

SECTION 1 – PRODUCT AND COMPANY INFORMATION

PRODUCT NAME: Sulfuric Acid 98 Percent

CHEMICAL NAME:	sulfuric acid	PRODUCT CODE:	SA98
CHEMICAL CATEGORY:	Inorganic acid	CAS NUMBER:	7664-93-9
MOLECULAR FORMULA:	H ₂ SO ₄	EINECS NUMBER:	231-639-5
MOLECULAR WEIGHT:	98.07	EU NUMBER:	016-020-00-8

PRODUCT DESCRIPTION: Clear, colorless, oily liquid

PRODUCT USE: Inorganic acid

SYNONYMS: Oil of Vitriol

Company Identification:





AGRIFOS FERTILIZER L.L.C.
 2001 Jackson Road
 Pasadena, TX 77506
www.agrifos.com

Phone Numbers:
 Agrifos Technical Information: (01)-713-920-5331
 Transportation Emergency: CHEMTREC (800) 424-9300 (within U.S.)

SECTION 2 - HAZARDS IDENTIFICATION

PHYSICAL FORM: Liquid COLOR: Colorless ODOR: Pungent, irritating

Emergency Overview

OSHA / ANSI	GHS
<p>CAUTION CAUSES RESPIRATORY TRACT IRRITATION. Avoid contact with skin, eyes and clothing.</p>  <p>ANSI: Corrosive</p>	<p>DANGER Causes severe skin burns and eye damage. Fatal if swallowed. Harmful if inhaled.</p>  <p>GHS: Skin Corrosion / Irritation - Category 1A, Skin Corrosion / Irritation - Category 1B, Skin Corrosion / Irritation - Category 1C, Serious Eye Damage, Eye Irritation - Category 1</p>
EU	WHIMS
<p>Corrosive – C R35</p> 	<p>Class E - Corrosive materials</p> 

ROUTES OF ENTRY: Inhalation, Skin / Dermal, Eye / Ocular, Ingestion / Oral

POTENTIAL HEALTH EFFECTS – ACUTE (IMMEDIATE):

INHALATION:	Expected to be severely irritating or corrosive to mucous membranes. May cause irreversible damage.
SKIN:	Expected to cause severe skin irritation or burns. May cause irreversible damage.
EYE:	Expected to cause severe eye irritation or serious damage to the eye. May cause irreversible damage.
INGESTION:	Expected to be severely irritating or corrosive to the esophagus and gastrointestinal tract. May cause corrosive burns - irreversible damage.

See Section 11 for Potential Chronic (Delayed) Effects

TARGET ORGANS: Eye, Skin, Lungs / Respiratory System, Teeth / Musculoskeletal System

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: Respiratory diseases

CONDITIONS TO AVOID: Heat and water. Reaction with metals can liberate flammable hydrogen gas.

POTENTIAL ENVIRONMENTAL EFFECTS: May cause long lasting harmful effects to aquatic life.

See Section 12 for Ecological Information

SECTION 3 – COMPOSITION / INFORMATION ON INGREDIENTS

Components				
Chemical Name	CAS Number	%(weight)	UN;EINECS	EU Classification; R Phrases
Sulfuric acid	7664-93-9	98%	231-639-5	C; R35
Water	7732-18-5	2%	231-791-2	Not Classified

See Section 11 for Toxicological Information

SECTION 4 - FIRST AID MEASURES

INHALATION: If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Move person to fresh air. Symptoms may be delayed; prompt medical attention may be required. Call a medical doctor.

SKIN: If widespread contact, immediately remove contaminated clothing under a safety shower and wash exposed areas with large quantities of water for at least 15-20 minutes. Get medical assistance. For lesser contact, wash contact areas with plenty of water for at least 15 minutes. Remove contaminated clothing. Launder contaminated clothing before reuse. Get medical assistance.

EYE: Immediately flush eyes with water for at least 15 minutes. Contact a medical doctor. Remove contact lenses if worn.

INGESTION: If swallowed, DO NOT induce vomiting. Contact a medical doctor immediately. If victim is conscious, give plenty of water to drink. Never give anything by mouth to an unconscious person.

NOTES TO PHYSICIAN: Continued washing of the affected area with cold or iced water will be helpful in removing the last traces of sulfuric acid. Creams or ointments should not be applied before or during the washing phase of the treatment.

