

SULPHURIC ACID >51%

Code : 16564

SECTION 1. Identification of the substance/mixture and of the company/undertaking1.1. Product identifier

Chemical description : Sulphuric acid , Dihydrogen sulphate, solution (>51%).
Type of product : Pure product in solution .
Reach registration number : 01-2119458838-20

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

- * Identified use(s) : See table on the front page of the annex.
- * Use(s) advised against : This product is not recommended for any industrial, professional or consumer use other than identified in table on the front page of the annex.

1.3. Details of the supplier of the safety data sheet

- * Company identification : Deep South Chemical, Inc.
229 Millstone Rd.
Broussard, LA 70518

TEL: 1-800-737-3546 - FAX: 1-337-837-9565
E-MAIL: info@deep-south-chemical.com

1.4. Emergency telephone number

- * Emergency phone number : Chemtrec
TEL: 1-800-424-9300

SECTION 2. Hazards identification2.1. Classification of the substance or mixtureClassification according to Directive 67/548/EEC or 1999/45/EC

Corrosive (C; R35)

Classification according to Regulation (EC) No 1272/2008

Skin corrosion - Category 1A - Danger (Skin Corr. 1A; H314)

2.2. Label elementsLabel in accordance with Regulation (EC) No 1272/2008

- Dangerous ingredient(s) : Sulphuric acid ...%

- Hazard pictogram(s)



- Signal word : Danger
- Hazard statements : H314 - Causes severe skin burns and eye damage.
- Precautionary statements
 - Prevention : P260 - Do not breathe dust, fume, gas, mist, vapours, spray. P280 - Wear protective gloves, protective clothing, eye protection, face protection.
 - Response : P301+P330+P331 - IF SWALLOWED : Rinse mouth. Do NOT induce vomiting. P303+P361+P353 - IF ON SKIN (or hair) : Remove immediately all contaminated clothing. Rinse skin with water/shower. P305+P351+P338 - IF IN EYES : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P363 - Wash contaminated clothing before reuse.

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SECTION 2. Hazards identification (continued)

2.3. Other hazards

- Physical/chemical hazards : Attacks metals with liberation of hydrogen gas.
- Hazards for the health : A health dangerous concentration in the air will not or very slowly be reached by evaporation of this substance at app. 20°C; by spraying much faster.
- Hazards for the environment : Product causes a strong drop of the pH-value of water and soil.
This product is no substance or contains no PBT or vPvB (in accordance with Annex XIII).
- Hazards for the safety : Risk of explosion by many reactions.

SECTION 3. Composition/information on ingredients

3.1. Substances

Name component(s)	Weight %	CAS nr	EINECS nr	Index nr	Reach nr	CLASSIFICATION
Sulphuric acid ...%	: > 51 %	7664-93-9	231-639-5	016-020-00-8	01-2119458838-20	C; R35 ----- Skin Corr. 1A; H314

* The full text of the R-phrases and (EU)H-statements is in section 16.

Note B (Regulation (EC) No 1272/2008) applies to the product or one or more of its components.

Note: SCL applicable

SECTION 4. First aid measures

4.1. Description of first aid measures

- General : CALL A PHYSICIAN IN ALL CIRCUMSTANCES.
Never give anything by mouth to an unconscious person.
- First Aid Measures
- * - Inhalation : Remove victim into fresh air.
Allow the affected person to rest in semi-sitting position.
If not breathing, give artificial respiration.
Get immediate medical advice/attention.
- * - Skin Contact : Remove contaminated clothing while rinsing.
Rinse skin immediately with plenty of water. (shower if necessary).
Get immediate medical advice/attention.
- * - Eye Contact : Rinse IMMEDIATELY thoroughly and long (at least 15 min.) with plenty of water.
Remove contact lenses.
Get immediate medical advice/attention.
Keep rinsing or dripping the eye during transport.
- Ingestion : DO NOT INDUCE VOMITING. Rinse mouth with water.
Give victim plenty of water to drink.
Take the patient IMMEDIATELY to the hospital.

