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

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 Blg, 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 1SO.

Website	www.norfalco.com.
Contact Point	André Auger, Administrative assistant. 1-905-542-6901 (Mississauga).
E-mail address	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

Skin corrosion/irritation	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-IFINHALED : 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 inpercent by volume.

SECTION 4: First aid measures

4.1. Description of first aid measures

General advice Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves.

Inhalation If not breathing, give artificial respiration. Take precautions to avoid secondary contamination by residual acids. Difficult breathing : Give oxygen.

Skin contact 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.
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.

Eye contact 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

Ingestion 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_2. 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

Exlosion 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.

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^3)	OSHA (U.S.A.) PEL-TWA (mg/m^3)
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^3.
IDLH : 15 mg/m^3
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

Physical state	liquid		
Appearance	Oily, Clear to turbid	**Odor**	Odorless
Color	Colorless to light grey	**Odor threshold**	No data available

Property	**Values**	**Remarks • Method**
pH	< 1	No information available
Melting point / freezing point	-35 ℃ to 11 ℃ (-31℉ to 52℉)	
Boiling point / boiling range	193 ℃ to 327 ℃ (379℉ 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 ℃ (77 °F) < 0.6 mm hg @ 38 ℃ (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℃ (68℉)	For Sulphuric acid 93 %
Explosive properties		Not explosive
Oxidizing properties		Not an oxidizer

9.2. Other information

Softening point		No information available
Molecular weight	98.08 g/mol	
Volatility	< 1 (Butyl acetate)	No information available
Bulk density		No information available

GRADE	Boiling point		Freezing point		Density
	DEG℃	DEG℉	DEG℃	DEG℉	
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_2, SO_3)).

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^3 (Rat) ; 320 mg/m^3 (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.

Chronic effects	Target organs for acute and chronic overexposure (NIOSH 90-117) : Respiratory system, eyes, skin, teeth. **Acid mists** : 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. **Contact (Skin)** : 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. **Contact (Eye)** : Possibility of corrosion or ulceration (Blindness may result). Repeated or prolonged exposure (Mist) : Possibility of eye irritation with tearing, pain or blurred vision. **Ingestion :** 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.
Serious eye damage/eye irritation	Risk of serious damage to eyes. Effects of exposure on eye may include pain, redness, severe deep burns and loss of vision.
Irritation - Sensitization	Severe irritation: 5 mg/30 s, rinsing (eyes, rabbit). (RTECS). Sensitisation: Not known.
Germ cell mutagenicity	Cytogenetic analysis : 4 mmol/l (Ovaries, Hamster). (RTECS). Not teratogenic (Mice, rabbits)..
Carcinogenicity	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.
Reproductive toxicity	Inhalation (Lo CT) : 20 mg/m_3/7 hour (6-18 days pregnant) reproductive effects: Specific developmental abnormalities (Musculoskeletal system) (Rabbit). (RTECS).
STOT - single exposure	Test data conclusive but not sufficient for classification.
STOT - repeated exposure	Test data conclusive but not sufficient for classification.
Other adverse effects	Be aware that symptoms of lung oedema (shortness of breath) may develop up to 24 hours after exposure.
Aspiration hazard	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 *(Lepomis macrochirus)* 16 mg/l (LC50 ; 48 hours)	Flea water *(Daphnia magna)* > 100 mg/l. (EC5O, 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 9th 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 (U.S.A.) Corrosive liquid

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.)

Fire Hazard	Reactivity	Health	Special Hazard
0	2	3	ACID

NPCA-HNIS Rating

Fire Hazard	Reactivity	Health
0	2	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 : 1:nternational 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 BEls (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)
- 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

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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

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).

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End of Safety Data Sheet