

BME-Iron Reducer SDS Safety Data Sheet
MSDS Sheet, Material Safety Data Sheet

1. Product Identification

Product Name/Synonyms: FE-360, BME-Iron Reducer,
Recommended uses and uses advised against (if any): Oil & Gas Wells fracturing and Industrial Manufacturing.

SUPPLIER

Company: Finoric LLC
Address: 8115 Loop 540, Beasley, Texas, 77417 USA

In case of emergency contact:





InfoTrac
US: 1-800-535-5053
International: 352-323-3500

2. Hazards Identification

GHS, Globally Harmonized System Classification in accordance with 29 CFR 1910
Classification according to Regulation (EC) No 1272/2008

Flammable liquids (Category 4), H227
Acute toxicity, Oral (Category 3), H301
Acute toxicity, Inhalation (Category 3), H331
Acute toxicity, Dermal (Category 2), H310
Skin irritation (Category 2), H315
Skin sensitization (Category 1), H317
Serious eye damage (Category 1), H318
Specific target organ toxicity - repeated exposure, Oral (Category 2), Liver, Heart, H373
Chronic aquatic toxicity (Category 1), H410

Labeling according GHS USA & Regulation (EC) No 1272/2008

GHS Label Elements	GHS Label Elements	GHS Label Elements	GHS Label Elements
			
Toxic	Health Hazard	Health Hazard	Aquatic Toxicity



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Signal Words: Danger

Hazard Statements:

H227 Combustible liquid.

H301+ H331: Toxic if swallowed or if inhaled.

H310 Fatal in contact with skin.

H315 Causes skin irritation.

H317 May cause an allergic skin reaction.

H318 Causes serious eye damage.

H373 May cause damage to organs (Liver, Heart) through prolonged or repeated exposure if swallowed.

H410 Very toxic to aquatic life with long lasting effects.

Precautionary Statements:

P210: Keep away from heat/sparks/open flames/hot surfaces – No smoking.

P260: Do not breathe dust/fume/gas/mist/vapors/spray.

P262: Do not get in eyes, on skin, or on clothing.

P264: Wash contaminated parts thoroughly after handling.

P270: Do not eat, drink or smoke when using this product.

P271: Use only outdoors or in a well-ventilated area.

P273: Avoid release to the environment.

P280: Wear protective gloves/protective clothing/eye protection/face protection.

P301+P310: IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.

P314: Get medical advice/attention if you feel unwell.

P304+P340: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

P370+378: In case of fire: Use water spray, carbon dioxide, water fog, dry chemical, chemical foam for extinction.

P302+352: IF ON SKIN: Wash with plenty of soap and water.

P333+313: If skin irritation or a rash occurs: Get medical advice/attention.

P305+351+338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do – continue rinsing.

P330: Rinse mouth.

P360: Rinse immediately contaminated clothing and skin with plenty of water before removing clothes.

P391: Collect spillage.

P403+P404 +405+235: Store in a well ventilated place. Keep cool. Keep container tightly closed and locked up.

P501: Dispose of contents/container in accordance with local/national regulation.

Classification according to EU Directives 67/548/EEC or 1999/45/EC:

Hazard Symbols:

T Toxic

Xn Harmful

Xi Irritant



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C Corrosive
N Dangerous for the environment

R-phrases:

R10 Flammable
R23/24/25 Toxic by inhalation, in contact with skin and if swallowed
R41 Risk of serious damage to eyes.
R43 May cause sensitization by skin contact.
R50 Very toxic to aquatic organisms.

3. Composition/Information on Ingredients

Item	CAS Number	EINECS EC Number	Percentage
2 Mercaptoethanol (C ₂ H ₆ OS)	60-24-2	200-464-6	>60%
Cupric Chloride Dihydrate (CuCl ₂ .2H ₂ O)	10125-13-0	231-210-2	1-5%

4. First Aid Measures

Always seek medical attention after first aid measures are provided.

Inhalation: Remove affected person to fresh air; if normal breathing has not returned within a few minutes after exposure, get medical attention.

Skin: Remove contaminated clothing; wash affected area with soap and water; launder contaminated clothing before reuse. Seek medical attention.

