Safety Data Sheet

Iron (III) Chloride, Anhydrous

CAROLINA®
www.carolina.com

Section 1 Product Description

Product Name:	Iron (III) Chloride, Anhydrous
Recommended Use:	Science education applications
Synonyms:	Ferric Chloride
Distributor:	Carolina Biological Supply Company 2700 York Road, Burlington, NC 27215 1-800-227-1150
Chemical Information:	800-227-1150 (8am-5pm (ET) M-F)
Chemtrec:	800-424-9300 (Transportation Spill Response 24 hours)

Section 2 Hazard Identification

Classification of the chemical in accordance with paragraph (d) of §1910.1200;

DANGER

May be corrosive to metals. Harmful if swallowed. Causes skin irritation. Causes serious eye damage. Toxic to aquatic life. Toxic to aquatic life with long lasting effects.

GHS Classification:
Substance or mixture corrosive to metals Category 1, Serious Eye Damage/Eye Irritation Category 1, Skin Corrosion/Irritation Category 2, Hazardous to the aquatic environment - Acute Category 2, Hazardous to the aquatic environment - Chronic Category 2, Acute Toxicity - Oral Category 4

Acute Toxicity Dermal Contains	100 % of the mixture consists of ingredient(s) of unknown toxicity
Acute Toxicity Inhalation Gas Contains	100 % of the mixture consists of ingredient(s) of unknown toxicity
Acute Toxicity Inhalation Vapor Contains	100 % of the mixture consists of ingredient(s) of unknown toxicity
Acute Toxicity Inhalation Dust/Mist Contains	100 % of the mixture consists of ingredient(s) of unknown toxicity

Section 3 Composition / Information on Ingredients

Chemical Name	CAS #	%
Iron (III) Chloride, Anhydrous	7705-08-0	100

Section 4 First Aid Measures

Emergency and First Aid Procedures

Inhalation:	In case of accident by inhalation: remove casualty to fresh air and keep at rest.
Eyes:	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Skin Contact:	IF ON SKIN: Wash with plenty of soap and water. If skin irritation occurs: Get medical advice/attention. Take off contaminated clothing and wash before reuse.
Ingestion:	IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.

Section 5 Firefighting Procedures

Extinguishing Media: Use dry chemical, CO2 or appropriate foam.

Fire Fighting Methods and Protection: Firefighters should wear full protective equipment and NIOSH approved self-contained breathing apparatus.

Fire and/or Explosion Hazards: Fire or excessive heat may produce hazardous decomposition products. Liberates hydrochloric acid fumes when damp.

Hazardous Combustion Products: Hydrogen chloride

Section 6 Spill or Leak Procedures

Steps to Take in Case Material Is Released or Spilled: Exposure to the spilled material may be irritating or harmful. Follow personal protective equipment recommendations found in Section 8 of this SDS. Additional precautions may be necessary based on special circumstances created by the spill including; the material spilled, the quantity of the spill, the area in which the spill occurred. Also consider the expertise of employees in the area responding to the spill.
Prevent the spread of any spill to minimize harm to human health and the environment if safe to do so. Wear complete and proper personal protective equipment following the recommendation of Section 8 at a minimum. Dike with suitable absorbent material like granulated clay. Gather and store in a sealed container pending a waste disposal evaluation. Absorb spillage to prevent material damage.
Collect spillage.

Section 7 Handling and Storage

Handling: Keep only in original container. Wash thoroughly after handling. Do no eat, drink or smoke when using this product. Avoid release to the environment. Wear protective gloves/protective clothing/eye protection/face protection. Keep container tightly closed in a cool, well-ventilated place. Readily absorbs moisture from air. Avoid direct sunlight and heat. Keep away from water and ice Avoid contact with skin and eyes. Harmful by inhalation and if swallowed.

Storage: Store in corrosive resistant/… container with a resistant inner liner. Keep container tightly closed and dry.

Storage Code: White - Corrosive. Separate acids from bases; separate oxidizer acids from organic acids.

Section 8 Protection Information

	ACGIH		OSHA PEL	
Chemical Name	**(TWA)**	**(STEL)**	**(TWA)**	**(STEL)**
Iron (III) Chloride, Anhydrous	1 mg/m3 TWA (as Fe)	N/A	N/A	N/A

Control Parameters

Engineering Measures: Local exhaust ventilation or other engineering controls are normally required when handling or using this product to avoid overexposure.

Personal Protective Equipment (PPE): Lab coat, apron, eye wash, safety shower.

Respiratory Protection: Respiratory protection may be required to avoid overexposure when handling this product. General or local exhaust ventilation is the preferred means of protection. Use a respirator if general room ventilation is not available or sufficient to eliminate symptoms.

Respirator Type(s): NIOSH approved air purifying respirator with acid gas cartridge and dust/mist filter

Eye Protection: Wear chemical splash goggles when handling this product. Have an eye wash station available.

Skin Protection: Avoid skin contact by wearing chemically resistant gloves, an apron and other protective equipment depending upon conditions of use. Inspect gloves for chemical break-through and replace at regular intervals. Clean protective equipment regularly. Wash hands and other exposed areas with mild soap and water before eating, drinking, and when leaving work.

