

SECTION 1: IDENTIFICATION

Product Identifier

Product Form: Mixture

Product Name: 50% Sulfuric Acid

Product Code: AFCO 0211

Intended Use of the Product

Use of the Substance/Mixture: Acid used for pH adjustment of sewer effluent. For professional use only

Name, Address, and Telephone of the Responsible Party

Company

AFCO
800 Development Avenue
Chambersburg, PA 17201
T: 800-345-1329
www.afcocare.com

Emergency Telephone Number

Emergency Number : 1-800-424-9300 (CHEMTREC)

SECTION 2: HAZARDS IDENTIFICATION

Classification of the Substance or Mixture

Classification (GHS-US)

Met. Corr. 1 H290

Skin Corr. 1B H314

Eye Dam. 1 H318

Carc. 1A H350

Label Elements

GHS-US Labeling

Hazard Pictograms (GHS-US)



Signal Word (GHS-US)

: Danger

Hazard Statements (GHS-US)

: H290 - May be corrosive to metals
H314 - Causes severe skin burns and eye damage
H318 - Causes serious eye damage
H350 - May cause cancer

Precautionary Statements (GHS-US)

: P201 - Obtain special instructions before use.
P202 - Do not handle until all safety precautions have been read and understood.
P234 - Keep only in original container.
P260 - Do not breathe vapors, mist, spray.
P264 - Wash hands, forearms, and other exposed areas thoroughly after handling.
P280 - Wear protective gloves, protective clothing, eye protection, face protection, respiratory protection.
P281 - Use personal protective equipment as required
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.
P304+P340 - IF INHALED: Remove victim to fresh air and keep at rest in a position 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.
P308+P313 - If exposed or concerned: Get medical advice/attention.

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

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 to local, regional, national, territorial, provincial, and international regulations.

Other Hazards

Other Hazards Not Contributing to the Classification: Exposure may aggravate those with pre-existing eye, skin, or respiratory conditions. When heated to decomposition, emits toxic fumes. Corrosive vapors.

Unknown Acute Toxicity (GHS-US) Not available.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Substances

Mixture

Name	Product identifier	% (w/w)	Classification (GHS-US)
Water	(CAS No) 7732-18-5	50-60	Not classified
Sulfuric acid	(CAS No) 7664-93-9	40-50	Met. Corr. 1, H290 Skin Corr. 1A, H314 Eye Dam. 1, H318 Carc. 1A, H350

Full text of H-phrases: see section 16.

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. Remove to fresh air and keep at rest in a position comfortable for breathing. Obtain medical attention.

Skin Contact: Remove contaminated clothing. Drench affected area with water for at least 15 minutes. Get immediate medical advice/attention. Wash contaminated clothing before reuse.

Eye Contact: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Seek medical attention immediately.

Ingestion: Rinse mouth. Do NOT induce vomiting. Immediately call a POISON CENTER or doctor/physician.

Most Important Symptoms and Effects Both Acute and Delayed

General: Causes serious eye damage. Corrosive to eyes, respiratory system and skin.

Inhalation: Contact may cause immediate severe irritation progressing quickly to chemical burns.

Skin Contact: Causes severe skin burns.

Eye Contact: Causes serious eye damage.

Ingestion: Ingestion is likely to be harmful or have adverse effects. Contact may cause immediate severe irritation progressing quickly to chemical burns.

Chronic Symptoms: Not available.

Indication of Any Immediate Medical Attention and Special Treatment Needed

If exposed or concerned, get medical advice and attention.

SECTION 5: FIRE-FIGHTING MEASURES

Extinguishing Media

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

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 flammable.

Explosion Hazard: Product is not explosive.

Reactivity: When heated to decomposition, emits toxic fumes. In contact with metals, emits flammable/explosive hydrogen gas.

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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: Toxic gases and vapors: sulfur dioxide, sulfur trioxide, sulfuric acid vapors/mist.

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 vapour or mist.

For Non-Emergency Personnel

Protective Equipment: Use appropriate personal protection equipment (PPE).

