

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

#### **NFPA (National Fire Protection Association) (U.S.A.)**

<b>Fire Hazard</b> 0	<b>Reactivity</b> 2	<b>Health</b> 3	<b>Special Hazard</b> ACID
-------------------------	------------------------	--------------------	-------------------------------

#### **NPCA-HNIS Rating**

<b>Fire Hazard</b> 0	<b>Reactivity</b> 2	<b>Health</b> 3
-------------------------	------------------------	--------------------

#### 15.2. Chemical safety assessment

Chemical Safety Assessments have been carried out for these substances

## **SECTION 16: Other information**

#### Key or legend to abbreviations and acronyms used in the safety data sheet

Indication of changes Section 14 – Proof of classification

**Full text of H-Statements and R phrases referred to under section 3**

H314 - Causes severe skin burns and eye damage

R35 - Causes severe burns

**Legend**

CLP : Classification, labeling, packaging of substances and mixtures (REACH)  
 DNEL : Derived No-Effect Level (REACH)  
 DSD : Dangerous Substances Directive (Directive 67/548/EEC)  
 DPD : Dangerous Preparations Directive (Directive 1999/45/EC)  
 EMS : Revised Emergency Response Procedures for Ships Carrying Dangerous Goods(IMO)  
 HSDB : Hazardous Substances Data Bank (USA)  
 IARC : International Agency for Research on Cancer.  
 NIOSH : National Institute of Occupational Safety and Health (USA)  
 NTP : U.S. National Toxicology Program (USA)  
 PNEC : Predicted No Effect Concentration  
 PBT : Persistent, bioaccumulative • toxic substances.  
 vPvB : Very persistent, very bioaccumulative substances.  
 REACH : Registration, Evaluation, Authorization and Restriction of Chemicals  
 RTECS : Registry of Toxic Effects of Chemical Substances (USA)  
 TWA : Total weight average  
 TLV : Threshold limit value  
 STOT : Specific target organ toxicity

**References**

- TLVs and BEIs (2014). Based on the Documentation of the Threshold Limit Values for Chemical Substances and Physical Agents & Biological Exposure Indices. ACGIH, Cincinnati, OH - <http://www.acgih.org>
- CCOHS (2014) - Canadian Centre for Occupational Health and Safety- <http://www.ccohs.ca/>
- CSST (2013) - Commission de la Sante et de la Sécurité du Travail (Quebec). Service du répertoire toxicologique - <http://www.reptox.csst.qc.ca/>
- HSDB (2014) - Hazardous Substances Data Bank. TOXNET® Network of databases on toxicology, hazardous chemicals, and environmental health. NLM Databases & Electronic Resources, U.S. National Library of Medicine, NHI, 8600 Rockville Pike, Bethesda, MD 20894 - <http://toxnet.nlm.nih.gov/cgi-bin/sis/htmlgen?HSDB>
- IARC - Monographs on the Evaluation of Carcinogenic Risks to Humans (collection) - IARC Publications <http://www.iarc.fr/en/websites/databases.php>
- IMO (2012). CARRIAGE OF DANGEROUS GOODS. INTERNATIONAL MARITIME DANGEROUS GOODS (IMDG) CODE ANNEXES AND SUPPLEMENTS. Revised Emergency Response Procedures for Ships Carrying Dangerous Goods (EmS Guide).
- NIOSH U.S. (2014) - Pocket Guide to Chemical Hazards - <http://www.cdc.gov/niosh/npg/>
- RTECS (2014). Registry of Toxic Effects of Chemical Substances, NIOSH, CDC. NIOSH RTECS [http://www.cdc.gov/niosh-rtecs/E\\_U958940.html](http://www.cdc.gov/niosh-rtecs/E_U958940.html)
- Toxicologie industrielle & intoxication professionnelle, 3e édition, Lauwerys.
- TSCA (2014)-U.S. EPA Toxic Substance Control Act, Chemical Inventory. System of Registries (SoR), Substance Registry Services [http://iaspub.epa.gov/sor\\_internet/registry/substreg/searchandretrieve/substancesearch/search.do](http://iaspub.epa.gov/sor_internet/registry/substreg/searchandretrieve/substancesearch/search.do)

**Issue Date** 09-Jan-2015**Revision Date** 09-Jan-2015**Previous revision date** 24- janv-2014

**Revision Note** For further information, see NorFalco Inc. Sulfuric Acid «Storage and Handling Bulletin». Because of its corrosive characteristics, Sulfuric Acid should not be used in sewer or drain cleaners or any similar application; regardless of whether they are formulated for residential, commercial or industrial use. NorFalco will not knowingly sell sulfuric acid to individuals or companies who repackage the product for sale as sewer or drain cleaners, or any other similar use. The data in this Safety Data Sheet relates only to the specific material designated herein and does not relate to use in combination with any other material or in any process. For additional information, please visited our website : [www.norfalco.com](http://www.norfalco.com)

**Training Advice** Follow training instructions when handling this material.**This material safety data sheet complies with the requirements of Occupational health legislation in Canada and with the Globally harmonized system (GHS).**

---

**Disclaimer** Although reasonable precautions have been taken in the preparation of the data contained herein, it is offered solely for your information, consideration and investigation. NorFalco Sales Inc. extends no warranty and assumes no responsibility for the accuracy of the content and expressly disclaims all liability for reliance thereon. This safety data sheet provides guidelines for the safe handling and processing of this product: it does not and cannot advise on all possible situations, therefore, your specific use of this product should be evaluated to determine if additional precautions are required. Individuals exposed to this product should read and understand this information and be provided pertinent training prior to working with this product.

**End of Safety Data Sheet**