Gloves: Butyl rubber, Neoprene, Nitrile

Section 9 Physical Data

Formula: FeCl3
Molecular Weight: 162.22
Appearance: Red-brown Crystalline Solid
Odor: No data available
Odor Threshold: No data available
pH: No data available
Melting Point: 304 C
Boiling Point: No data available
Flash Point: No data available
Flammable Limits in Air: No data available
Vapor Pressure: 1.33 hPa at 194 °C
Evaporation Rate (BuAc=1): 1.33 hPa at 194 °C (solid)
Vapor Density (Air=1): 5.6
Specific Gravity: 2.90
Solubility in Water: Soluble
Log Pow (calculated): No data available
Autoignition Temperature: No data available
Decomposition Temperature: No data available
Viscosity: No data available
Percent Volatile by Volume: No data available

Safety Data Sheet

Section 10 Reactivity Data

Reactivity: Not generally reactive under normal conditions.
Chemical Stability: Stable under normal conditions.
Conditions to Avoid: Exposure to moisture
Incompatible Materials: Contact with (specify material) may form shock-sensitive materials, Potassium Metal, Sodium Metal
Hazardous Decomposition Products: Hydrogen chloride
Hazardous Polymerization: Will not occur

Section 11 Toxicity Data

Routes of Entry Inhalation and ingestion.
Symptoms (Acute): Respiratory disorders, Increased Respiration, Tachycardia, Hypoxemia (low blood oxygen), Metabolic Acidosis, Vomiting, Heart attack
Delayed Effects: No data available

Acute Toxicity:

Chemical Name	CAS Number	Oral LD50	Dermal LD50	Inhalation LC50
Iron (III) Chloride, Anhydrous	7705-08-0	Oral LD50 Mouse 200 mg/kg Oral LD50 Rat 316 mg/kg	Not determined	Not determined

Carcinogenicity:

Chemical Name	CAS Number	IARC	NTP	OSHA
Iron (III) Chloride, Anhydrous	7705-08-0	Not listed	Not listed	Not listed

Chronic Effects:
Mutagenicity: No evidence of a mutagenic effect.
Teratogenicity: No evidence of a teratogenic effect (birth defect).
Sensitization: No evidence of a sensitization effect.
Reproductive: Evidence of negative reproductive effects in males.
Target Organ Effects:
Acute: Cardiovascular system
Chronic: No information available

Section 12 Ecological Data

Overview: Severe ecological hazard. This product may be toxic to plants and/or wildlife.
Mobility: This material is expected to have only slight mobility in soil. It absorbs strongly to most soil types.
Persistence: Adsorbs to soil.
Bioaccumulation: Bioconcentration may occur.
Degradability: No data
Other Adverse Effects: No data

Chemical Name	CAS Number	Eco Toxicity
Iron (III) Chloride, Anhydrous	7705-08-0	96 HR LC50 GAMBUSIA AFFINIS 75.6 MG/L [STATIC] 48 HR EC50 DAPHNIA MAGNA 27.9 MG/L 48 HR EC50 DAPHNIA MAGNA 9.6 MG/L [STATIC]

Section 13 Disposal Information

Disposal Methods: Dispose in accordance with all applicable Federal, State and Local regulations. Always contact a permitted waste disposer (TSD) to assure compliance.
Waste Disposal Code(s): Not Determined

Section 14 Transport Information

Ground - DOT Proper Shipping Name:
UN1773
Ferric Chloride, Anhydrous
Class 8
P.G. III

Air - IATA Proper Shipping Name:
UN1773
Ferric Chloride, Anhydrous
Class 8
P.G. III

Section 15 Regulatory Information

TSCA Status: All components in this product are on the TSCA Inventory.

Chemical Name	CAS Number	§ 313 Name	§ 304 RQ	CERCLA RQ	§ 302 TPQ	CAA 112(2) TQ
Iron (III) Chloride, Anhydrous	7705-08-0	No	1000 lb RQ	1000 lb final RQ; (454 kg)	No	No

Section 16 Additional Information

Revised: 09/09/2015 **Replaces: 09/03/2014** **Printed: 10-29-2015**

The information provided in this (Material) Safety Data Sheet represents a compilation of data drawn directly from various sources available to us. Carolina Biological Supply makes no representation or guarantee as to the suitability of this information to a particular application of the substance covered in the (Material) Safety Data Sheet.

Glossary

ACGIH	American Conference of Governmental Industrial Hygienists
CAS	Chemical Abstract Service Number
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
DOT	U.S. Department of Transportation
IARC	International Agency for Research on Cancer
N/A	Not Available
NTP	National Toxicology Program
OSHA	Occupational Safety and Health Administration
PEL	Permissible Exposure Limit
ppm	Parts per million
RCRA	Resource Conservation and Recovery Act
SARA	Superfund Amendments and Reauthorization Act
TLV	Threshold Limit Value
TSCA	Toxic Substances Control Act
IDLH	Immediately dangerous to life and health