

# Ferric Sulfate 50%

## Safety Data Sheet

According to U.S. Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules And Regulations and according to Canada's Hazardous Products Regulation, February 11, 2015.

Revision Date: 12/03/2018

Date of Issue: 05/09/2015

Version: 4.0

## SECTION 1: IDENTIFICATION

### Product Identifier

**Product Form:** Mixture

**Product Name:** Ferric Sulfate 50%

### Intended Use of the Product

Municipal and industrial water and wastewater treatment for the removal of turbidity, color, suspended solids and phosphorus. Sludge conditioning, compaction and volume reduction. Oily wastewater clarification and dissolved air flotation. Emulsion breaking.

### Name, Address, and Telephone of the Responsible Party

#### **Manufacturer**

Lab Alley LLC  
 22111 Highway 71 West, Suite 601  
 Spicewood, Texas 78669  
 Tel.: 512-668-9918  
[www.laballey.com](http://www.laballey.com)

### Emergency Telephone Number

**Emergency Number** : InfoTrac: 800-535-5053

## SECTION 2: HAZARDS IDENTIFICATION

### Classification of the Substance or Mixture

#### **GHS Classification**

Met. Corr. 1	H290
Acute Tox. 4 (Oral)	H302
Skin Corr. 1A	H314
Eye Dam. 1	H318
Carc. 1A	H350

Full text of hazard classes and H-statements : see section 16

### Label Elements

#### **GHS Labeling**

##### **Hazard Pictograms**



##### **Signal Word**

: Danger

##### **Hazard Statements**

: H290 - May be corrosive to metals.  
 H302 - Harmful if swallowed.  
 H314 - Causes severe skin burns and eye damage.  
 H318 - Causes serious eye damage.  
 H350 - May cause cancer (Inhalation).

##### **Precautionary Statements**

: P234 - Keep only in original container.  
 P260 - Do not breathe vapors, mist, or spray.  
 P264 - Wash hands, forearms, and other exposed areas thoroughly after handling.  
 P270 - Do not eat, drink or smoke when using this product.  
 P280 - Wear protective gloves, protective clothing, and eye protection.  
 P301+P312 - IF SWALLOWED: Call a POISON CENTER or doctor if you feel unwell.  
 P301+P330+P331 - IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.  
 P303+P361+P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing.

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Rinse skin with water.  
P304+P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing.  
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P310 - Immediately call a POISON CENTER or doctor.  
P321 - Specific treatment (see section 4 on this SDS).  
P330 - Rinse mouth.  
P363 - Wash contaminated clothing before reuse.  
P390 - Absorb spillage to prevent material damage.  
P405 - Store locked up.  
P406 - Store in corrosive resistant container with a resistant inner liner.  
P501 - Dispose of contents/container in accordance with local, regional, national, territorial, provincial, and international regulations.

### Other Hazards

May produce explosive hydrogen gas on contact with incompatibilities or upon thermal decomposition.

### Unknown acute toxicity

No data available

## SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

### Mixture

Name	Product Identifier	%*	GHS Ingredient Classification
Water	(CAS-No.) 7732-18-5	35- 69	Not classified
Sulfuric acid, iron(3+) salt (3:2)**	(CAS-No.) 10028-22-5	30 – 60 <sup>+</sup>	Met. Corr. 1, H290 Acute Tox. 4 (Oral), H302 Skin Irrit. 2, H315 Eye Dam. 1, H318
Sulfuric acid***	(CAS-No.) 7664-93-9	1 - 5 <sup>+</sup>	Skin Corr. 1A, H314 Eye Dam. 1, H318 Carc. 1A, H350 Aquatic Acute 3, H402

Full text of H-phrases: see section 16

\*Percentages are listed in weight by weight percentage (w/w%) for liquid and solid ingredients. Gas ingredients are listed in volume by volume percentage (v/v%).

\*\*As Fe<sub>2</sub>(SO<sub>4</sub>)<sub>3</sub>•9H<sub>2</sub>O (Dry Ferric Sulfate)

\*\*\* Strong inorganic acid aerosols/mists containing this substance are carcinogenic to humans via inhalation. Under normal conditions of use this route of exposure is not expected.