See Section 2 for Potential Acute Health Effects and Section 11 for Potential Chronic Health Effects

SECTION 5 - FIRE FIGHTING MEASURES

FLASH POINT:	Sulfuric acid is not combustible, but it is a strong oxidizer that enhances the combustion of other substances.
EXPLOSION LIMITS:	Upper: Not applicable Lower: Not applicable
EXTINGUISHING MEDIA:	Extinguish fire using an agent suitable for the surrounding fire (dry chemical, foam or carbon dioxide). DO NOT use water on material. See Unusual Fire and Explosion Hazards. Water spray may be used to cool containers exposed to fire but do not get water inside containers.
PROTECTION OF FIREFIGHTERS:	Product health hazards require the use of full protective clothing. Fire fighters must use positive-pressure breathing apparatus, due to possible release of toxic fumes.
FIREFIGHTING PROCEDURES:	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. Prevent runoff from entering streams, sewers or drinking water supplies.
UNUSUAL FIRE AND EXPLOSION HAZARDS:	Product reacts violently with water evolving steam and hot sulfuric acid mist vapors. Contact with metals causes the formation of flammable, and potentially explosive, hydrogen gas.
HAZARDOUS COMBUSTION PRODUCTS:	This material will not burn but sulfur trioxide gas, sulfuric acid mist and sulfur dioxide may be generated at elevated temperature.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS: Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Wear a self-contained breathing apparatus and appropriate Personal Protective Equipment (PPE). Ventilate enclosed areas.

EMERGENCY PROCEDURES: Eliminate all ignition sources. Keep spilled material away from water and metals. Wear appropriate protective equipment. Stop flow if possible. For small spills, isolate spill or leak area for at least 25 meters (75 feet) in all directions. For large spills, consider initial downwind evacuation for at least 100 meters (330 feet).

ENVIRONMENTAL PRECAUTIONS: Prevent liquid from entering sewers, waterways, drinking water supplies or low-lying areas.

Containment / Clean-up Measures: For small spills, neutralize with soda ash or lime. Absorb with sand, clay or diatomaceous earth. Dike large spills and collect into an acid resistant container, if possible. Otherwise, cautiously dilute and neutralize with soda ash or lime. Collect or sweep neutralized material into an acid safe container for proper disposal. Wash the area with large amount of water.

PROHIBITED MATERIALS: Contact with water or metals may evolve flammable hydrogen gas.

OTHER INFORMATION: Comply with applicable national, state and local regulations for the reporting of spills and releases, and for the disposal of spilled material.

SECTION 7 - HANDLING AND STORAGE

HANDLING: Avoid contact with skin, eyes, and clothing. Avoid breathing vapors or mist. Wear Acid protective clothing. Wash thoroughly after handling. Keep containers closed. Do not add water to contents while in container because of violent reaction.

STORAGE: Store in a cool, dry, ventilated storage area with acid resistant floors and good drainage. Protect from physical damage. Keep out of direct sunlight and away from heat, water, and incompatible materials. Do not wash out

container and use it for other purposes. When diluting, always add the acid to water; never add water to the acid. When opening metal containers, use non-sparking tools because of the possibility of hydrogen gas being present. Containers of this material may be hazardous when empty since they retain product residues (vapors, liquid); observe all warnings and precautions listed for the product.

SECTION 8 – EXPOSURE CONTROLS / PERSONAL PROTECTION

PERSONAL PROTECTIVE EQUIPMENT (PPE):



RESPIRATORY PROTECTION: If the exposure limit is exceeded, a full facepiece respirator with an acid gas cartridge and dust/mist filter may be worn for up to 50 times the exposure limit, or the maximum use concentration specified by the appropriate regulatory agency (NIOSH or CEN) or respirator supplier, whichever is lowest. For emergencies or instances where the exposure levels are not known, use a full-facepiece, positive pressure, air-supplied respirator.

EYE / FACE PROTECTION: Wear chemical splash goggles or goggles and a full faceshield when handling liquid. Do not wear contact lenses.

HAND PROTECTION: Wear acid-proof gauntlet gloves.

SKIN / BODY PROTECTION: Wear an acid-proof apron and boots.

ENGINEERING MEASURES / CONTROLS: Good, general ventilation should be provided to keep vapor and mist concentrations below applicable exposure limits. Packaging and unloading areas and open processing equipment may require mechanical exhaust system.