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

See section 11.

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

For specialist advice doctors should contact the NVCI or the Belgian Poison center.

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SECTION 5. Firefighting measures5.1. Extinguishing media

Extinguishing Media

- Suitable : Extinguishing powder , Alcohol resistant foam , Carbon dioxide (CO2) , Sand .
- Insuitable : Water .

5.2. Special hazards arising from the substance or mixture

- Special Exposure Hazards : Fire may liberate toxic and corrosive sulfur oxides.

5.3. Advice for firefighters

- Special Protective Equipment for Firefighters : Use self-contained breathing apparatus and wear protective clothes when in close proximity to fire.
- Special Procedures : Apply water spray or fog to cool nearby equipment. Avoid fire-fighting water to enter environment.
Neutralize extinguishing water with a basic product.

SECTION 6. Accidental release measures6.1. Personal precautions, protective equipment and emergency procedures

- Personal Precautions : Evacuate all personnel immediately and ventilate area.
Avoid breathing vapour and contact with skin, eyes and clothing. Wear recommended personal protective equipment. (See section 8)

6.2. Environmental precautions

- Environmental Precautions : Shut off leaks if without risks.
Dike in the spilled product as much as possible with inert material.
Prevent entry of product in public water, sewers or soil.
Notify authorities if liquid enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

- Methods for Cleaning Up : Collect the spillage in closable, corrosion resistant, suitable disposal containers.
Dilute spilled liquid immediately with plenty of water and neutralise with base. (e.g. Sodium carbonate)
Rinse abundantly with water.

6.4. Reference to other sections

- For personal protection, see section 8.
- For the removal of the waste product, see section 13.

SECTION 7. Handling and storage7.1. Precautions for safe handling

- Handling : AVOID EVERY CONTACT !!
Avoid breathing vapour and contact with skin, eyes and clothing. Wear recommended personal protective equipment. (See section 8)
Avoid heating, splashing and formation of vapour when emptying, pouring, diluting or dissolving the product.
When diluting, always pour the acid solution upon the water, never the other way round.
When using, do not eat, drink or smoke.
Wash hands before and after working with the product.
Emergency eye wash fountains and showers should be available in the immediate vicinity of any potential exposure.

7.2. Conditions for safe storage, including any incompatibilities

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SECTION 7. Handling and storage (continued)

Storage : Keep only in the original, safely locked container in a cool, well ventilated and dry place.
All dangerous products should be placed on a drip tray or should be barreled.
Keep away from : Bases , Reducing agents , Combustibles .
Storage temperature: 10-30 °C

Packaging Material : Carbon steel , Polyethylene , Polypropylene , Glass .

* Insuitable Packaging Material : Metals .

7.3. Specific end use(s)

For identified uses, see subsection 1.2 and/or exposure scenarios.

SECTION 8. Exposure controls/personal protection8.1. Control parameters

* Occupational Exposure Limits : Sulphuric acid ...% : Limit value (BE) : 0,2 mg/m³ (2014) (Fog) (C)
Sulphuric acid ...% : Limit value (TWA 8 h) (NL) : 0,05 mg/m³ (2011)
(C) The mention "C" means that the involved agent concerns the field of application of the royal decree of December 2, 1993 concerning the protection of employees against the risks related to the exposure to carcinogenic and mutagen agents to work.

Biological limit values : They will be included when available.

DNELs : • Sulphuric acid ...% : Worker, acute - local effects, inhalation : 0,1 mg/m³
• Sulphuric acid ...% : Worker, long-term - local effects, inhalation : 0,05 mg/m³

PNECs : • Sulphuric acid ...% : Intermittent release : -
• Sulphuric acid ...% : Sewage treatment plant : 8,8 mg/l
• Sulphuric acid ...% : Marine water sediment : 0,002 mg/l
• Sulphuric acid ...% : Fresh water sediment : 0,002 mg/l
• Sulphuric acid ...% : Marine water : 0,00025 mg/l
• Sulphuric acid ...% : Fresh water : 0,0025 mg/l
• Sulphuric acid ...% : Soil : -

8.2. Exposure controls

Engineering Measures : Ventilation (If possible through the floor), Local exhaust .