<sup>+</sup>The actual concentration of the ingredient(s) is withheld as a trade secret in accordance with Regulations Amending the Hazardous Products Regulations (HPR) SOR/2018-68 and 29 CFR 1910.1200.

## SECTION 4: FIRST AID MEASURES

### Description of First-aid Measures

**General:** Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).

**Inhalation:** When symptoms occur: go into open air and ventilate suspected area. Obtain medical attention if breathing difficulty persists.

**Skin Contact:** Remove contaminated clothing. Immediately flush skin with plenty of water for at least 30 minutes. Wash contaminated clothing before reuse. Get immediate medical advice/attention.

**Eye Contact:** Rinse cautiously with water for at least 30 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get immediate medical advice/attention.

**Ingestion:** Rinse mouth. Do NOT induce vomiting. Obtain medical attention.

### Most Important Symptoms and Effects Both Acute and Delayed

**General:** Harmful if swallowed. Causes severe skin burns and eye damage. May be corrosive to the respiratory tract.

**Inhalation:** May be corrosive to the respiratory tract.

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**Skin Contact:** Causes severe irritation which will progress to chemical burns.

**Eye Contact:** Causes permanent damage to the cornea, iris, or conjunctiva.

**Ingestion:** This material is harmful orally and can cause adverse health effects or death in significant amounts. May cause burns or irritation of the linings of the mouth, throat, and gastrointestinal tract.

**Chronic Symptoms:** None expected under normal conditions of use.

### **Indication of Any Immediate Medical Attention and Special Treatment Needed**

If exposed or concerned, get medical advice and attention. If medical advice is needed, have product container or label at hand.

## **SECTION 5: FIRE-FIGHTING MEASURES**

### **Extinguishing Media**

**Suitable Extinguishing Media:** Water spray, dry chemical, foam, carbon dioxide.

**Unsuitable Extinguishing Media:** Do not use a heavy water stream. Use of heavy stream of water may spread fire.

### **Special Hazards Arising From the Substance or Mixture**

**Fire Hazard:** Not considered flammable but may burn at high temperatures.

**Explosion Hazard:** Contact with metallic substances may release flammable hydrogen gas.

**Reactivity:** May be corrosive to metals. Contact with metals may evolve flammable hydrogen gas. May react exothermically with water releasing heat. Adding an acid to a base or base to an acid may cause a violent reaction.

### **Advice for Firefighters**

**Precautionary Measures Fire:** Exercise caution when fighting any chemical fire.

**Firefighting Instructions:** Use water spray or fog for cooling exposed containers.

**Protection During Firefighting:** Do not enter fire area without proper protective equipment, including respiratory protection.

**Hazardous Combustion Products:** Sulfur oxides. Corrosive vapors.

**Other Information:** Do not allow run-off from fire fighting to enter drains or water courses.

### **Reference to Other Sections**

Refer to Section 9 for flammability properties.

## **SECTION 6: ACCIDENTAL RELEASE MEASURES**

### **Personal Precautions, Protective Equipment and Emergency Procedures**

**General Measures:** Do not get in eyes, on skin, or on clothing. Do not breathe vapor, mist or spray.

#### **For Non-Emergency Personnel**

**Protective Equipment:** Use appropriate personal protective equipment (PPE).

**Emergency Procedures:** Evacuate unnecessary personnel.

#### **For Emergency Personnel**

**Protective Equipment:** Equip cleanup crew with proper protection.

**Emergency Procedures:** Upon arrival at the scene, a first responder is expected to recognize the presence of dangerous goods, protect oneself and the public, secure the area, and call for the assistance of trained personnel as soon as conditions permit. Ventilate area.

### **Environmental Precautions**

Prevent entry to sewers and public waters. Avoid release to the environment. Collect spillage.

### **Methods and Materials for Containment and Cleaning Up**

**For Containment:** Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams. As an immediate precautionary measure, isolate spill or leak area in all directions.

**Methods for Cleaning Up:** Clean up spills immediately and dispose of waste safely. Cautiously neutralize spilled liquid. Absorb spillage to prevent material damage. Transfer spilled material to a suitable container for disposal. Contact competent authorities after a spill.

### **Reference to Other Sections**

See Section 8 for exposure controls and personal protection and Section 13 for disposal considerations.

## **SECTION 7: HANDLING AND STORAGE**

### **Precautions for Safe Handling**

Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Handle empty containers with care because they may still present a hazard. Do not get in eyes, on skin, or on clothing. Do not breathe mist, spray, vapors.