Emergency Procedures: Evacuate unnecessary personnel.

For Emergency Personnel

Protective Equipment: Equip cleanup crew with proper protection.

Emergency Procedures: Ventilate area.

Environmental Precautions

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

Methods and Material for Containment and Cleaning Up

For Containment: Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams. Absorb and/or contain spill with inert material, then place in suitable container. Cautiously neutralize spilled liquid with soda ash or lime.

Methods for Cleaning Up: Clear up spills immediately and dispose of waste safely. Do not take up in combustible material such as: saw dust or cellulosic material. Contact competent authorities after a spill. Cautiously neutralize spilled liquid with soda ash or lime.

Reference to Other Sections

See heading 8, Exposure Controls and Personal Protection.

SECTION 7: HANDLING AND STORAGE

Precautions for Safe Handling

Additional Hazards When Processed: When heated to decomposition, emits toxic fumes. Corrosive vapors are released. Contact with metals may evolve flammable hydrogen gas.

Hygiene Measures: Handle in accordance with good industrial hygiene and safety procedures. Wash hands and other exposed areas with mild soap and water before eating, drinking, or smoking and again when leaving work. Do not eat, drink or smoke when using this product. Wash hands and forearms thoroughly after handling. Always wash your hands immediately after handling this product, and once again before leaving the workplace.

Conditions for Safe Storage, Including Any Incompatibilities

Technical Measures: Comply with applicable regulations.

Storage Conditions: Store in a well-ventilated place. Keep container tightly closed. Keep/Store away from incompatible materials.

Incompatible Materials: Cyanides, hypochlorites, nitrites, metals, and chlorinated products. Contact with organic materials (such as chlorates, carbides, fulminates, and picrates) may cause fire and explosion. Contact with metal may produce flammable hydrogen gas. May react violently with water and organic materials with evolution of heat.

Specific End Use(s): Acid used for pH adjustment of sewer effluent. For professional use only.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Control Parameters

Sulfuric acid (7664-93-9)		
Mexico	OEL TWA (mg/m ³)	1 mg/m ³
USA ACGIH	ACGIH TWA (mg/m ³)	0.2 mg/m ³
USA OSHA	OSHA PEL (TWA) (mg/m ³)	1 mg/m ³
USA NIOSH	NIOSH REL (TWA) (mg/m ³)	1 mg/m ³
USA IDLH	US IDLH (mg/m ³)	15 mg/m ³
Ontario	OEL TWA (mg/m ³)	0.2 mg/m ³
Québec	VECD (mg/m ³)	3 mg/m ³

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Québec	VEMP (mg/m ³)	1 mg/m ³
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Exposure Controls

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

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



Materials for Protective Clothing: Chemically resistant materials and fabrics. Corrosion proof clothing.

Hand Protection: Wear chemically resistant protective gloves.

Eye Protection: Chemical goggles or face shield.

Skin and Body Protection: Wear suitable protective clothing.

Respiratory Protection: Use NIOSH-approved air-purifying or supplied-air respirator where airborne concentrations of vapor or mist are expected to exceed exposure limits.

Thermal Hazard Protection: Wear suitable protective clothing.

Other Information: When using, do not eat, drink or smoke.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Information on Basic Physical and Chemical Properties

Physical State	: Liquid
Appearance	: Clear, colorless
Odor	: Low
Odor Threshold	: Not available
pH	: <1
Relative Evaporation Rate (butylacetate=1)	: Not available
Melting Point	: Not available
Freezing Point	: Not available
Boiling Point	: 121.1°C (250°F)
Flash Point	: Not flammable
Auto-ignition Temperature	: Not available
Decomposition Temperature	: Not available
Flammability (solid, gas)	: Not available
Lower Flammable Limit	: Not available
Upper Flammable Limit	: Not available
Vapor Pressure	: <0.3 mmHg (40°C)
Relative Vapor Density at 20°C	: Not available
Specific Gravity	: 1.40
Solubility	: Complete
Partition coefficient: n-octanol/water	: Not available
Viscosity	: Not available
Explosion Data – Sensitivity to Mechanical Impact	: Not expected to present an explosion hazard due to mechanical impact
Explosion Data – Sensitivity to Static Discharge	: Not expected to present an explosion hazard due to static discharge

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SECTION 10: STABILITY AND REACTIVITY

Reactivity: When heated to decomposition, emits toxic fumes. In contact with some metals, emits flammable/explosive hydrogen gas.