Listed Exposure Limits / Guidelines ⁽¹⁾				
U.S. OSHA	U.S. ACGIH ⁽²⁾	U.S. NIOSH	U.S. California	Manufacturer
PEL 1 mg/m ³ (vacated)	TLV 0.2 mg/m ³ (thoracic fraction)	REL 1 mg/m ³ IDLH 15 mg/m ³	PEL 1 mg/m ³ STEL 3 mg/m ³	1 mg/m ³
Brazil	Mexico⁽³⁾			
8 ppm / 12 mg/m ³	1 mg/m ³			

⁽¹⁾ 8-hour time weighted average (TWA)

⁽²⁾ Carcinogens: A2 - Suspected Human Carcinogen (contained in strong inorganic acid mists) | TLV Basis - Critical Effects: (pulmonary function)

⁽³⁾ Carcinogens: (A2 - Suspected human carcinogen)

GENERAL INFORMATION: In case of emergency or where there is a strong possibility of considerable exposure, wear a complete acid suit with hood, boots, and gloves and wear appropriate NIOSH / CEN approved respiratory protection.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE: Colorless liquid		ODOR: Pungent, irritating	
TASTE: Not applicable		ODOR THRESHOLD: Not applicable	
BOILING POINT:	327°C (621°F)	VAPOR PRESSURE:	0.002 mmHg @ 40°C (104°F)
MELTING POINT:	-2°C (28°F)	VAPOR DENSITY (AIR =1):	3.4
SPECIFIC GRAVITY (WATER = 1):	1.84 @ 16°C (60°F)	WATER SOLUBILITY:	Miscible (exothermic)
DENSITY:	15.35 lbs/gal	VISCOSITY:	26.7 cP @ 20°C (68°F)
BULK DENSITY:	Not applicable (see specific gravity)	PH:	< 1.0

SECTION 10 - STABILITY AND REACTIVITY

STABILITY: Stable under normal temperatures and pressures.

HAZARDOUS POLYMERIZATION: Will not occur.

CONDITIONS TO AVOID: Heat and water. Reaction of product with metals can liberate flammable hydrogen gas.

INCOMPATIBLE MATERIALS: Acid anhydrides, light combustible material, organic chemicals, strong oxidizers, finely divided metals, alkalis, and amines.

HAZARDOUS DECOMPOSITION PRODUCTS: Sulfur oxides; hydrogen gas.

SECTION 11 - TOXICOLOGICAL INFORMATION

POTENTIAL HEALTH EFFECTS – CHRONIC (DELAYED):

INHALATION:	Repeated exposures may cause permanent damage to the lungs and erosion of tooth enamel.
SKIN AND EYE:	None expected.
INGESTION:	None expected.
MUTAGENIC EFFECTS:	None expected.
CARCINOGENIC EFFECTS:	IARC has classified strong inorganic mists containing sulfuric acid as carcinogenic to humans. This does not apply to sulfuric acid solutions.
REPRODUCTIVE EFFECTS:	None expected.

Animal Data: Sulfuric acid Oral LD50: 2,140 mg/kg in rats Inhalation 8 hour LC50: 30 mg/m³ in guinea pigs. Concentrated sulfuric acid is corrosive to skin and eyes. Animal testing indicates that sulfuric acid is a moderate eye irritant and a slight skin irritant when tested as a 10% solution. Single and repeated inhalation exposures caused irritation of the respiratory tract, corrosion of the respiratory tract, lung damage, labored breathing, altered respiratory rate, and pulmonary edema.

Repeated exposure caused altered red blood cell counts. No adequate animal data are available to define carcinogenic potential of Sulfuric Acid. Limited studies do not suggest effects. In animal testing, sulfuric acid has not caused developmental toxicity. No animal data are available to define reproductive toxicity. Sulfuric acid has not produced genetic damage in bacterial cultures.

Carcinogenicity: The International Agency for Research on Cancer (IARC) has classified "strong inorganic acid mists containing sulfuric acid" as a known human carcinogen, (IARC category 1). Strong inorganic acid mists containing sulfuric acid are also classified as a known human carcinogen by the National Toxicology Program (NTP) and the American Conference of Government Industrial Hygienists (ACGIH). These classifications apply only to mists containing sulfuric acid and not to sulfuric acid or sulfuric acid solutions.

SECTION 12 - ECOLOGICAL INFORMATION

Environmental Fate: When released into the soil, this material may leach into groundwater. When released into the air, this material may be removed from the atmosphere to a moderate extent by wet deposition. When released into the air, this material may be removed from the atmosphere to a moderate extent by dry deposition.

Environmental Toxicity: LC50 Flounder 100 to 330 mg/l/48 hr aerated water/Conditions of bioassay not specified; LC50 Shrimp 80 to 90 mg/l/48 hr aerated water /Conditions of bioassay not specified; LC50 Prawn 42.5 ppm/48 hr salt water /Conditions of bioassay not specified. This material may be toxic to aquatic life.