**Additional Hazards When Processed:** May be corrosive to metals. May release corrosive vapors.

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**Hygiene Measures:** Handle in accordance with good industrial hygiene and safety procedures.

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

**Technical Measures:** Comply with applicable regulations.

**Storage Conditions:** Keep container closed when not in use. Store in a dry, cool place. Keep/Store away from extremely high or low temperatures and incompatible materials. Store in original container or corrosive resistant and/or lined container.

**Incompatible Materials:** Strong acids, strong bases, strong oxidizers. Alkalis. Metals.

### **Specific End Use(s)**

Municipal and industrial water and wastewater treatment for the removal of turbidity, color, suspended solids and phosphorus. Sludge conditioning, compaction and volume reduction. Oily wastewater clarification and dissolved air flotation. Emulsion breaking.

## **SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**

### **Control Parameters**

For substances listed in section 3 that are not listed here, there are no established Exposure limits from the manufacturer, supplier, importer, or the appropriate advisory agency including: ACGIH (TLV), AIHA (WEEL), NIOSH (REL), OSHA (PEL), Canadian provincial governments, or the Mexican government.

<b>Sulfuric acid (7664-93-9)</b>		
<b>Mexico</b>	OEL TWA (mg/m <sup>3</sup> )	1 mg/m <sup>3</sup>
<b>USA ACGIH</b>	ACGIH TWA (mg/m <sup>3</sup> )	0.2 mg/m <sup>3</sup> (thoracic particulate matter)
<b>USA ACGIH</b>	ACGIH chemical category	Suspected Human Carcinogen contained in strong inorganic acid mists
<b>USA OSHA</b>	OSHA PEL (TWA) (mg/m <sup>3</sup> )	1 mg/m <sup>3</sup>
<b>USA NIOSH</b>	NIOSH REL (TWA) (mg/m <sup>3</sup> )	1 mg/m <sup>3</sup>
<b>USA IDLH</b>	US IDLH (mg/m <sup>3</sup> )	15 mg/m <sup>3</sup>
<b>Alberta</b>	OEL STEL (mg/m <sup>3</sup> )	3 mg/m <sup>3</sup>
<b>Alberta</b>	OEL TWA (mg/m <sup>3</sup> )	1 mg/m <sup>3</sup>
<b>British Columbia</b>	OEL TWA (mg/m <sup>3</sup> )	0.2 mg/m <sup>3</sup> (Thoracic, contained in strong inorganic acid mists)
<b>Manitoba</b>	OEL TWA (mg/m <sup>3</sup> )	0.2 mg/m <sup>3</sup> (thoracic particulate matter)
<b>New Brunswick</b>	OEL STEL (mg/m <sup>3</sup> )	3 mg/m <sup>3</sup>
<b>New Brunswick</b>	OEL TWA (mg/m <sup>3</sup> )	1 mg/m <sup>3</sup>
<b>Newfoundland &amp; Labrador</b>	OEL TWA (mg/m <sup>3</sup> )	0.2 mg/m <sup>3</sup> (thoracic particulate matter)
<b>Nova Scotia</b>	OEL TWA (mg/m <sup>3</sup> )	0.2 mg/m <sup>3</sup> (thoracic particulate matter)
<b>Nunavut</b>	OEL STEL (mg/m <sup>3</sup> )	0.6 mg/m <sup>3</sup> (thoracic fraction)
<b>Nunavut</b>	OEL TWA (mg/m <sup>3</sup> )	0.2 mg/m <sup>3</sup> (thoracic fraction)
<b>Northwest Territories</b>	OEL STEL (mg/m <sup>3</sup> )	0.6 mg/m <sup>3</sup> (thoracic fraction, strong acid mists only)
<b>Northwest Territories</b>	OEL TWA (mg/m <sup>3</sup> )	0.2 mg/m <sup>3</sup> (thoracic fraction, strong acid mists only)
<b>Ontario</b>	OEL TWA (mg/m <sup>3</sup> )	0.2 mg/m <sup>3</sup> (thoracic)
<b>Prince Edward Island</b>	OEL TWA (mg/m <sup>3</sup> )	0.2 mg/m <sup>3</sup> (thoracic particulate matter)
<b>Québec</b>	VECD (mg/m <sup>3</sup> )	3 mg/m <sup>3</sup>
<b>Québec</b>	VEMP (mg/m <sup>3</sup> )	1 mg/m <sup>3</sup>
<b>Saskatchewan</b>	OEL STEL (mg/m <sup>3</sup> )	0.6 mg/m <sup>3</sup> (thoracic fraction)
<b>Saskatchewan</b>	OEL TWA (mg/m <sup>3</sup> )	0.2 mg/m <sup>3</sup> (thoracic fraction)
<b>Yukon</b>	OEL STEL (mg/m <sup>3</sup> )	1 mg/m <sup>3</sup>
<b>Yukon</b>	OEL TWA (mg/m <sup>3</sup> )	1 mg/m <sup>3</sup>

