

SECTION 1: IDENTIFICATION

Product Identifier

Product Form: Mixture

Product Name: AF 45

Product Code: AFCO 18039

Intended Use of the Product

Use of the Substance/Mixture: Water treatment chemical. 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

Acute Tox. 4 (Oral) H302

Skin Corr. 1B H314

Eye Dam. 1 H318

Label Elements

GHS-US Labeling

Hazard Pictograms (GHS-US)



Signal Word (GHS-US)

: Danger.

Hazard Statements (GHS-US)

: H290 - May be corrosive to metals
H302 - Harmful if swallowed
H314 - Causes severe skin burns and eye damage

Precautionary Statements (GHS-US)

: P234 - Keep only in original container
P261 - Avoid breathing dust/fumes/gas/mist/vapours/spray.
P264 - Wash hands, forearms, and exposed areas thoroughly after handling.
P270 - Do not eat, drink, or smoke when using this product.
P280 - Wear eye protection, face protection, protective clothing, protective gloves.
P301+P312 - IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
P303+P361+P353 - IF ON SKIN (or hair): Remove/Take off 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.
P310 - Immediately call a POISON CENTER or doctor/physician.
P321 - Specific treatment (see Section 4).
P330 - If swallowed, rinse mouth.
P362 - Take off contaminated clothing and wash before reuse.
P390 - Absorb spillage to prevent material damage.

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P405 - Store locked up.
P406 - Store in corrosive resistant container with a corrosive resistant liner.
P501 - Dispose of contents/container according to local, regional, national, territorial, provincial, and international regulations.

Other Hazards

Other Hazards: None known.

Unknown Acute Toxicity (GHS-US): Less than 1 percent of the mixture consists of ingredient(s) of unknown acute toxicity.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Substances: Not available, product is a mixture.

Mixture:

Name	Product identifier	% (w/w)
Water	(CAS No) 7732-18-5	Balance
Diiron tris(sulphate)	(CAS No) 10028-22-5	30-50
Sulfuric acid	(CAS No) 7664-93-9	0.1-1

Exact percentage composition of substances and/or ingredients may be withheld as a trade secret, in accordance with [29 CFR § 1910.1200 App E].

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: Remove to fresh air and keep at rest in a position comfortable for breathing. If symptoms persist, seek medical advice.

Skin Contact: Remove contaminated clothing and shoes immediately. Drench affected area with water for at least 15 minutes and consult a physician. If symptoms persist, seek medical advice. Wash contaminated clothing before reuse.

Eye Contact: Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present and easy to do. Prevent rinsing water from flowing into the other eye. Continue rinsing eyes during transport to hospital. Immediately call a POISON CENTER or doctor/physician.

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

Most Important Symptoms and Effects Both Acute and Delayed

Effects are immediate or delayed. Symptoms may include: Central nervous system depression, Headache, Nausea, Dizziness, Blistering, Irritation, Burn, Pain, Harmful if swallowed. Causes severe skin burns and eye damage. Causes serious eye damage.

Indication of Any Immediate Medical Attention and Special Treatment Needed

First Aid responders should pay attention to self-protection and use the recommended protective clothing. All treatments should be based on observed signs and symptoms of distress in the patient. Consideration should be given to the possibility that overexposure to materials other than this product may have occurred. Treat symptomatically.

SECTION 5: FIRE-FIGHTING MEASURES

Extinguishing Media

Suitable Extinguishing Media: Not combustible. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable Extinguishing Media: Do not use a heavy water stream. A heavy water stream may spread burning liquid.

Special Hazards Arising From the Substance or Mixture

Fire Hazard: Not flammable.

Explosion Hazard: Product is not flammable, however contact with some metals may release flammable hydrogen gas.

Advice for Firefighters

Precautionary Measures Fire: Exercise caution when fighting any chemical fire. Under fire conditions, hazardous fumes will be present.

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. In the event of fire, wear self-contained breathing apparatus. Use NIOSH/MSHA approved respiratory protection.

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Hazardous Combustion Products: Heating or fire conditions liberates toxic gas. Sulphur oxides (SO_x).

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: Avoid all contact with skin, eyes, or clothing.

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. Wear respiratory protection.

Emergency Procedures: Ventilate area.

Environmental Precautions

Prevent entry to sewers and public waters. Restrict the spread of the spillage by using inert absorbent material (sand, gravel). Cover the drains. Must be disposed of in accordance with local and national regulations.

Methods and Material for Containment and Cleaning Up

Methods for Cleaning Up: Dilute residues with water and then neutralize with lime or soda ash to a solid consistency. Shovel or sweep up. Must be disposed of in accordance with local and national regulations.

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: Avoid contact with skin, eyes and clothing.

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 contaminated clothing before reuse.

