Safety Data Sheet

File version: 1

Iron(III) chloride, 1M

SDS Date: 29 Nov 2016

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: **1M Iron(III) chloride**
SYNONYMS: **Ferric chloride**
PRODUCT CODES: **1008173**
1008174
MANUFACTURER: **Rigaku Reagents**
ADDRESS: **9009 New Trails Drive**
The Woodlands, TX 77381
USA
PHONE: **+1 (281) 362-2300**
EMAIL: **ReagentOrders@Rigaku.com**

CHEMICAL NAME: **Iron trichloride**
CHEMICAL FAMILY: **Inorganic iron salt**
CHEMICAL FORMULA: $FeCl_3$

PREPARED BY: **Rigaku Reagents**

SECTION 1 NOTES:

SECTION 2: HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW:

OSHA HAZARDS: Toxic by ingestion, irritant

GHS CLASSIFICATION:

Acute toxicity, Oral (Category 4)
Skin irritation (Category 2)
Serious eye damage (Category 1)
Acute aquatic toxicity (Category 2)
Chronic aquatic toxicity (Category 2)

GHS LABEL ELEMENTS, INCLUDING PRECAUTIONARY STATEMENTS

Signal word: Danger

Hazard statement(s):

H302 Harmful if swallowed.
H315 Causes skin irritation.
H318 Causes serious eye damage.
H411 Toxic to aquatic life with long lasting effects.

Precautionary statement(s):

P273 Avoid release to the environment.
P280 Wear protective gloves/ eye protection/ face protection.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

POTENTIAL HEALTH EFFECTS:

EYES: Causes eye irritation.

SKIN: Harmful if absorbed through skin. Causes skin irritation.

INGESTION: Toxic if swallowed.

INHALATION: May be harmful if inhaled. Causes respiratory tract irritation.

SECTION 2 NOTES:

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

INGREDIENTS: Iron trichloride, De-ionized water

IRON TRICHLORIDE:

CAS NO.	% WT	% VOL
7705-08-0	15-17	

	ppm	mg/m3
OSHA PEL-TWA:		1
OSHA PEL STEL :		
ACGIH TLV-TWA:		1
ACGIH TLV STEL:		

SECTION 3 NOTES:

SECTION 4: FIRST AID MEASURES

EYES: Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

SKIN: Wash off with soap and plenty of water. Consult a physician.

INGESTION: Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

INHALATION: If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

SECTION 4 NOTES:

SECTION 5: FIRE-FIGHTING MEASURES

FLASH POINT:
F: No data available
C: No data available

AUTOIGNITION TEMPERATURE:
F: No data available
C: No data available

NFPA HAZARD CLASSIFICATION
HEALTH: 2 **FLAMMABILITY: 0** **REACTIVITY: 0**

HMIS HAZARD CLASSIFICATION
HEALTH: 2 **FLAMMABILITY: 0** **REACTIVITY: 0**

EXTINGUISHING MEDIA: Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

HAZARDOUS DECOMPOSITION PRODUCTS: Hazardous decomposition products formed under fire conditions. - Hydrogen chloride gas, Iron oxides

SECTION 5 NOTES: Not flammable or combustible.

SECTION 6: ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS: Use personal protective equipment. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas.

ENVIRONMENTAL PRECAUTIONS: Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

METHODS AND MATERIALS FOR CONTAINMENT AND CLEANING UP: Soak up with inert absorbent material and dispose of as hazardous waste. Keep in suitable, closed containers for disposal.

SECTION 6 NOTES:

SECTION 7: HANDLING AND STORAGE

HANDLING AND STORAGE: Avoid contact with skin and eyes. Avoid inhalation of vapor or mist. Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

SECTION 7 NOTES:

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

RESPIRATORY PROTECTION: Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

EYE PROTECTION: Tightly fitting safety goggles. Face shield (8-inch minimum). Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

SKIN PROTECTION: Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands. Complete suit protecting against chemicals, the type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

WORK HYGIENIC PRACTICES: Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

SECTION 8 NOTES:

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE: clear, colorless

PHYSICAL STATE: liquid, clear

pH AS SUPPLIED: No data available
pH (Other): No data available

BOILING POINT:
F: No data available
C: No data available

FREEZING POINT:
F: No data available
C: No data available

VAPOR PRESSURE (mmHg): No data available
@
F: No data available
C: No data available

VAPOR DENSITY (AIR = 1): No data available

SPECIFIC GRAVITY (H2O = 1): No data available
@
F: No data available
C: No data available

EVAPORATION RATE: No data available

SOLUBILITY IN WATER: No data available

VISCOSITY: No data available
@
F: No data available
C: No data available

SECTION 9 NOTES:

SECTION 10: STABILITY AND REACTIVITY

STABILITY: Stable under recommended storage conditions.