### **Exposure Controls**

**Appropriate Engineering Controls:** Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Ensure adequate ventilation, especially in confined areas. Ensure all national/local regulations are observed.

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**Personal Protective Equipment:** Gloves. Protective clothing. Protective goggles. Face shield. Insufficient ventilation: wear respiratory protection.



**Materials for Protective Clothing:** Acid-resistant clothing.

**Hand Protection:** Wear protective gloves.

**Eye Protection:** Chemical safety goggles and face shield.

**Skin and Body Protection:** Wear suitable protective clothing.

**Respiratory Protection:** If exposure limits are exceeded or irritation is experienced, approved respiratory protection should be worn. In case of inadequate ventilation, oxygen deficient atmosphere, or where exposure levels are not known wear approved respiratory protection.

**Environmental Exposure Controls:** Do not allow the product to be released into the environment.

**Consumer Exposure Controls:** Do not eat, drink, or smoke during use.

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

### Information on Basic Physical and Chemical Properties

Physical State	: Liquid
Appearance	: Reddish brown
Odor	: Not available
Odor Threshold	: Not available
pH	: < 1
Evaporation Rate	: Not available
Melting Point	: < -18 °C (< -0.4 °F)
Freezing Point	: Not available
Boiling Point	: Not available
Flash Point	: Not applicable
Auto-ignition Temperature	: Not applicable
Decomposition Temperature	: Not available
Flammability (solid, gas)	: Not flammable
Lower Flammable Limit	: Not applicable
Upper Flammable Limit	: Not applicable
Vapor Pressure	: Not available
Relative Vapor Density at 20°C	: Not available
Relative Density	: Not available
Specific Gravity	: 1.24 - 1.62
Solubility	: 100%
Partition Coefficient: N-Octanol/Water	: Not available
Viscosity	: Not available
VOC content	: < 1 %

## SECTION 10: STABILITY AND REACTIVITY

**Reactivity:** May be corrosive to metals. Contact with metals may evolve flammable hydrogen gas. May react exothermically with water releasing heat. Adding an acid to a base or base to an acid may cause a violent reaction.

**Chemical Stability:** Stable under recommended handling and storage conditions (see section 7).

**Possibility of Hazardous Reactions:** Hazardous polymerization will not occur.

**Conditions to Avoid:** Extremely high or low temperatures and incompatible materials.

**Incompatible Materials:** Strong acids, strong bases, strong oxidizers. Alkalis. Metals.

**Hazardous Decomposition Products:** Thermal decomposition generates: Corrosive vapors. Sulfur oxides.

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### SECTION 11: TOXICOLOGICAL INFORMATION

#### Information on Toxicological Effects - Product

**Acute Toxicity (Oral):** Oral: Harmful if swallowed.

**Acute Toxicity (Dermal):** Not classified

**Acute Toxicity (Inhalation):** Not classified

#### LD50 and LC50 Data:

Ferric Sulfate 50%	
ATE (Oral)	802.10 mg/kg body weight

**Skin Corrosion/Irritation:** Causes severe skin burns and eye damage.

**pH:** < 1

**Eye Damage/Irritation:** Causes serious eye damage.

**pH:** < 1

**Respiratory or Skin Sensitization:** Not classified

**Germ Cell Mutagenicity:** Not classified

**Carcinogenicity:** Not classified

**Specific Target Organ Toxicity (Repeated Exposure):** Not classified

**Reproductive Toxicity:** Not classified

**Specific Target Organ Toxicity (Single Exposure):** Not classified

**Aspiration Hazard:** Not classified

**Symptoms/Effects After Inhalation:** May be corrosive to the respiratory tract.

**Symptoms/Effects After Skin Contact:** Causes severe irritation which will progress to chemical burns.

**Symptoms/Effects After Eye Contact:** Causes permanent damage to the cornea, iris, or conjunctiva.

**Symptoms/Effects After Ingestion:** This material is harmful orally and can cause adverse health effects or death in significant amounts. May cause burns or irritation of the linings of the mouth, throat, and gastrointestinal tract.