SECTION 13 - DISPOSAL CONSIDERATIONS

PRODUCT: Material that cannot be saved for recovery or recycling should be handled as hazardous waste. Do not flush to surface water or sanitary sewer system. If approved, neutralize and transfer to waste treatment system. Otherwise, send to an approved incinerator or approved waste facility. Processing, use or contamination of this product may change the waste management options.

State and local disposal regulations may differ from national disposal regulations. Dispose of container and unused contents in accordance with national, state and local requirements.

SECTION 14 - TRANSPORTATION INFORMATION

U.S. DOT 49 CFR 172.101:

SHIPPING NAME: Sulfuric acid

ID NUMBER: UN1830 (with more than 51% acid)

HAZARD CLASS: Class 8 – Corrosive Materials

LABELING CLASS: Class 8 – Corrosive Materials

PACKING GROUP: II

TDG - CANADA - TRANSPORT OF DANGEROUS GOODS:

SHIPPING NAME: Sulphuric acid

ID NUMBER: UN1830 (with more than 51% acid)

HAZARD CLASS: Class 8 – Corrosives

LABELING CLASS: Class 8 – Corrosives

PACKING GROUP: II

IMO / IMDG –INTERNATIONAL MARITIME TRANSPORT:

SHIPPING NAME: Sulphuric acid

ID NUMBER: UN1830 (with more than 51% acid)

HAZARD CLASS: Class 8 – Corrosives

LABELING CLASS: Class 8 – Corrosives

PACKING GROUP: II

ADN - EUROPE TRANSPORT OF DANGEROUS GOODS BY ROAD/INLAND WATERWAY:

SHIPPING NAME: Acide sulfurique...électrolyte acide pour accumulateurs

ID NUMBER: UN1830

HAZARD CLASS: Class 8 – Corrosives

LABELING CLASS: Class 8 – Corrosives

PACKING GROUP: II

ADR - EUROPE TRANSPORT OF DANGEROUS GOODS BY ROAD/INLAND WATERWAY:

SHIPPING NAME: Sulphuric acid

ID NUMBER: UN1830 (with more than 51% acid)

HAZARD CLASS: Class 8 – Corrosives

LABELING CLASS: Class 8 – Corrosives

PACKING GROUP: II

SECTION 15 - REGULATORY INFORMATION

U.S. SARA HAZARD CLASSIFICATIONS: ACUTE, REACTIVE

EU RISK AND SAFETY PHRASES:

S24 / 25 Avoid contact with skin and eyes.

R35 Causes severe burns.

R68 / 20 / 21 / 22 Harmful: possible risk of irreversible effects through inhalation, in contact with skin and if swallowed.

R48 / 20 Harmful: danger of serious damage to health by prolonged exposure through inhalation.

U.S. State Right To Know					
Component	CAS	MA	MN	NJ	PA
Sulfuric acid	7664-93-9	Yes	Yes	Yes	Yes
Water	7732-18-5	No	No	No	No

National Inventories							
Component	CAS	U.S. TSCA	Canada DSL	China IECS	EU EINECS	Japan ENCS	Korea KECL
Sulfuric acid	7664-93-9	Yes	Yes	Yes	Yes	Yes	Yes
Water	7732-18-5	No	No	No	No	No	No

Canada

Labor

Canada - WHMIS - Classifications of Substances

- Sulfuric acid 7664-93-9 98% D1A, E (including >51%, <=51%)

Canada - WHMIS - Ingredient Disclosure List

- Sulfuric acid 7664-93-9 98% 1 %

Other

Canada - Controlled Drugs - Class B Precursors

- Sulfuric acid 7664-93-9 98%

Europe

Other

EU - CLP (1272/2008) - Annex VI - Table 3.2 - Classification

- Sulfuric acid 7664-93-9 98% C; R35

EU - CLP (1272/2008) - Annex VI - Table 3.2 - Concentration Limits

- Sulfuric acid 7664-93-9 98% 15%<=C: C; R35 5%<=C<15%: Xi; R36/38

EU - CLP (1272/2008) - Annex VI - Table 3.2 - Labelling

- Sulfuric acid 7664-93-9 98% C R:35 S:(1/2)-26-30-45

EU - CLP (1272/2008) - Annex VI - Table 3.2 - Notes - Substances and Preparations