Chemical Stability: Stable at standard temperature and pressure.

Possibility of Hazardous Reactions: Hazardous polymerization will not occur.

Conditions to Avoid: Incompatible materials.

Incompatible Materials: Strong bases and (some) metals. Chlorine compounds.

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

SECTION 11: TOXICOLOGICAL INFORMATION

Information on Toxicological Effects - Product

Acute Toxicity: Toxic if swallowed. Toxic if inhaled.

LD50 and LC50 Data: Not available.

Skin Corrosion/Irritation: Causes severe skin burns. (pH: <1)

Serious Eye Damage/Irritation: Causes serious eye damage. (pH: <1)

Respiratory or Skin Sensitization: Not classified.

Germ Cell Mutagenicity: Not classified.

Teratogenicity: Not available.

Carcinogenicity: May cause cancer.

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

Reproductive Toxicity: Not classified.

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

Aspiration Hazard: Not classified.

Potential Adverse Human Health Effects and Symptoms: Toxic if inhaled. Toxic if swallowed.

Symptoms/Injuries After Inhalation: Inhalation may cause immediate severe irritation progressing quickly to chemical burns. Toxic if inhaled.

Symptoms/Injuries After Skin Contact: Contact may cause immediate severe irritation progressing quickly to chemical burns. May cause an allergic skin reaction.

Symptoms/Injuries After Eye Contact: Causes serious eye damage.

Symptoms/Injuries After Ingestion: Toxic if swallowed. Ingestion is likely to be harmful or have adverse effects.

Chronic Symptoms: May cause cancer. May cause erosion of the teeth, or chronic bronchitis.

Information on Toxicological Effects - Ingredient(s)

LD50 and LC50 Data:

Water (7732-18-5)	
LD50 Oral Rat	>90000 mg/kg
Sulfuric acid (7664-93-9)	
LD50 Oral Rat	2140 mg/kg
LC50 Inhalation Rat (mg/l)	510 mg/m ³ (Exposure time: 2 h)
IGRC Group	1

SECTION 12: ECOLOGICAL INFORMATION

Toxicity

Ecology - General: Harmful to aquatic life.

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

Persistence and Degradability: Not available.

Bioaccumulative Potential

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Bioaccumulative Potential	Not established.

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Sulfuric acid (7664-93-9)	
BCF fish 1	(no bioaccumulation)

Mobility in Soil Not available.

Other Adverse Effects

Other Information: Avoid release to the environment.

SECTION 13: DISPOSAL CONSIDERATIONS

Waste Disposal Recommendations: Dispose of waste material in accordance with all local, regional, national, provincial, territorial and international regulations.

Ecology – Waste Materials: This material is hazardous to the aquatic environment. Keep out of sewers and waterways.

SECTION 14: TRANSPORT INFORMATION

14.1 In Accordance with DOT

Proper Shipping Name : Sulfuric acid with not more than 51% acid
Hazard Class : 8
Identification Number : UN2796
Label Codes : 8
Packing Group : II
ERG Number : 157



14.2 In Accordance with IMDG

Proper Shipping Name : Sulfuric acid with not more than 51% acid
Hazard Class : 8
Identification Number : UN2796
Packing Group : II
Label Codes : 8
EmS-No. (Fire) : F-A
EmS-No. (Spillage) : S-B



14.3 In Accordance with IATA

Proper Shipping Name : Sulfuric acid with not more than 51% acid
Packing Group : II
Identification Number : UN2796
Hazard Class : 8
Label Codes : 8
ERG Code (IATA) : 8P



14.4 In Accordance with TDG

Proper Shipping Name : Sulfuric acid with not more than 51% acid
Packing Group : II
Hazard Class : 8
Identification Number : UN2796
Label Codes : 8



SECTION 15: REGULATORY INFORMATION

US Federal Regulations

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SARA Section 311/312 Hazard Classes	Immediate (acute) health hazard. Delayed (chronic) health hazard. Reactivity hazard.
Water (7732-18-5)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory.	
Sulfuric acid (7664-93-9)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory.	