**Chronic Symptoms:** None expected under normal conditions of use.

#### Information on Toxicological Effects - Ingredient(s)

##### LD50 and LC50 Data:

Sulfuric acid, iron(3+) salt (3:2) (10028-22-5)	
LD50 Oral Rat	500 - 2000 mg/kg
Sulfuric acid (7664-93-9)	
LD50 Oral Rat	2140 mg/kg
Water (7732-18-5)	
LD50 Oral Rat	> 90000 mg/kg
Sulfuric acid (7664-93-9)	
IARC Group	1
OSHA Hazard Communication Carcinogen List	In OSHA Hazard Communication Carcinogen list.

### SECTION 12: ECOLOGICAL INFORMATION

**Toxicity** No additional information available

Sulfuric acid (7664-93-9)	
LC50 Fish 1	500 mg/l (Exposure time: 96 h - Species: Brachydanio rerio [static])
LC50 Fish 2	42 mg/l (Exposure time: 96 h - Species: Gambusia affinis [static])

#### Persistence and Degradability

Ferric Sulfate 50%	
Persistence and Degradability	May cause long-term adverse effects in the environment.

#### Bioaccumulative Potential

Ferric Sulfate 50%	
Bioaccumulative Potential	Not established.
Sulfuric acid (7664-93-9)	
BCF Fish 1	(no bioaccumulation)

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**Mobility in Soil** Not available

### Other Adverse Effects

**Other Information:** Avoid release to the environment.





## SECTION 13: DISPOSAL CONSIDERATIONS

**Waste Disposal Recommendations:** Dispose of contents/container in accordance with local, regional, national, territorial, provincial, and international regulations.

**Additional Information:** Container may remain hazardous when empty. Continue to observe all precautions.

**Ecology - Waste Materials:** Avoid release to the environment. This material is hazardous to the aquatic environment. Keep out of sewers and waterways.

## SECTION 14: TRANSPORT INFORMATION

TRANSPORTATION CLASSIFICATION	DOT	TDG	IMDG	IATA
Identification Number	UN3264	UN3264	UN3264	UN3264
Proper Shipping Name	CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (CONTAINS FERRIC SULFATE, SULFURIC ACID)	CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (CONTAINS FERRIC SULFATE, SULFURIC ACID)	CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (CONTAINS FERRIC SULFATE, SULFURIC ACID)	CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (CONTAINS FERRIC SULFATE, SULFURIC ACID)
Transport Hazard Class(es)	8	8	8	8
				
Packing Group	II	II	II	II
Environmental Hazards	Marine Pollutant : No	Marine Pollutant : No	Marine Pollutant : No	Marine Pollutant: N/A
Emergency Response	ERG Number : 154	ERAP Index: Not applicable	EMS: F-A, S-B	ERG code (IATA): 8L
Additional Information	Not applicable	Not applicable	Not applicable	Not applicable

## SECTION 15: REGULATORY INFORMATION

### US Federal Regulations

Chemical Name (CAS No.)	CERCLA RQ	EPCRA 304 RQ	SARA 302 TPQ	SARA 313
Sulfuric acid, iron(3+) salt (3:2) (10028-22-5)	1000 lb	Not applicable	Not applicable	No
Sulfuric acid (7664-93-9)	1000 lb	1000 lb	1000 lb	Yes

### SARA 311/312

<b>Ferric Sulfate 50%</b>
Immediate (acute) health hazard

**US TSCA Flags** Not present

### US State Regulations

#### California Proposition 65

Chemical Name (CAS No.)	Carcinogenicity	Developmental Toxicity	Female Reproductive Toxicity	Male Reproductive Toxicity
Sulfuric acid, iron(3+) salt (3:2) (10028-22-5)	No	No	No	No
Sulfuric acid (7664-93-9)	Yes	No	No	No