- Sulfuric acid 7664-93-9 98% B

EU - CLP (1272/2008) - Annex VI - Table 3.2 - Safety Phrases

- Sulfuric acid 7664-93-9 98% S:(1/2)-26-30-45

EU - Existing Substance Regulation (793/93/EEC) - Evaluation of Existing HPV Chemicals (REPEALED)

- Sulfuric acid 7664-93-9 98%

EU - Food Additives (1333/2008/EC) - Annex I - Generally Permitted for Use in Foodstuffs

- Sulfuric acid 7664-93-9 98% E 513

EU - Food Additives (2008/84/EC) - Specific Purity Criteria for Food Additives Other than Colours and Sweeteners

- Sulfuric acid 7664-93-9 98% E 513

EU - Hazardous Substances Restricted or Prohibited in Electrical Equipment (2002/95/EC) (RoHS)

None Listed

EU - Inventory of Cosmetic Ingredients Directive (INCI) (76/768/EEC) - Other Ingredients

- Sulfuric acid 7664-93-9 98% Buffering

EU - Narcotics (273/2004) - Drug Precursors - Annex I - Scheduled Substances

- Sulfuric acid 7664-93-9 98% Category 3 Substance

Germany

Environment

Germany - Water Classification (VwVwS) - Annex 2 - Water Hazard Classes

- Sulfuric acid 7664-93-9 98% Number 182, hazard class 1 - low hazard to waters (footnote 8)

Mexico

Other

Mexico - Hazard Classifications

- Sulfuric acid 7664-93-9 98% Class = 8 UN1830, UN1832, UN2796

Mexico - Regulated Substances

- Sulfuric acid 7664-93-9 98% UN2796 (with not more than 51% acid); UN1830 (with more than 51% acid); UN1832 (spent)

Netherlands

Other

Netherlands - List of Carcinogens

- Sulfuric acid 7664-93-9 98%

Other Agency Information

Other

AIHA - Emergency Response Planning Guidelines - ERPG-1 Values

- Sulfuric acid 7664-93-9 98% 2 mg/m3 ERPG-1

AIHA - Emergency Response Planning Guidelines - ERPG-2 Values

- Sulfuric acid 7664-93-9 98% 10 mg/m3 ERPG-2

AIHA - Emergency Response Planning Guidelines - ERPG-3 Values

- Sulfuric acid 7664-93-9 98% 30 mg/m3 ERPG-3

AIHA - Odor Threshold Values

- Sulfuric acid 7664-93-9 98% no geometric mean air odor threshold

U.S. - DEA (Drug Enforcement Administration) - List II or Essential Chemicals

7664-93-9 98% 50 gallon Export Volume (Exports, transshipments and international transactions to designated countries)

U.S. - DEA (Drug Enforcement Administration) - Precursors - Concentration Limits for Chemical Mixtures

20 % by weight or volume (Sulfuric acid in an inert carrier solvent, such as aqueous or alcoholic

7664-93-9 98% solutions, is not considered a mixture. Weight is based on Sulfuric acid in the mixture and not the combined weight of the carrier solvent, if any.)

ICCA - High Production Volume Working List

- Sulfuric acid 7664-93-9 98%

OECD - List of High Production Volume Chemicals

- Sulfuric acid 7664-93-9 98% SIDS Chemical

OECD - SIDS for HPV Chemicals - Publications Date of SIDS Initial Assessment Reports

- Sulfuric acid 7664-93-9 98% March 2003

UN - Convention on Illicit Traffic in Narcotics & Psychotropics - Table II Substances

- Sulfuric acid 7664-93-9 98%

United States

Environment

U.S. - CERCLA/SARA - Hazardous Substances and their Reportable Quantities

- Sulfuric acid 7664-93-9 98% 1000 lb final RQ; 454 kg final RQ

U.S. - CERCLA/SARA - Section 302 Extremely Hazardous Substances EPCRA RQs

- Sulfuric acid 7664-93-9 98% 1000 lb EPCRA RQ

U.S. - CERCLA/SARA - Section 302 Extremely Hazardous Substances TPQs

- Sulfuric acid 7664-93-9 98% 1000 lb TPQ

U.S. - CERCLA/SARA - Section 313 - Emission Reporting

- Sulfuric acid 7664-93-9 98% 1.0 % de minimis concentration (acid aerosols including mists, vapors, gas, fog, and other airborne forms of any particle size)

U.S. - CWA (Clean Water Act) - Hazardous Substances

- Sulfuric acid 7664-93-9 98%

U.S. - CWA (Clean Water Act) - Reportable Quantities of Designated Hazardous Substances