Conditions for Safe Storage, Including Any Incompatibilities

Technical Measures: Comply with applicable regulations.

Storage Conditions: Keep container tightly closed in a dry and well-ventilated place. Keep in properly labelled containers. Keep at temperatures above 0°C and below 30°C. Keep/Store away from incompatible materials. Keep from freezing.

Incompatible Materials: Bases. Stainless steel, leather, non-acid proof metals (like aluminum, copper, iron). Direct sunlight. Contact with some metals may release flammable hydrogen gas. Oxidizing agents and strongly acid or alkaline materials.

Specific End Use(s): Water treatment chemical. For professional use only.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Control Parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
Diiron tris(sulphate)	10028-22-5	TWA	1 mg/m ³ (Iron)	ACGIH
		TWA	1 mg/m ³ (Iron)	NIOSH REL
		TWA	1 mg/m ³ (Iron)	OSHA P0
Sulfuric acid	7664-93-9	TWA (Thoracic particulate matter)	0.2 mg/m ³	ACGIH
		TWA	1 mg/m ³	NIOSH REL
		TWA	1 mg/m ³	OSHA Z-1
		TWA	1 mg/m ³	OSHA P0

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Exposure Controls

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

Personal Protective Equipment: Protective goggles and/or Face-Shield with safety glasses/goggles. Gloves. Protective clothing.



Materials for Protective Clothing: Chemically resistant materials and fabrics.

Hand Protection: Wear chemically resistant protective gloves.

Eye Protection: Tightly fitting safety goggles or face-shield.

Skin and Body Protection: Wear protective clothing.

Respiratory Protection: Respiratory protection is not required under normal handling conditions.

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	: Red, brown
Odor	: Slightly acidic
Odor Threshold	: Not available
pH (as is)	: < 2
Relative Evaporation Rate (butylacetate=1)	: Similar to water
Melting Point	: Not available
Freezing Point	: -40°C/-40°F
Boiling Point	: 100 – 105°C (212 – 221°F)
Flash Point	: Not applicable
Auto-ignition Temperature	: Not auto-flammable
Decomposition Temperature	: 315 °C/599 °F
Flammability (solid, gas)	: Not flammable
Lower Flammable Limit	: Not applicable
Upper Flammable Limit	: Not applicable
Vapor Pressure	: Similar to water
Relative Vapor Density at 20°C	: Similar to water
Relative Density	: Not available
Specific Gravity	: 1.51 – 1.58
Solubility	: Water: Complete
Partition coefficient: n-octanol/water	: Not applicable - Inorganic compound
Viscosity, Dynamic	: 30 mPa·s (20°C/68°F)
Viscosity, Kinematic	: No data available
Oxidizing Properties	: Not oxidizing
Surface Tension	: No data available
Particle Characteristics Assessment	: Not applicable

SECTION 10: STABILITY AND REACTIVITY

Reactivity: Corrosive to metals.

Chemical Stability: Stable under recommended handling and storage conditions.

Possibility of Hazardous Reactions: Heating or fire conditions liberates toxic gas. Sulphur oxides (SO_x).

Conditions to Avoid: Freezing. Storage at high temperatures. Incompatible materials.

Incompatible Materials: Bases. Stainless steel, leather, non-acid proof metals (aluminum, copper, iron). Contact with metals may release flammable hydrogen gas.

Hazardous Decomposition Products: Sulphur oxides (SO_x).

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SECTION 11: TOXICOLOGICAL INFORMATION

Information on Toxicological Effects - Product

- Acute Toxicity:** Not classified.
LD50 and LC50 Data: Not available.
Skin Corrosion/Irritation: Causes severe skin burns and eye damage.
Serious Eye Damage/Irritation: Causes serious eye damage.
Respiratory or Skin Sensitization: Not classified.
Germ Cell Mutagenicity: Not classified.
Teratogenicity: 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/Injuries After Inhalation: May cause irritation of the respiratory tract.
Symptoms/Injuries After Skin Contact: Causes severe skin burns.
Symptoms/Injuries After Eye Contact: Causes serious eye damage.
Symptoms/Injuries After Ingestion: May be harmful if swallowed; may cause gastrointestinal irritation.
Chronic Symptoms: None known.

Information on Toxicological Effects - Ingredient(s)

LD50 and LC50 Data:

Diiron tris(sulphate) (10028-22-5)	
LD50 Oral Rat	220 mg/kg (OECD Test Guideline 423; calculated as Fe)
LD50 Dermal Rat	>2,000 mg/kg (OECD Test Guideline 402; read-across)
Sulfuric acid (7664-93-9)	
LD50 Oral Rat	~2,140 mg/kg (equivalent to OECD TG 401; not classified for acute toxicity)
LC50 Inhalation Rat	0.375 mg/L/4h (dust/mist)
IARC Group	3

ECOLOGICAL INFORMATION

Toxicity: No data available for the product.

