



WEST BENGAL CHEMICAL INDUSTRIES LIMITED

145/1, Jessore Road, Lake Town,

Kolkata – 700 089, India.

Phone: +9133 4025 1700 Fax: +9133 2574 7410

Email: webcil@webcil.com

Website: www.webcil.com

Section 1 - Chemical Product and Company Identification

MSDS Name: Ferric Ammonium Citrate BP

Product Code: FACIH20

Company Identification:

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Section 2 - Composition / Information on Ingredients

Molecular Weight: 265 g/mol

Molecular Formula: $C_6H_{11}FeNO_7^{+3}$

Ingredient Name	CAS Number	% wt	Molecular Wt.	Molecular formula
Ferric Ammonium Citrate BP	1185 - 57 - 5	90 - 100	265 g/mol	$C_6H_{11}FeNO_7^{+3}$

Section 3 - Hazards Identification

POTENTIAL ACUTE HEALTH EFFECTS: Slightly hazardous in case of skin contact (irritant), of eye contact (irritant), of ingestion, of inhalation.

POTENTIAL CHRONIC HEALTH EFFECTS: Hazardous in case of skin contact (irritant).

CARCINOGENIC EFFECTS: No data available.

MUTAGENIC EFFECTS: No data available.

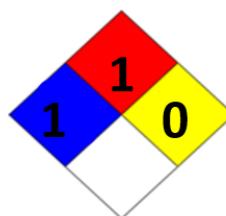
TERATOGENIC EFFECTS: No data available.

DEVELOPMENTAL TOXICITY: No data available.

Irritant: Skin irritation, category 2 Eye irritation, category 2A Specific target organ toxicity following single exposure, category 3

H315 (100%): Causes skin irritation [Warning Skin corrosion/irritation]

H319 (100%): Causes serious eye irritation



NFPA SCALE (0-4)





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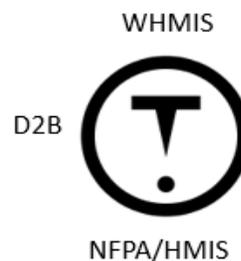
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Section 3 - Hazards Identification

Skin Irrit. 2 (100%)
Eye Irrit. 2 (100%)
P264, P264+P265, P280, P302+P352,
P305+P351+P338, P321, P332+P317, P337+P317, and
P362+P364



Health	1
Flammability	1
Physical Hazard	0
Personal protection	E

Section 4 - First Aid Measures

GENERAL ADVICE	: Consult a physician. Show this safety data sheet to the doctor in attendance.
IF INHALED	: If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.
SKIN CONTACT	: Wash off with soap and plenty of water. Consult a physician.
EYE CONTACT	: Rinse thoroughly with plenty of water for 15 minutes and consult a physician.
IF SWALLOWED	: Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

Section 5 - Fire-Fighting Measures

SUITABLE EXTINGUISHING MEDIA	: Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
SPECIAL HAZARDS ARISING FROM THE SUBSTANCE OR MIXTURE	: Carbon oxides, nitrogen oxides (NO _x), Iron oxides.



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Section 5 - Fire-Fighting Measures

ADVICE FOR FIREFIGHTERS	:	Wear self-contained breathing apparatus for firefighting if necessary.
FIRE EXTINGUISHING MEDIA	:	Use fire-extinguishing media appropriate to the surrounding fire SMALL FIRE: Use DRY chemical powder. LARGE FIRE: Use water spray, fog or foam. Do not use water jet.
FURTHER INFORMATION	:	No data available.
Special hazards arising from the substance or mixture: Combustion products may include carbon oxides or other toxic vapors. Thermal decomposition can lead to release of irritating gases and vapors. Avoid generating dust; fine dust dispersed in air in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard. Carbon oxides, Nitrogen oxides (NOx), Iron oxides		

Section 6 - Accidental Release Measures

PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT & EMERGENCY PROCEDURES	:	Use personal protective equipment. Avoid dust formation. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust.
ENVIRONMENTAL PRECAUTIONS	:	Do not let product enter drains.
METHODS AND MATERIALS FOR CONTAINMENT & CLEANING UP	:	Pick up and arrange disposal without creating dust. Sweep up and keep in suitable, closed containers for disposal.