- Sulfuric acid 7664-93-9 98% 1000 lb RQ

U.S. - EPA - HPV (High Production Volume) Challenge Program Chemical List

- Sulfuric acid 7664-93-9 98% Indicators 2,4; ICCA Confirmed Commitment

U.S. - EPA - NAC/AEGL - Priority Chemicals for Guideline Development

- Sulfuric acid 7664-93-9 98%

U.S. - EPA - NAC/AEGL - Acute Exposure Guidelines (AEGL-1) - Interim

- Sulfuric acid 7664-93-9 98% 0.20 mg/m³ 10-min AEGL-1 (interim); 0.20 mg/m³ 30 min AEGL-1 (interim); 0.20 mg/m³ 60-min AEGL-1 (interim); 0.20 mg/m³ 4-hr AEGL-1 (interim); 0.20 mg/m³ 8-hr AEGL-1 (interim)

U.S. - EPA - NAC/AEGL - Acute Exposure Guidelines (AEGL-2) - Interim

- Sulfuric acid 7664-93-9 98% 8.7 mg/m³ 10-min AEGL-2 (interim); 8.7 mg/m³ 30-min AEGL-2 (interim); 8.7 mg/m³ 60-min AEGL-2 (interim); 8.7 mg/m³ 4-hr AEGL-2 (interim); 8.7 mg/m³ 8-hr AEGL-2 (interim)

U.S. - EPA - NAC/AEGL - Acute Exposure Guidelines (AEGL-3) - Interim

- Sulfuric acid 7664-93-9 98% 270 mg/m³ 10-min AEGL-3 (interim); 200 mg/m³ 30-min AEGL-3 (interim); 160 mg/m³ 60-min AEGL-3 (interim); 110 mg/m³ 4-hr AEGL-3 (interim); 93 mg/m³ 8-hr AEGL-3 (interim)

U.S. - FIFRA - Listing of Pesticide Chemicals (40 CFR 180)

- Sulfuric acid 7664-93-9 98% Section number 180.910; Section number 180.940; Section number 180.1019

U.S. - FIFRA - Pesticide Product Other Ingredients

- Sulfuric acid 7664-93-9 98% List 4B - Inert Ingredients

Other

U.S. - CPSC (Consumer Product Safety Commission) - Specially Regulated Substances

- Sulfuric acid 7664-93-9 98% Add POISON to label, 16 CFR 1500.129 (10% or more, free or chemically unneutralized)

U.S. - FDA - Food Additives Generally Recognized as Safe (GRAS)

- Sulfuric acid 7664-93-9 98% 21 CFR 184.1095

U.S. - FDA - Indirect Food Additives

- Sulfuric acid 7664-93-9 98% 21 CFR 175.105, 21 CFR 176.210, 21 CFR 177.2800

U.S. - FDA - Total Food Additives List Sourced from EAFUS

- Sulfuric acid 7664-93-9 98% 172.560, 172.892, 173.385, 176.170, 176.180, 176.210, 177.2800, 178.1010, 179.45, 184.1095, 73.85

Other (continued)

U.S. - Coast Guard - Cargo Compatibility

- Sulfuric acid 7664-93-9 98%

Incompatible with the following Groups:

1 - Non-oxidizing minerals acids, 3 - Nitric acid, 4 - Organic acids, 5 – Caustics, 6 - Ammonia, 7 - Aliphatic amines, 8 - Alkanolamines, 9 - Aromatic amines, 10 - Amides, 11 – Organic anhydrides, 12 - Isocyanates, 13 -Vinyl acetate, 14 - Acrylates, 15 - Substituted allyls, 16 - Alkylene oxides, 17 - Epichlorohydrin, 18 - Ketones, 19 - Aldehydes, 20 - Alcohols and glycols, 21 - Phenols, cresols, 22 - Caprolactam solution

U.S. - Coast Guard - Compatibility Groups

- Sulfuric acid 7664-93-9 98% Group No. 2; Group No. 2 (spent)

U.S. - Coast Guard - Requirements for Liquid Hazardous Materials

46 CFR 153.440, 46 CFR 153.554, 46 CFR 153.555, 46 CFR 153.556, 46 CFR 153.602, 46 CFR

- Sulfuric acid 7664-93-9 98% 153.908(a), (b), 46 CFR 153.933, 46 CFR 153.1000, 46 CFR 153.1045, 46 CFR 153.1046, 46 CFR 153.1052

