

Mettler-Toledo, Inc.

Material Safety Data Sheet

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| WHMIS | Protective Clothing | TDG Road/Rail |
|--------------------------------------|---|--|
| Not controlled under WHMIS (Canada). | | Not controlled under TDG (Canada). PIN: Not applicable. PG: Not applicable. |
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| Section I. Product Identification and Uses | | | | | | | | | | | |
|---|--|-----|----------------|------|-----------|------|--------|----------------|--------|------------|--|
| Product name | FERROUS AMMONIUM SULFATE, ACCULUTE | | | | | | | | | | |
| Chemical formula | Fe(NH4)2(SO4)2.6H2O | | | | | | | | | | |
| Synonyms | C-2158 | | | | | | | | | | |
| | <table border="1"> <tr> <td>CI#</td> <td>Not available.</td> </tr> <tr> <td>CAS#</td> <td>7783-85-9</td> </tr> <tr> <td>Code</td> <td>C-2158</td> </tr> <tr> <td>Formula weight</td> <td>392.13</td> </tr> <tr> <td>Supersedes</td> <td></td> </tr> </table> | CI# | Not available. | CAS# | 7783-85-9 | Code | C-2158 | Formula weight | 392.13 | Supersedes | |
| CI# | Not available. | | | | | | | | | | |
| CAS# | 7783-85-9 | | | | | | | | | | |
| Code | C-2158 | | | | | | | | | | |
| Formula weight | 392.13 | | | | | | | | | | |
| Supersedes | | | | | | | | | | | |
| Material uses | For laboratory use only. | | | | | | | | | | |

| Section II. Ingredients | | | |
|---|-----------|------------|---|
| Name | CAS # | % | TLV |
| 1) FERROUS AMMONIUM SULFATE HEXAHYDRATE | 7783-85-9 | 98.5-101.5 | Exposure limits: ACGIH (Soluble iron salts (as Fe)) TWA 1 mg(Fe)/m3 |

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| Toxicity values of the hazardous ingredients | FERROUS AMMONIUM SULFATE: ORAL (LD50): Acute: 3250 mg/kg (Rat). |
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Section III. Physical Data

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| Physical state and appearance / Odor | Green odorless crystals. |
| pH (1% soln/water) | 3-5 (5% solution aqueuse) |
| Odor threshold | Not available. |
| Percent volatile | 0% at 21°C |
| Freezing point | Not available. |
| Boiling point | Decomposes at 100-110°C. |
| Specific gravity | 1.864 (Water = 1) |
| Vapor density | Not applicable. |
| Vapor pressure | Not applicable. |
| Water/oil dist. coeff. | Not available. |
| Evaporation rate | Not applicable. |
| Solubility | 21% @ 20°C (in H ₂ O) |

Section IV. Fire and Explosion Data

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| Flash point | Not applicable. |
| Flammable limits | Not applicable. |
| Auto-ignition temperature | Not applicable. |
| Fire degradation products | Ammonia. Oxides of sulfur, iron and nitrogen. |
| Fire extinguishing procedures | Use flooding quantities of water. Wear adequate personal protection to prevent contact with material or its combustion products. Self contained breathing apparatus with a full facepiece operated in a pressure demand or other positive pressure mode. Cool containing vessels with flooding quantities of water. If without risk, move undamaged containing vessels or packages from fire area. |
| Fire and Explosion Hazards | Container explosion may occur under fire conditions or when heated. The sensitivity to static discharge is not available. The sensitivity to impact is not available. Emits toxic fumes under fire conditions. |

Section V. Toxicological Properties

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|---------------------------|---|
| Routes of entry | Inhalation and ingestion. Eye contact. Skin contact. |
| Effects of Acute Exposure | May be harmful by ingestion, inhalation, or skin absorption. Target organs: liver, kidneys, cardiovascular, respiratory, digestive and central nervous systems. |
| Eye | May cause irritation with redness and pain. |
| Skin | May cause irritation. |
| Inhalation | May be irritating to mucous membranes and upper respiratory tract. Exposure can cause coughing, chest pains, and difficulty in breathing. See ingestion. |
| Ingestion | May cause gastrointestinal irritation. May cause iron poisoning: Nausea, vomiting, diarrhea, abdominal pain. Large amounts may cause liver and kidney damage, hematemesis, cyanosis, hypothermia, hypotension, mydriasis, anorexia, acidosis, pulmonary edema, respiratory failure, shock, coma and possible death. Acute effects may be delayed. If the product is aspirated into the lungs, very severe lung damage or death could result. Pink urine discoloration is a strong indication of iron poisoning. 30 mg (Fe)/kg may be fatal. |