### State Right-To-Know Lists

<b>Sulfuric acid, iron(3+) salt (3:2) (10028-22-5)</b>
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U.S. - Massachusetts - Right To Know List - Yes  
 U.S. - New Jersey - Right to Know Hazardous Substance List - Yes  
 U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List - Yes  
 U.S. - Pennsylvania - RTK (Right to Know) - Special Hazardous Substances - No  
 U.S. - Pennsylvania - RTK (Right to Know) List - Yes

### Sulfuric acid (7664-93-9)

U.S. - Massachusetts - Right To Know List - Yes  
 U.S. - New Jersey - Right to Know Hazardous Substance List - Yes  
 U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List - Yes  
 U.S. - Pennsylvania - RTK (Right to Know) - Special Hazardous Substances - No  
 U.S. - Pennsylvania - RTK (Right to Know) List - Yes

## Canadian Regulations

### Sulfuric acid, iron(3+) salt (3:2) (10028-22-5)

Listed on the Canadian DSL (Domestic Substances List)  
 Not listed on the Canadian NDSL (Non-Domestic Substances List)

### Sulfuric acid (7664-93-9)

Listed on the Canadian DSL (Domestic Substances List)  
 Not listed on the Canadian NDSL (Non-Domestic Substances List)

## International Inventories/Lists

Chemical Name (CAS No.)	Australia AICS	Turkey CICR	Korea ECL	EU EINECS	EU ELINCS	EU SVHC	EU NLP	Mexico INSQ
Sulfuric acid, iron(3+) salt (3:2) (10028-22-5)	Yes	No	Yes	Yes	No	No	No	Yes
Sulfuric acid (7664-93-9)	Yes	No	Yes	Yes	No	No	No	No

Chemical Name (CAS No.)	China IECSC	Japan ENCS	Japan ISHL	Japan PDSCL	Japan PRTR	Philippines PICCS	New Zealand NZIOC	US TSCA
Sulfuric acid, iron(3+) salt (3:2) (10028-22-5)	Yes	Yes	No	No	No	Yes	Yes	Yes
Sulfuric acid (7664-93-9)	Yes	Yes	No	Yes	No	Yes	Yes	Yes

## SECTION 16: OTHER INFORMATION, INCLUDING DATE OF PREPARATION OR LAST REVISION

Date of Preparation or Latest Revision : 12/03/2018

### Revision Summary

Section	Change	Date Changed
2	Classification update	12/03/2018
3	Information update	12/03/2018
16	Information update	12/03/2018

**Other Information** : This document has been prepared in accordance with the SDS requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200 and Canada's Hazardous Products Regulations (HPR).

### GHS Full Text Phrases:

Acute Tox. 4 (Oral)	Acute toxicity (oral) Category 4
Aquatic Acute 3	Hazardous to the aquatic environment - Acute Hazard Category 3
Eye Dam. 1	Serious eye damage/eye irritation Category 1
Met. Corr. 1	Corrosive to metals Category 1
Carc. 1A	Carcinogenicity Category 1A
Skin Corr. 1A	Skin corrosion/irritation Category 1A
Skin Irrit. 2	Skin corrosion/irritation Category 2
H290	May be corrosive to metals



# Ferric Sulfate 50%

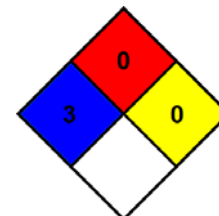
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H302	Harmful if swallowed
H314	Causes severe skin burns and eye damage
H315	Causes skin irritation
H318	Causes serious eye damage
H350	May cause cancer
H402	Harmful to aquatic life