U.S. - Coast Guard - Special Requirements for Bulk Liquid Hazardous Materials

- Sulfuric acid 7664-93-9 98% 46 CFR 151.50-20, 46 CFR 151.50-21, 46 CFR 151.50-73 (spent)

United States - California

Labor

U.S. - California - 8 CCR Section 339 - Director's List of Hazardous Substances

- Sulfuric acid 7664-93-9 98%

U.S. - California - Air Toxics Hot Spots Act - Acute Reference Exposure Levels (RELs)

- Sulfuric acid 7664-93-9 98% 120 µg/m3 REL

U.S. - California - Air Toxics Hot Spots Act - Chronic Reference Exposure Levels (RELs)

- Sulfuric acid 7664-93-9 98% 1 µg/m3 REL (inhalation)

U.S. - California - Air Toxics Hot Spots Act - Acute Hazard Index Target Organs

- Sulfuric acid 7664-93-9 98% Respiratory system

Environment

U.S. - California - 22 CCR - Presumed Hazardous Wastes

- Sulfuric acid 7664-93-9 98% Toxic; Corrosive

U.S. - California - Air Toxics Hot Spots Act - Emissions Inventory Criteria & Guidelines - Appendix A-I Substances - ADOA

- Sulfuric acid 7664-93-9 98% 2 lbs/yr ADOA

U.S. - California - Toxic Air Contaminant List (AB 1807, AB 2728)

- Sulfuric acid 7664-93-9 98% Category IIb

Other

U.S. - California - Regulated Substances for Accidental Release Prevention

- Sulfuric acid 7664-93-9 98% 1000 lb TQ

United States - Connecticut

Environment

U.S. - Connecticut - Hazardous Air Pollutants - HLVs (30 min)

- Sulfuric acid 7664-93-9 98% 100 µg/m3 HLV

U.S. - Connecticut - Hazardous Air Pollutants - HLVs (8 hr)

- Sulfuric acid 7664-93-9 98% 20 µg/m3 HLV

United States - Delaware

Environment

U.S. - Delaware - Pollutant Discharge Requirements - Reportable Quantities

- Sulfuric acid 7664-93-9 98% 1000 lb DRQ

United States - Idaho

Environment

U.S. - Idaho - Non-Carcinogenic Toxic Air Pollutants - Acceptable Ambient Concentrations

- Sulfuric acid 7664-93-9 98% 0.05 mg/m3 AAC

U.S. - Idaho - Non-Carcinogenic Toxic Air Pollutants - Emission Levels (ELs)

- Sulfuric acid 7664-93-9 98% 0.067 lb/hr EL

United States - Illinois

Environment

U.S. - Illinois - Toxic Air Contaminants

- Sulfuric acid 7664-93-9 98% (aerosol)

United States - Louisiana

Environment

U.S. - Louisiana - Reportable Quantity List for Pollutants

- Sulfuric acid 7664-93-9 98% 1000 lb final RQ; 454 kg final RQ

United States - Massachusetts

Environment

U.S. - Massachusetts - Allowable Ambient Limits (AALs)

- Sulfuric acid 7664-93-9 98% 2.72 µg/m3 AAL; 0.68 ppb AAL

U.S. - Massachusetts - Allowable Threshold Concentrations (ATCs)

- Sulfuric acid 7664-93-9 98% 14 µg/m3 ATC; 3 ppb ATC

U.S. - Massachusetts - Oil & Hazardous Material List - Groundwater Reportable Concentration- Reporting Category 1

- Sulfuric acid 7664-93-9 98% See RCs of any listed constituents

U.S. - Massachusetts - Oil & Hazardous Material List - Groundwater Reportable Concentration- Reporting Category 2

- Sulfuric acid 7664-93-9 98% See RCs of any listed constituents

U.S. - Massachusetts - Oil & Hazardous Material List - Reportable Quantity

- Sulfuric acid 7664-93-9 98% 50 lb RQ

U.S. - Massachusetts - Oil & Hazardous Material List - Soil Reportable Concentration- Reporting Category 1

- Sulfuric acid 7664-93-9 98% See RCs of any listed constituents

U.S. - Massachusetts - Oil & Hazardous Material List - Soil Reportable Concentration- Reporting Category 2

- Sulfuric acid 7664-93-9 98% See RCs of any listed constituents

U.S. - Massachusetts - Threshold Effects Exposure Limits (TELs)