CONDITIONS TO AVOID (STABILITY): No data available

INCOMPATIBILITY (MATERIAL TO AVOID): Bases, alkali metals, strong oxidizing agents, potassium, exothermic in contact with water, forms shock-sensitive mixtures with certain other materials.

HAZARDOUS DECOMPOSITION OR BY-PRODUCTS: Hazardous decomposition products formed under fire conditions. - Hydrogen chloride gas, Iron oxides. Other decomposition products - no data available

SECTION 10 NOTES:

SECTION 11: TOXICOLOGICAL INFORMATION

ACUTE TOXICITY:

ORAL LD50: No data available.
INHALATION LC50: No data available.
DERMAL LD50: No data available.

SKIN CORROSION/IRRITATION: No data available.

SERIOUS EYE DAMAGE/EYE IRRITATION: No data available.

RESPIRATORY OR SKIN SENSITIZATION: No data available.

GERM CELL MUTAGENICITY: No data available.

CARCINOGENICITY:

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

REPRODUCTIVE TOXICITY: No data available.

SECTION 11 NOTES:

SECTION 12: ECOLOGICAL INFORMATION

TOXICITY
No data available.

PERSISTENCE AND DEGRADABILITY
No data available.

BIOACCUMULATIVE POTENTIAL

No data available.

MOBILITY IN SOIL
No data available

PBT AND vPvB ASSESSMENT
No data available

SECTION 12 NOTES:

SECTION 13: DISPOSAL CONSIDERATIONS

PRODUCT: Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

CONTAMINATED PACKAGING: Dispose of as unused product.

SECTION 14: TRANSPORT INFORMATION

U.S. DEPARTMENT OF TRANSPORTATION

PROPER SHIPPING NAME:	Ferric chloride, solution
HAZARD CLASS:	8
ID NUMBER:	2582
PACKING GROUP:	III
MARINE POLLUTANT:	No
POISON INHALATION HAZARD:	No

WATER TRANSPORTATION

PROPER SHIPPING NAME:	FERRIC CHLORIDE SOLUTION
HAZARD CLASS:	8
ID NUMBER:	2582
PACKING GROUP:	III EMS-No: F-A, S-B
MARINE POLLUTANT:	No

AIR TRANSPORTATION

PROPER SHIPPING NAME:	Ferric chloride solution
HAZARD CLASS:	8
ID NUMBER:	2582
PACKING GROUP:	III

SECTION 14 NOTES:

SECTION 15: REGULATORY INFORMATION

OSHA HAZARDS: Irritant, harmful by ingestion, teratogen

SARA 302 COMPONENTS: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 COMPONENTS: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

SARA 311/312 HAZARDS: Acute health hazard

MASSACHUSETTS RIGHT TO KNOW COMPONENTS:

	CAS-No.
Iron trichloride	7705-08-0

PENNSYLVANIA RIGHT TO KNOW COMPONENTS:

	CAS-No.
Iron trichloride	7705-08-0

Water	7732-18-5

NEW JERSEY RIGHT TO KNOW COMPONENTS:

	CAS-No.
Iron trichloride	7705-08-0
Water	7732-18-5

CALIFORNIA PROP. 65 COMPONENTS: This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

SECTION 15 NOTES:

SECTION 16: OTHER INFORMATION

DISCLAIMER: The above information is believed to be correct but does not necessarily include all information and should be used only as a guide. The information in this document is based on our current knowledge and applies to the product with regard to appropriate safety precautions. This document does not represent any guarantee of the properties of the product. Rigaku Reagents will not be held liable for any damage resulting from handling or contact with the above product.