Diiron tris(sulphate) (10028-22-5)	
LC50 Fish 1	59 mg/L (Exposure time: 96 h - Species: <i>Lepomis macrochirus</i> [bluegill])
EC50 Daphnia 1	27 mg/L (Exposure time: 48 h - Species: <i>Daphnia magna</i> [Static])

Persistence and Degradability: Methods not applicable to inorganic substances.

Bioaccumulative Potential: Not applicable – inorganic compound.

Mobility in Soil: Not available.

Other Adverse Effects: May lower the pH of water and be harmful to aquatic organisms at high concentrations.

SECTION 13: DISPOSAL CONSIDERATIONS

Waste Disposal Recommendations: Dispose of waste material in accordance with all local, regional, national, provincial, territorial and international regulations. Contaminated packaging is classified as hazardous waste and must be disposed of in accordance with all local, regional, national, provincial, territorial and international regulations.

Ecology – Waste Materials: Not available.

SECTION 14: TRANSPORT INFORMATION

14.1 In Accordance with DOT

- Proper Shipping Name** : Corrosive, Liquid, Acidic, Inorganic, N.O.S. (Ferric sulfate)
Hazard Class : 8
Identification Number : UN3264

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Label Codes : 8



Packing Group : II

ERG Number : 157

14.2 In Accordance with IMDG

Proper Shipping Name : Corrosive, Liquid, Acidic, Inorganic, N.O.S. (Ferric sulfate)

Hazard Class : 8

Identification Number : UN3264

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 : Corrosive, Liquid, Acidic, Inorganic, N.O.S. (Ferric sulfate)

Packing Group : II

Identification Number : UN3264

Hazard Class : 8

Label Codes : 8

ERG Code (IATA) : 8L



14.4 In Accordance with TDG

Proper Shipping Name : Corrosive, Liquid, Acidic, Inorganic, N.O.S. (Ferric sulfate)

Packing Group : II

Hazard Class : 8

Identification Number : UN3264

Label Codes : 8



SECTION 15: REGULATORY INFORMATION

US Federal Regulations

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SARA Section 311/312 Hazard Classes : Immediate (acute) health hazard.

Diiron tris(sulphate) (10028-22-5)

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.

US State Regulations:

Sulfuric acid (7664-93-9)

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
RTK - U.S. - New Jersey - Right to Know Hazardous Substance List
U.S. - New Jersey - Special Health Hazards Substances List
U.S. - New Jersey - TCPA - Extraordinarily Hazardous Substances (EHS)
U.S. - New York - Occupational Exposure Limits - Ceilings
U.S. - New York - Reporting of Releases Part 597 - List of Hazardous Substances
RTK - U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List
RTK - U.S. - Pennsylvania - RTK (Right to Know) List
U.S. - Texas - Effects Screening Levels - Long Term
U.S. - Texas - Effects Screening Levels - Short Term

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Canadian Regulations

Sulfuric acid (7664-93-9)

Listed on the Canadian DSL (Domestic Substances List) inventory.

Diiron tris(sulphate) (10028-22-5)

Listed on the Canadian DSL (Domestic Substances List) inventory.

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

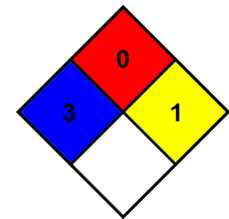
SECTION 16: OTHER INFORMATION, INCLUDING DATE OF PREPARATION OR LAST REVISION

Revision date : 05/01/2026
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:

Acute Tox. 3 (Inhalation: dust, mist)	Acute toxicity (inhalation: dust, mist) Category 3
Acute Tox. 4 (Oral)	Acute toxicity (oral) Category 4
Aquatic Acute 2	Hazardous to the aquatic environment - Acute Hazard Category 2
Eye Dam. 1	Serious eye damage/eye irritation Category 1
Metal Corr. 1	Corrosive to metals Category 1
Skin Corr. 1B	Skin corrosion/irritation Category 1B
STOT SE 3	Specific target organ toxicity (single exposure) Category 3
H290	May be corrosive to metals.
H302	Harmful if swallowed
H314	Causes severe skin burns and eye damage
H315	Causes skin irritation
H318	Causes serious eye damage
H331	Toxic if inhaled
H335	May cause respiratory irritation
H401	Toxic to aquatic life

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 : 1 - Normally stable, but can become unstable at elevated temperatures and pressures or may react with water with some release of energy, but not violently.



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 : 1 - Slight Hazard.

Party Responsible for the Preparation of This Document

AFCO
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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.

North America GHS SDS 2015 (U.S., Can., Mex.)