- Sulfuric acid 7664-93-9 98% 2.72 µg/m3 TEL; 0.68 ppb TEL

U.S. - Massachusetts - Toxics Use Reduction Act

- Sulfuric acid 7664-93-9 98% CERCLA and 313 chemical (aerosol)

United States - Michigan

Environment

U.S. - Michigan - Polluting Materials List

- Sulfuric acid 7664-93-9 98% 100 lb TRQ

United States - New Jersey

Environment

U.S. - New Jersey - Discharge Prevention - List of Hazardous Substances

- Sulfuric acid 7664-93-9 98%

U.S. - New Jersey - Environmental Hazardous Substances List

- Sulfuric acid 7664-93-9 98% SN 1761 TPQ: 500 lb

U.S. - New Jersey - Special Health Hazards Substances List

- Sulfuric acid 7664-93-9 98% carcinogen; corrosive; reactive - second degree

United States - New York

Environment

U.S. - New York - Reporting of Releases Part 597 - List of Hazardous Substances

- Sulfuric acid 7664-93-9 98% 1000 lb RQ (air); 100 lb RQ (land/water)

United States - North Carolina

Environment

U.S. - North Carolina - Control of Toxic Air Pollutants

- Sulfuric acid 7664-93-9 98% 0.012 mg/m3 (chronic toxicants); 0.1 mg/m3 (acute systemic toxicants)

United States - Ohio

Environment

U.S. - Ohio - Extremely Hazardous Substances - Threshold Quantities

- Sulfuric acid 7664-93-9 98% 500 lb TQ

United States - Pennsylvania

Labor

U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List

- Sulfuric acid 7664-93-9 98%

United States - Rhode Island

Labor

U.S. - Rhode Island - Hazardous Substance List

- Sulfuric acid 7664-93-9 98% Toxic; Flammable

United States - South Carolina

Environment

U.S. - South Carolina - Toxic Air Pollutants - Maximum Allowable Concentrations

- Sulfuric acid 7664-93-9 98% 10.00 µg/m3 MAC

U.S. - South Carolina - Toxic Air Pollutants - Pollutant Categories

- Sulfuric acid 7664-93-9 98% category 2 pollutant - moderate toxicity

United States - Texas

Other

U.S. - Texas - Effects Screening Levels - Long Term

- Sulfuric acid 7664-93-9 98% TCEQ Regulation II

U.S. - Texas - Effects Screening Levels - Short Term

- Sulfuric acid 7664-93-9 98% TCEQ Regulation II

United States - Wisconsin

Environment

U.S. - Wisconsin - Hazardous Air Contaminants - All Sources - Emissions from Stack Heights 25 Feet to Less Than 40 Feet

- Sulfuric acid 7664-93-9 98% 0.209 lb/h TQ (24 hour average)

U.S. - Wisconsin - Hazardous Air Contaminants - All Sources - Emissions from Stack Heights 40 Feet to Less Than 75 Feet

- Sulfuric acid 7664-93-9 98% 0.421 lb/h TQ (24 hour average)

U.S. - Wisconsin - Hazardous Air Contaminants - All Sources - Emissions from Stack Heights 75 Feet or Greater

- Sulfuric acid 7664-93-9 98% 1.62 lb/h TQ (24 hour average)

U.S. - Wisconsin - Hazardous Air Contaminants - All Sources - Emissions from Stack Heights Less Than 25 Feet

- Sulfuric acid 7664-93-9 98% 0.0537 lb/h TQ (24 hour average)

SECTION 16 – OTHER INFORMATION

Responsible for MSDS: MSDS Coordinator
Address: Agrifos Fertilizer L.L.C.
Pasadena, TX 77501
Telephone: (01)713-920-5362

PREPARATION DATE: 07 June 2010
LAST REVISION DATE: 21 March 2011

OTHER INFORMATION:



National Fire Protection Association (NFPA) Rating:
Health = 3 Flammability = 0 Reactivity = 2 Other = Water Reactive

HEALTH	3
FLAMMABILITY	0
REACTIVITY	2

Hazardous Materials Information System (HMIS) Rating:
Health = 3 Flammability = 0 Reactivity = 2
Other: Personal Protection rating to be supplied by the user depending on specific conditions of use.

DISCLAIMER / STATEMENT OF LIABILITY: The information herein has been compiled from sources believed to be reliable and up-to-date, and is accurate to the best of our knowledge. However, Agrifos Fertilizer L.L.C. cannot give any guarantees regarding information from other sources, and expressly does not make warranties, nor assumes any liability for its use. The data in this Material 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.