


MSDS	Ferric Chloride Solution	 Adwan Chemical Industries Co. Ltd.
Issuing Date		

Safety Data Sheet

1. PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME	Ferric Chloride Solution
CHEMICAL NAME	Ferric Chloride Solution
SYNONYMS	Iron (III) Chloride Solution
MANUFACTURED BY	Adwan Chemical Industries Co. Ltd. Riyadh 2nd Industrial City – Al Kharj Road PO Box 355128 Riyadh 11383 Kingdom of Saudi Arabia
PHONE	+966-11-265-0041
FAX	+966-11-265-0023

2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

DANGER! CORROSIVE. CAUSES BURNS TO ANY AREA OF CONTACT. HARMFUL IF SWALLOWED OR INHALED. AFFECTS THE LIVER.

Health Rating	: 2 - Moderate
Flammability Rating	: 0 - None
Reactivity Rating	: 2 - Moderate
Contact Rating	: 3 - Severe (Corrosive)
Lab Protective Equip	: GOGGLES & SHIELD; LAB COAT & APRON; VENT HOOD; PROPER GLOVES
Storage Color Code	: White (Corrosive)

POTENTIAL HEALTH EFFECTS

INHALATION

Extremely destructive to tissues of the mucous membranes and upper respiratory tract. Symptoms may include burning sensation, coughing, wheezing, laryngitis, shortness of breath, headache, nausea and vomiting.

SKIN


Corrosive. Symptoms of redness, pain, and severe burn can occur.

EYE

Corrosive. Contact can cause blurred vision, redness, pain and severe tissue burns.

INGESTION

Corrosive. Swallowing can cause severe burns of the mouth, throat, and stomach. Can cause sore throat, vomiting, diarrhea. Low systemic toxicity in small quantities but larger doses may cause systemic effects. Pink urine discoloration is a strong indicator of iron poisoning. Liver damage, coma and death may follow, sometimes delayed as long as three days.

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MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE

No information found.

INTERACTIONS WITH OTHER CHEMICALS WHICH ENHANCE TOXICITY

No information found.

CHRONIC EFFECTS

No information found.

3. COMPOSITION / INFORMATION INGREDIENTS

CHEMICAL NAME : Ferric Chloride
CAS NUMBER : 7705-08-0
% RANGE : 35-50 %

4. FIRST AID MEASURES

INHALATION

Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately.

SKIN

Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention immediately. Wash clothing before reuse. Thoroughly clean shoes before reuse.

EYES

Immediately flush eyes with plenty of water for at least 15 minutes, lifting lower and upper eyelids occasionally. Get medical attention immediately.

INGESTION

If swallowed, DO NOT INDUCE VOMITING. Give large quantities of water. Never give anything by mouth to an unconscious person. Get medical attention immediately.

5. FIRE-FIGHTING MEASURES

FLAMMABLE PROPERTIES

Not considered to be a fire hazard. Irritating hydrogen chloride fumes may form in fire

FLASH POINT


None

AUTOIGNITION TEMPERATURE

N/A

FLAMMABLE LIMITS IN AIR (PERCENT BY VOLUME)

Nonflammable

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HAZARDOUS COMBUSTION PRODUCTS

Nonflammable.

EXTINGUISHING MEDIA

Water, dry chemical, foam or carbon dioxide. Do not allow water runoff to enter sewers or waterways.

FIRE FIGHTING INSTRUCTIONS

In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full facepiece operated in the pressure demand or other positive pressure mode.

6. ACCIDENTAL RELEASE MEASURES

Ventilate area of leak or spill. Wear appropriate personal protective equipment as specified in Section 8. Isolate hazard area. Keep unnecessary and unprotected personnel from entering. Contain and recover liquid when possible. Collect liquid in an appropriate container or absorb with an inert material (e. g., vermiculite, dry sand, earth), and place in a chemical waste container. Do not use combustible materials, such as saw dust. Do not flush to sewer

7. HANDLING AND STORAGE

Keep in a tightly closed container, stored in a cool, dry, ventilated area. Protect against physical damage. Isolate from incompatible substances. Containers of this material are hazardous when empty since they retain product residues; observe all warnings for the product.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

ENGINEERING CONTROLS

VENTILATION

A system of local and/or general exhaust is recommended to keep employee exposures below the Airborne Exposure Limits. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area.