### NFPA 704

**NFPA Health Hazard** : 3  
**NFPA Fire Hazard** : 0  
**NFPA Reactivity Hazard** : 0



### HMIS Rating

**Health** : 3  
**Flammability** : 0  
**Physical** : 0  
**PPE** See Section 8

### Abbreviations and Acronyms

AICS – Australian Inventory of Chemical Substances  
ACGIH – American Conference of Governmental Industrial Hygienists  
AIHA – American Industrial Hygiene Association  
ATE - Acute Toxicity Estimate  
BCF - Bioconcentration factor  
BEI - Biological Exposure Indices (BEI)  
CAS No. - Chemical Abstracts Service number  
CERCLA RQ - Comprehensive Environmental Response, Compensation, and Liability Act - Reportable Quantity  
CICR - Turkish Inventory and Control of Chemicals  
DOT – 49 CFR – US Department of Transportation – Code of Federal Regulations Title 49 – Transportation.  
EC50 - Median effective concentration  
ECL - Korea Existing Chemicals List  
EINECS - European Inventory of Existing Commercial Chemical Substances  
ELINCS - European List of Notified Chemical Substances  
EmS - IMDG Emergency Schedule Fire & Spillage  
ENCS - Japanese Existing and New Chemical Substances Inventory  
EPA – Environmental Protection Agency  
EPCRA 304 RQ – EPCRA 304 Extremely Hazardous Substance Emergency Planning and Community Right-to-Know-Act – Reportable Quantity  
ERAP Index – Emergency Response Assistance Plan Quantity Limit  
ErC50 - EC50 in Terms of Reduction Growth Rate  
ERG code (IATA) - Emergency Response Drill Code as found in the International Civil Aviation Organization (ICAO)  
ERG No. - Emergency Response Guide Number  
HCCL - Hazard Communication Carcinogen List  
HMIS – Hazardous Materials Information System  
IARC - International Agency for Research on Cancer  
IATA - International Air Transport Association – Dangerous Goods Regulations  
IDLH - Immediately Dangerous to Life or Health  
IECSC - Inventory of Existing Chemical Substances Produced or Imported in China  
IMDG - International Maritime Dangerous Goods Code  
INSQ - Mexican National Inventory of Chemical Substances  
ISHL - Japan Industrial Safety and Health Law  
LC50 - Median Lethal Concentration  
LD50 - Median Lethal Dose  
LOAEL - Lowest Observed Adverse Effect Level  
LOEC - Lowest-observed-effect Concentration  
Log Pow - Octanol/water Partition Coefficient  
NFPA 704 – National Fire Protection Association - Standard System for the Identification of the Hazards of Materials for Emergency Response  
NIOSH - National Institute for Occupational Safety and Health  
NLP - Europe No Longer Polymers List  
NOAEL - No-Observed Adverse Effect Level  
NOEC - No-Observed Effect Concentration  
NZIOC - New Zealand Inventory of Chemicals  
OEL - Occupational Exposure Limits  
OSHA – Occupational Safety and Health Administration  
PEL - Permissible Exposure Limits  
PICCS - Philippine Inventory of Chemicals and Chemical Substances  
PDSCL - Japan Poisonous and Deleterious Substances Control Law  
PPE – Personal Protective Equipment  
PRTR - Japan Pollutant Release and Transfer Register  
REL - Recommended Exposure Limit  
SADT - Self Accelerating Decomposition Temperature  
SARA - Superfund Amendments and Reauthorization Act  
SARA 302 - Section 302, 40 CFR Part 355  
SARA 311/312 - Sections 311 and 312, 40 CFR Part 370 Hazard Categories  
SARA 313 - Section 313, 40 CFR Part 372  
SRCL - Specifically Regulated Carcinogen List  
STEL - Short Term Exposure Limit  
SVHC – European Candidate List of Substance of Very High Concern  
TDG – Transport Canada Transport of Dangerous Goods Regulations  
TLM - Median Tolerance Limit  
TLV - Threshold Limit Value  
TPQ - Threshold Planning Quantity  
TSCA – United States Toxic Substances Control Act  
TWA - Time Weighted Average  
WEEL - Workplace Environmental Exposure Levels

# Ferric Sulfate 50%

## Safety Data Sheet

According to U.S. Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules And Regulations and according to Canada's Hazardous Products Regulation, February 11, 2015.

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*Handle product with due care and avoid unnecessary contact. This information is supplied under U.S. OSHA'S "Right to Know" (29 CFR 1910.1200) and Canada's WHMIS regulations. Although certain hazards are described herein, we cannot guarantee these are the only hazards that exist. The information contained herein is based on data available to us and is believed to be true and accurate but it is not offered as a product specification. No warranty, expressed or implied, regarding the accuracy of this data, the hazards connected with the use of the product, or the results to be obtained from the use thereof, is made and Lab Alley and its affiliates assume no responsibility.*