Personal Protection Equipment

- Respiratory protection : CE-approved gas respirator (Filter type E).

- Skin protection : Suitable protective clothing (Acid proof).

* - Hand protection : Suitable material for safety gloves (EN 374):
The suitability of the gloves and the breakthrough time for a specific workplace should be discussed with the producers of the protective gloves.
- material : Viton
- thickness : 0,7 mm
- breakthrough time : > 480'

- Eye/Face protection : Closed safety glasses or face shield.

Environmental exposure controls : See sections 6, 7, 12 and 13.

SECTION 9. Physical and chemical properties9.1. Information on basic physical and chemical properties

See technical data sheet for detailed information.

Physical State (20°C) : Liquid .

* Form/Colour : Colourless . (> 70%: Dark brown)

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SECTION 9. Physical and chemical properties (continued)

Odour	: Odourless .
* Odour threshold	: Not applicable.
* pH value	: <1
* Melting/Freezing point	: -35 to 5 °C
* Boiling Point/Range (1013 hPa)	: 130 - 338 °C
Flash point	: Not applicable.
Fire hazard	: Not applicable.
Evaporation rate	: Not applicable.
Explosion limits in air	: Not applicable.
* Vapour pressure (20°C)	: 0,4 - 2 kPa
Relative density of saturated vapour/air mixture (air=1)	: 1,0
* Relative density	: 1,8305 (100%) 1,3950 (50%) 1,2850 (38%)
Density (20°C)	: 1,40 - 1,84 kg/l
Solubility in water	: Complete solubility .
Soluble in	: Diethyl ether .
Log P Octanol/Water (20°C)	: Not applicable.
Auto-ignition temperature	: Not applicable.
Minimum ignition energy	: Not applicable.
* Decomposition temperature	: 338 °C
Viscosity (20°C)	: 11 - 28 mPa.s (Dynamic)
* Explosive properties	: No chemical groups associated with explosive properties .
* Oxidizing properties	: No chemical groups associated with oxidizing properties .

9.2. Other information

Others : Very hygroscopic .

SECTION 10. Stability and reactivity

10.1. Reactivity

Reactivity : The product is a strong oxidizer and reacts violently with combustibles and reducing agents.
Reacts violently with oxidizing agents and lyes.
Reacts with : Organic materials , Solvents .

10.2. Chemical stability

Stability : Unstable upon contact with moisture .

10.3. Possibility of hazardous reactions

Hazardous reactions : Exothermic reaction with: Water , Bases .
Contact with metallic substances may release inflammable hydrogen gas.

10.4. Conditions to avoid

* Conditions to avoid : High temperatures , Water .

10.5. Incompatible materials

* Materials to avoid : Reducing agents , Bases , Combustibles , Organic materials , Solvents , Oxidizing agents , Metals .

10.6. Hazardous decomposition products

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SECTION 10. Stability and reactivity (continued)

- * Hazardous Decomposition Products : Sulfur oxides , Hydrogen gas .