Section V. Toxicological Properties

FERROUS AMMONIUM SULFATE,
ACQUITE

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Effects of Chronic Overexposure Iron may cause hemosiderosis, liver, kidney, cardiovascular, pancreas, respiratory and central nervous system damage. Carcinogenic effects: Not available. Mutagenic effects: Not available. Teratogenic effects: Not available. Toxicity of the product to the reproductive system: Not available. To the best of our knowledge the chronic toxicity of this substance has not been fully investigated. Medical conditions which may be aggravated: Individuals with preexisting diseases of the skin, eye, liver, kidney or respiratory system may be more susceptible to the toxicity of overexposure to this product.

Section VI. First Aid Measures

Eye contact Immediately flush eyes with copious quantities of water for at least 15 minutes holding lids apart to ensure flushing of the entire surface. Call a physician.

Skin contact Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Call a physician. Wash contaminated clothing before reusing.

Inhalation Remove patient to fresh air. Administer approved oxygen supply if breathing is difficult. Administer artificial respiration or CPR if breathing has ceased. Seek immediate medical attention.

Ingestion If conscious, wash out mouth with water. Have conscious person drink several glasses of water or milk. Induce vomiting by sticking finger in throat. Call a physician. Never give anything by mouth to an unconscious person. NOTE TO PHYSICIAN: Deferoxamine is a specific antidote for iron poisoning. Do not give carbonates.

Section VII. Reactivity Data

Stability Unstable. Air and light sensitive. Conditions to avoid: High temperatures, sparks, open flames and all other sources of ignition, contamination.

Hazardous decomp. products Not available.

Incompatibility Acids, oxidizing agents (chlorates, nitrates, nitrites, etc...), sulfuric acid.

Reaction Products May discolor on exposure to light or air. Decomposes on heating. Hazardous polymerization will not occur.

Section VIII. Preventive Measures

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Protective Clothing in case of spill and leak Wear respirator, safety glass, rubber boots and heavy rubber glove

Spill and leak Evacuate the area. Sweep up and place in container for disposal. Avoid raising dust. Ventilate area and wash spill site after material pick up is complete. DO NOT empty into drains. DO NOT touch spilled material.

Waste disposal According to all applicable regulations.

Storage and Handling Store in a cool place away from heated areas, sparks, and flame. Store in a well ventilated area. Store away from incompatible materials. Do not add any other material to the container. Do not wash down the drain. Do not breathe dust. Keep away from direct sunlight or strong incandescent light. Keep container tightly closed and dry. Manipulate under an adequate fume hood. Avoid raising dust. Handle and open container with care. Minimize dust generation and exposure - use dust mask or appropriate protection. This product must be manipulated by qualified personnel. Do not get in eyes, on skin, or on clothing. Wash well after use. In accordance with good storage and handling practices. Do not allow smoking and food consumption while handling. In case of accident or if you feel unwell, seek medical advice immediately (show the label when possible.).

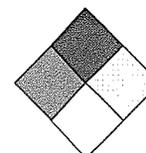
Section IX. Protective Measures

Protective clothing Splash goggles. Impervious rubber gloves, coveralls, and/or other resistant protective clothing. Sufficient to protect skin. A OSHA/MSHA jointly approved respirator is advised in the absence of proper environmental controls. If more than TLV, do not breathe vapor. Wear self-contained breathing apparatus. Do not wear contact lenses. Make eye bath and emergency shower available. Ensure that eyewash station and safety shower is proximal to the work-station location.

Engineering controls Use in a chemical fume hood to keep airborne levels below recommended exposure limits. Do not use in unventilated spaces.

Section X. Other Information

Special Precautions or comments Harmful solid! Do not breathe dust. Avoid all contact with the product. Manipulate in a well ventilated area or under an adequate fume hood.
RTECS NO: BR6500000 (Ferrous ammonium sulfate hexahydrate).



NFPA

Prepared by MSDS Department/Département de F.S..

Validated 16-Apr-2014



While the company believes the data set forth herein are accurate as of the date hereof, the company makes no warranty with respect thereto and expressly disclaims all liability for reliance thereon. Such data are offered solely for your consideration, investigation and verification.