Eyes: Immediately, flush eyes for 15 minutes in clear running water while holding eyelids open; seek medical attention immediately.

Ingestion: Never give anything by mouth to an unconscious person. Do not induce vomiting; seek medical attention immediately.

5. Fire Fighting Measures

General Hazards: Contact with eyes causes immediate severe irritation of the eye and eyelids. Product will support combustion.

Extinguishing Media: Water spray, carbon dioxide, water fog, dry chemical, chemical foam. Keep containers cool by spraying with water. Use extinguishing media appropriate for surrounding fire.

Fire & Explosion Hazard: May evolve oxides of carbon (COx) & sulfur (SOx) along with ammonia under fire conditions.

In case of fire, wear a full face positive-pressure self contained breathing apparatus and protective suit. Self-contained respiratory equipment; cool containers to prevent pressure buildup and possible explosion when exposed to extreme heat. Caution - material will support combustion!

Unusual Fire and Explosion Hazards: Closed containers can explode due to buildup of pressure when exposed to extreme heat.



Hazardous Combustion Products: Products of combustion include smoke, toxic fumes, oxides of carbon to include carbon monoxide, sulfur oxides, ammonia.

6. Accidental Release Measures

Personal precautions, protective equipment, environmental precautions and emergency procedures: Wear respiratory protection. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapors accumulating to form explosive concentrations. Vapors can accumulate in low areas. Avoid release to the environment.

Methods and materials used for containment Cleanup procedures and Storage:

Avoid contact with eyes and skin. Do not inhale. Do not wash to sanitary sewer.

Large spills: Confine spill, soak up with approved absorbent, shovel product into approved container for disposal.

7. Handling and Storage

Precautions for safe handling: Keep away from heat/sparks/open flames/hot surfaces – No smoking. Do not breathe dust/fume/gas/mist/vapors/spray. Do not get in eyes, on skin, or on clothing. Wash contaminated parts thoroughly after handling. Do not eat, drink or smoke when using this product. Use only outdoors or in a well-ventilated area.

Conditions for safe storage, including any incompatibilities: Keep container tightly closed in a dry and well-ventilated place at low temperature. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Keep container closed when not in use; protect containers from abuse; protect from high temperatures, open flames. Keep this and other chemicals out of reach of children.

8. Exposure Controls/Personal Protection

Exposure Limits:

Component	CAS-No.	Value	Control parameters	Basis
2-Mercaptoethanol	60-24-2	TWA	0.200000 ppm	USA. (WEEL)
Ammonia, anhydrous	7664-41-7	TWA	25.000000 ppm	USA. ACGIH (TLV)
Copper(II) chloride dihydrate	10125-13-0	TWA	1.000000 mg/m3	USA. NIOSH
Potassium iodide	7681-11-0	TWA	0.010000 mg/m3	USA. ACGIH (TLV)

Engineering Controls: The use of local exhaust ventilation is recommended to control emissions near the source. Provide mechanical ventilation of confined spaces. Use corrosion-resistant, explosion-proof ventilation equipment.

Personal Protection: Respiratory Protection (Specify Type): None required while threshold limits are kept below maximum allowable concentrations; if TWA exceeds standard workplace limits, NIOSH approved respirator must be worn.

Hand Protection: Neoprene, butyl or nitrile rubber gloves with cuffs.



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Eye Protection: Chemical safety goggles.

Other Protective Clothing Or Equipment: Apron, or other equipment should be worn to prevent skin contact, safety eyewash station nearby. Practice safe workplace habits. Minimize body contact with this, as well as all chemicals in general.

9. Physical and Chemical Properties

Appearance: Yellowish Liquid.

Odor: Ammonia and Mercaptant Stench.

Odor threshold: Not available.

pH: Not available.

Relative density: Not available.

Melting point/freezing point: Not available.

Initial boiling point and boiling range: Not available.

Flash point: Not available.

Auto-ignition temperature: Not available.

Decomposition temperature: Not available.

Upper/lower flammability or explosive limits: Not available.

Vapor pressure: Not available.

Vapor density: Not available.

Evaporation rate: Not available.