PERSONAL PROTECTIVE EQUIPMENT

EYE AND FACE PROTECTION

Use chemical safety goggles and/or a full face shield where splashing is possible. Maintain eye wash fountain and quick-drench facilities in work area.

SKIN PROTECTION

Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact.

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RESPIRATORY PROTECTION

If the exposure limit is exceeded and engineering controls are not feasible, a full facepiece particulate respirator (NIOSH type N100 filters) may be worn for up to 50 times the exposure limit or the maximum use concentration specified by the appropriate regulatory agency or respirator supplier, whichever is lowest. If oil particles (e.g. lubricants, cutting fluids, glycerine, etc.) are present, use a NIOSH type R or P filter. For emergencies or instances where the exposure levels are not known, use a full-facepiece positive-pressure, air-supplied respirator. **WARNING:** Air-purifying respirators do not protect workers in oxygen-deficient atmospheres.

9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE	: Orange to brown liquid.
ODOR	: Acid odor.
SOLUBILITY	: Complete (100%)
SPECIFIC GRAVITY	: 1.40
PH	: No information found.
% VOLATILES BY VOLUME @ 21C (70F)	: 55-65
BOILING POINT	: 230C (446F)
MELTING POINT	: No information found.
VAPOR DENSITY (AIR=1)	: No information found.
VAPOR PRESSURE (MM HG)	: No information found.
EVAPORATION RATE (BUAC=1)	: No information found.

10. STABILITY AND REACTIVITY

CHEMICAL STABILITY

Stable under ordinary conditions of use and storage.

CONDITIONS TO AVOID

Incompatibles.

INCOMPATIBILITY WITH OTHER MATERIALS


Metals, allyl chloride, sodium, potassium.

HAZARDOUS DECOMPOSITION PRODUCTS

May produce hydrogen chloride.

HAZARDOUS POLYMERIZATION

This substance does not polymerize.

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11. TOXICOLOGICAL INFORMATION

ACUTE TOXICITY

Oral rat LD50: 450 mg/kg (anhydrous); investigated as a mutagen, reproductive effector.

12. ECOLOGICAL INFORMATION

ENVIRONMENTAL FATE No information found.

ECOTOXICITY No information found.

13. DISPOSAL CONSIDERATIONS

Whatever cannot be saved for recovery or recycling should be managed in an appropriate and approved waste facility. Although not a listed RCRA hazardous waste, this material may exhibit one or more characteristics of a hazardous waste and require appropriate analysis to determine specific disposal requirements. Processing, use or contamination of this product may change the waste management options. State and local disposal regulations may differ from federal disposal regulations. Dispose of container and unused contents in accordance with federal, state and local requirements.

14. TRANSPORT INFORMATION

Not regulated.

15. REGULATORY INFORMATION


Chemical Inventory Status

Ingredient	TSCA	EC	Japan	Australia	Korea	DSL	NDSL	Phil
Ferric Chloride (7705 08 0)	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes

Federal, State & International Regulations

Ingredient	SARA 302		SARA 313		CERCLA	RCRA 261.33	TSCA 8(d)
	RQ	TPQ	List	Chemical Catg.			
Ferric Chloride (7705 08 0)	No	No	No	No	No	No	No

Chemical Weapons Convention: No TSCA 12(b): No CDTA: No

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SARA 311/312: Acute: Yes Chronic: Yes Fire: No Pressure: No
 Reactivity: No (Mixture / Liquid)

Australian Hazchem Code: None allocated.
 Poison Schedule: None allocated.

WHMIS:

This MSDS has been prepared according to the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.

16. OTHER INFORMATION

NFPA RATINGS:

Health: 3 Flammability: 0 Reactivity: 0

LABEL HAZARD WARNING:

DANGER! CORROSIVE. CAUSES BURNS TO ANY AREA OF CONTACT. HARMFUL IF SWALLOWED OR INHALED. AFFECTS THE LIVER.

LABEL PRECAUTIONS:

Do not get in eyes, on skin, or on clothing. Do not breathe mist.
 Keep container closed.
 Use only with adequate ventilation. Wash thoroughly after handling.

LABEL FIRST AID:

In case of contact, immediately flush eyes or skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. If swallowed, **DO NOT INDUCE VOMITING**. Give large quantities of water. Never give anything by mouth to an unconscious person. In all cases get medical attention immediately.