SECTION 11. Toxicological information

11.1. Information on toxicological effects

- Acute toxicity
- * - Inhalation : Symptoms include: Sore throat, Cough, Shortness of breath, Difficulty in breathing
• Sulphuric acid ...% : LC50 (Rat, inhalation, 4 h) : 0,375 mg/l (OECD Guideline 403)
- * - Skin contact : Symptoms include: Redness, Pain. Severe burns .
• Sulphuric acid ...% : LD50 (Rabbit, dermal) : No data available.
- * - Ingestion : Symptoms include: Burning pain in mouth, throat, oesophagus and stomach
• Sulphuric acid ...% : LD50 (Rat, oral) : 2140 mg/kg (OECD Guideline 401)
- * Skin corrosion/irritation : Causes severe burns.
- * Serious eye damage/irritation : Causes serious eye damage.
- Aspiration hazard : The product may affect the upper and lower airways, causing infections and impaired lung function.
- Respiratory or skin sensitisation : Probably not sensitive .
- Carcinogenicity : Not listed as carcinogenic .
IARC : Group 1 (carcinogenic to humans)
- Mutagenicity : Not listed as mutagenic .
- Reproductive toxicity : Not listed for reproductive toxicity .
- Specific target organ toxicity - single exposure : To human : Listed not for organ toxicity .
For animals : No effects known.
- Specific target organ toxicity - repeated exposure : To human : Listed not for organ toxicity .
For animals : No effects known.

SECTION 12. Ecological information

12.1. Toxicity

- * Ecotoxicity : • Sulphuric acid ...% : LC50 (Fish, 96 h) : 16 28 mg/l (Lepomis macrochirus)
• Sulphuric acid ...% : EC50 (Algae, 72 h) : >100 mg/l (Desmodesmus subspicatus) (OECD Guideline 201)
• Sulphuric acid ...% : EC50 (Daphnia magna, 48 h) : >100 mg/l (OECD Guideline 202)

12.2. Persistence and degradability

- Persistence and degradability : • Sulphuric acid ...% : Persistence and degradability : Inorganic .

12.3. Bioaccumulative potential

- Bioaccumulation : • Sulphuric acid ...% : Bioaccumulation : No bioaccumulation .

12.4. Mobility in soil

- * Mobility : • Sulphuric acid ...% : Mobility : Hydrolysis .

12.5. Results of PBT and vPvB assessment

- Evaluation : • Sulphuric acid ...% : PBT/vPvB : No

12.6. Other adverse effects

- Photochemical ozone creation potential : No data available.
- Ozone depletion potential : None .
- Endocrine disrupting potential : No data available.

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SECTION 12. Ecological information (continued)

Global warming potential : No data available.

SECTION 13. Disposal considerations

13.1. Waste treatment methods

- Waste from residues/Unused products : The product has to be destroyed according to national or local legislation, by a company specialised in handling hazardous waste products.
- European list of waste products : XXXXXX - European waste product code. This code is assigned on the basis of the most current applications and can not be representative for pollutions which are arisen at the effective use of the product. The producer of the waste has to evaluate its process himself and has to grant the appropriate waste coding. See Decision 2001/118/EC.
- Removal contaminated packaging : Packing is to be used exclusively for the packing of this product. After use, empty and close the packing very carefully. In case of returned packing, the empty packing can be offered back to the supplier.

SECTION 14. Transport information

14.1. UN number

UN Number : 1830

14.2. UN proper shipping name

- ADR/RID Name : UN 1830 Sulphuric acid, 8, II, (E)
- ADN Name : UN 1830 Sulphuric acid , 8, II
- IMDG Name : UN 1830 Sulphuric acid , 8, II
- * IATA Name : UN 1830 Sulphuric acid , 8, II

14.3. Transport hazard classe(s)

Class : 8

14.4. Packing group

Packaging Group : II

14.5. Environmental hazards

- Environmentally hazard : No
- Marine pollutant : No

14.6. Special precautions for user

- Danger number : 80
- Hazard Label(s) : 8
- EmS-N° : F-A, S-B

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

- Type ship : No data available.
- Pollution category : No data available.

SECTION 15. Regulatory information

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

- Inventories : Australian inventory (AICS): Listed in inventory.
Canadian inventory (DSL): Listed in inventory.
Chinese inventory (IECS): Listed in inventory.
European inventory (EINECS): Listed in inventory.