Flammability (solid, gas): Not available.

Partition coefficient: n-octanol/water: Not available.

Solubility in Water: Miscible

Viscosity: Not available.

10. Stability and Reactivity

Stability: Stable at normal temperatures and operating conditions.

Conditions to Avoid: Avoid high temperatures and contact with strong oxidizing agents & Metals. Avoid Heat, flames and sparks.

Incompatibilities: Strong Bases & Oxidizing Agent.

Decomposition: Decomposition yields carbon monoxide & dioxide, oxides of sulfur & fumes.

Polymerization: Polymerization will not occur.

11. Toxicological Information

Eye: Irritation Eye contact may be painful and irritating. Risk of serious damage to eyes.

Skin: Irritation Prolonged and repeated skin exposure may be painful and irritating and toxic.

Inhalation: Toxicity Inhalation of this product during manufacturing may be harmful.

Ingestion: Toxic if swallowed



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Acute toxicity for 2 Mercaptoethanol (C₂H₆O₂):

LD50 Oral - Rat - 98 - 162 mg/kg

LC50 Inhalation - Rat - 4 h - 2 mg/l

LC50 Inhalation - Rat - 4 h - 625 ppm

LD50 Dermal - Rabbit - 112 mg/kg

Acute toxicity for Aqua Ammonia (NH₃):

LC50 Inhalation - Rat - 4 h - 2000 ppm

Acute toxicity for Cupric Chloride Dihydrate (CuCl₂·2H₂O):

LD50 Oral - Rat - 336 mg/kg

LD50 Dermal - Rat - male - > 2,000 mg/kg

LD50 Dermal - Rat - female - 1,224 mg/kg

Acute toxicity for Potassium Iodide:

LD50 Oral - Mouse - 1,000 mg/kg.

Mutagenic Effects: Not available.

Teratogenic Effects: Not available.

Developmental Toxicity: Not available.

Reproductive Effects: No information available.

12. Ecological Information

Toxicity For 2 Mercaptoethanol (C₂H₆O₂):

Toxicity to fish: LC50 - Leuciscus idus (Golden orfe) - 46 - 100 mg/l - 96.0 h

Toxicity to daphnia & other aquatic invertebrates: EC50 - Daphnia (water flea) - 0.89 mg/l - 48 h

Toxicity for Aqua Ammonia (NH₃):

Toxicity to daphnia & other aquatic invertebrates: LC50 - Daphnia magna (Water flea) - 25.4 mg/l - 48 h

Toxicity for Cupric Chloride Dihydrate (CuCl₂·2H₂O):

Toxicity to fish: LC50 - Cyprinus carpio (Carp) - 0.12 - 0.23 mg/l - 96.0 h

Toxicity for Potassium Iodide:

Toxicity to fish: LC50 - Oncorhynchus mykiss (rainbow trout) - 2,190 mg/l - 96 h

Toxicity to daphnia & other aquatic invertebrates: EC50 - Daphnia (water flea) - 2.7 mg/l - 24 h

13. Disposal Considerations

Dispose in accordance with Local, State, and Federal Regulations. Consult local, state, or Federal Environmental Protection Agency before disposing of any chemicals.

14. Transport Information

DOT (USA) ADR/RID, IMDG and IATA:

UN number: 2966 Class: 6.1 Packing group: II

Proper shipping name: Thioglycol



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15. Regulatory Information

UNITED STATES REGULATORY INFORMATION

SARA 311/312 Hazards: Fire Hazard, Acute Health Hazard, Chronic Health Hazard

California Prop. 65 Components: Not listed.

Section 16 - Additional Information

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Disclaimer:

The information and recommendations set forth herein are presented in good faith and believed correct as of the date the SDS was created. It is compiled from various sources and it is not necessarily all inclusive nor fully adequate in every circumstance. In addition, these suggestions should not be confused with nor followed in violation of applicable laws, regulations, rules or insurance requirements applicable. This SDS is intended only as a guide to the appropriate precautionary handling of the material by a properly trained person using this product. Individuals receiving the information must exercise their independent judgment in determining its appropriateness for a particular purpose. This shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.