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Listed on SARA Section 302 (Specific toxic chemical listings).	
Listed on SARA Section 313 (Specific toxic chemical listings).	
SARA Section 302 Threshold Planning Quantity (TPQ)	1000
SARA Section 313 - Emission Reporting	1.0% (acid aerosols including mists, vapors, gas, fog, and other airborne forms of any particle size).

US State Regulations

Sulfuric acid (7664-93-9)	
U.S. - California - Proposition 65 - Carcinogens List	WARNING: This product contains chemicals known to the State of California to cause cancer.

Sulfuric acid (7664-93-9)	
Strong inorganic acid mists containing sulfuric acid are present on the State of California list of Chemicals Known to the State to Cause Cancer or Reproductive Toxicity (Cal Prop 65).	
U.S. - California - SCAQMD - Toxic Air Contaminants - Non-Cancer Acute	
U.S. - California - SCAQMD - Toxic Air Contaminants - Non-Cancer Chronic	
U.S. - California - Toxic Air Contaminant List (AB 1807, AB 2728)	
U.S. - New Jersey - Discharge Prevention - List of Hazardous Substances	
U.S. - New Jersey - Environmental Hazardous Substances List	
U.S. - New Jersey - Right to Know Hazardous Substance List	
U.S. - New Jersey - Special Health Hazards Substances List	
U.S. - New York - Occupational Exposure Limits - TWAs	
U.S. - New York - Reporting of Releases Part 597 - List of Hazardous Substances	
U.S. - North Carolina - Control of Toxic Air Pollutants	
U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List	
U.S. - Pennsylvania - RTK (Right to Know) List	
U.S. - Texas - Effects Screening Levels - Long Term	
U.S. - Texas - Effects Screening Levels - Short Term	

Canadian Regulations

Water (7732-18-5)	
Listed on the Canadian DSL (Domestic Substances List) inventory.	
Sulfuric acid (7664-93-9)	
Listed on the Canadian DSL (Domestic Substances List) inventory.	

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the SDS contains all of the information required by CPR.

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

Revision date : 02/09/2023
Other Information : This document has been prepared in accordance with the SDS requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200.

GHS Full Text Phrases:

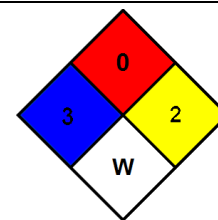
Carc. 1A	Carcinogenicity Category 1A.
Eye Dam. 1	Serious eye damage/eye irritation Category 1.
Met. Corr. 1	Corrosive to metals Category 1.
Skin Corr. 1A	Skin corrosion/irritation Category 1A.
H290	May be corrosive to metals.
H314	Causes severe skin burns and eye damage.
H318	Causes serious eye damage.
H350	May cause cancer.

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- NFPA Health Hazard** : 3 - Short exposure could cause serious temporary or residual injury even though prompt medical attention was given.
- NFPA Fire Hazard** : 0 - Materials that will not burn.
- NFPA Reactivity** : 2- Normally unstable and readily undergo violent decomposition but do not detonate.
- NFPA Special Hazard** : W - may react violently with water or may form potentially explosive mixtures with water.



HMIS III Rating

- Health** : 3 Serious Hazard - Major injury likely unless prompt action is taken and medical treatment is given.
- Flammability** : 0 - Minimal Hazard.
- Physical** : 2 Moderate Hazard - Materials that are unstable and may undergo violent chemical changes at normal temperature and pressure with low risk for explosion. Materials may react violently with water or form peroxides upon exposure to air.

Party Responsible for the Preparation of This Document

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This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.