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SECTION 15. Regulatory information (continued)

- Korean inventory (KECI): Listed in inventory.
Inventory of the United States (TSCA): Listed in inventory.
- NFPA n° : 3-0-2
- Relevant EU Rule(s) : Directive 98/24/EC of the Council of 7 April 1998 on the protection of the health and safety of workers from the risks related to chemical agents at work
Decision 2001/118/EC of the Commission of 16 January 2001 amending Decision 2000/532/EC as regards the list of wastes
Regulation (EC) No 273/2004 of the European Parliament and of the Council of 11 February 2004 on drug precursors
Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006
Regulation (EU) No 453/2010 of 20 May 2010 amending Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (Reach)
- National regulations
- * - Germany : WGK : 1
 - * - Netherlands : Water damaging : 9
Decontamination exertion : B
SZW-list of carcinogenic substances : Sulphuric acid vapours

15.2. Chemical Safety Assessment

- * A chemical safety assessment has been carried out for the material.

SECTION 16. Other information

This safety data sheet has been drawn up in accordance with Regulation (EU) No 453/2010.
This safety data sheet is exclusively made for industrial/professional use.

* Has changed compared to previous revision.

- * Changes : Section 1 , Section 3 , Section 4 , Section 7 , Section 8 , Section 9 , Section 10 , Section 11 , Section 12 , Section 14 , Section 15 , Section 16 .
- Sources of used key data : The information contained herein is based on the present state of our knowledge (Producers of starting materials , Chemical cards , ...).
See also on the webaddress:
<http://apps.echa.europa.eu/registered/registered-sub.aspx#search>
- R-phrases) : R35 - Causes severe burns.
- (EU)H-statements) : H314 - Causes severe skin burns and eye damage.
- * List of abbreviations and acronyms : ADN (Accord européen relatif au transport international des marchandises Dangereuses par voie de Navigation interieur) : European agreement concerning the international carriage of dangerous goods by inland waterways
ADR (Accord européen relatif au transport international des marchandises Dangereuses par Route) : European agreement concerning the international carriage of dangerous goods by road
DNEL (Derived No Effect Level) : an estimated safe exposure level
EC50 : median Effective Concentration
EmS (Emergency Schedule) : the first code refers to the relevant fire schedule and the second code refers to the relevant spillage schedule
IARC (International Agency for Research on Cancer)
IATA (International Air Transport Association) : provisions concerning the international carriage of dangerous goods by air
IMDG (International Maritime Dangerous Goods code)
LC50 : median Lethal Concentration
LD50 : median Lethal Dose

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SECTION 16. Other information (continued)

NFPA (National Fire Protection Association) or fire diamant
NOEC (No Observed Effect Concentration)
NVC : National Poisoning Information Center
OECD : Organisation for Economic Cooperation and Development
PBT : persistent, bioaccumulative and toxic
PNEC (Predicted No Effect Concentration) : concentration below which exposure to a substance is not expected to cause adverse effects
REACH : Registration, Evaluation, Authorisation and restriction of Chemicals
RID (Règlement concernant le transport International ferroviaire des marchandises Dangereuses) : Regulation concerning the International carriage of Dangerous goods by rail
SCL (Specific Concentration Limits)
Skin Corr. 1A : Skin corrosion - Category 1A
SZW-list : List of carcinogenic substances and processes as referred to in Article 4. 11 of the Working conditions decree
TWA (Time-Weighted Average) : the average exposure over a specified period
vPvB : very persistent and very bioaccumulative
WGK (Wassergefährdungsklasse) : a German classification of substances that indicate the environmental hazard for surface water

This information is to our knowledge correct and complete on the date of issue of this safety data sheet. The information only concerns the product and does not give any guarantee for the quality and the completeness of the properties of the product, or in case of mixing or using in any other process. It remains the responsibility of the user to assure himself that the information is suitable and complete concerning the special use he makes of the product.

Deep South Chemical, Inc. denies all responsibility for loss or damage resulting from the use of these data.