Section 7 - Handling and Storage

PRECAUTIONS FOR SAFE HANDLING	:	Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Provide appropriate exhaust ventilation at places where dust is formed.
CONDITIONS FOR SAFE STORAGE INCLUDING ANY INCOMPATIBILITIES	:	Store in cool place. Keep container tightly closed in a dry and well – ventilated place. Light sensitive. Hygroscopic.
Storage class (TRGS 510)	:	11: Combustible Solids



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Section 8 - Exposure Controls / Personal Protection

APPROPRIATE ENGINEERING CONTROLS	:	Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.
EYE/FACE PROTECTION	:	Safety glasses with side-shields conforming to EN166 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.
BODY PROTECTION	:	Impervious clothing, The type of protective equipment must be selected according to the concentration and amount of the amount of the dangerous substance at the specific workplace.
EXPOSURE LIMITS	:	TWA: 1 STEL: 2 (mg (Fe)/m) [United Kingdom (UK)] TWA: 1 (mg (Fe)/m) from MSHA standard. Consult local authorities for acceptable exposure limits.

Section 9 - Physical and Chemical Properties

Appearance form	:	Thin, transparent, scales or granules or powder. Odourless, deliquescent in moist air, affected by light.
Color	:	Dark red to brownish red.
Odour	:	Odourless
Solubility	:	Soluble in 20°C, in 0.5% part of water, almost insoluble in alcohol (95%).
Molecular weight	:	265 g/mol.
Relative density at 20°C	:	1.431
Partition coefficient	:	-0.2 to -1.8
Water solubility	:	1 400 g/L at 20°C
Density	:	1.8 at 68 °F
Specific Gravity	:	1.8 at 20 °C

Other safety information: No data available



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Section 10 - Stability and Reactivity

Stability	:	Stable under ordinary conditions of use and storage. Reduced to ferrous salt by exposure to light. Very deliquescent; forms a solution on prolonged exposure to air.
Hazardous Decomposition Products	:	Burning may produce carbon monoxide, carbon dioxide, nitrogen oxides.
Hazardous Polymerization Incompatibilities	:	Iodides, Acacia preparation and tannins.
Conditions to avoid	:	Heat, Light, moisture.

Section 11 - Toxicological Information

Acute Toxicity	:	No Data Available
Skin corrosion/inhalation	:	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.
Sign & Symptoms of Exposure	:	Overdose of iron compounds may have a corrosive effect on the gastrointestinal mucosa and be followed by necrosis, perforation, and stricture formation. Several hours may elapse before symptoms that can include epigastric pain, diarrhea, vomiting, nausea, and hematemesis occur. After apparent recovery a person may experience metabolic acidosis, convulsions, and coma hours or days later. Further complications may develop leading to acute liver necrosis that can result in death due to hepatic coma.
Special Remarks on Toxicity to Animals		
Lethal Dose/Conc: LD [Rat] - Route	:	Dose: >2000 mg/kg
LD50 >2 gm/kg (rat, oral)		
LD50 >2 gm/kg (dog, oral)		



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Section 12 - Ecological Information

ROUTES OF ENTRY	:	Inhalation, Ingestion.
ENVIRONMENTAL TOXICITY	:	This material is expected to be slightly toxic to aquatic life.
PERSISTANCE & DEGRADABILITY	:	No data available.
TOXICITY OF THE PRODUCTS OF BIODEGRADATION	:	No data available.
SPECIAL REMARKS ON THE PRODUCTS OF BIODEGRADATION.	:	Not Available
SPECIAL REMARKS ON THE TOXICITY OF ANIMALS	:	Lethal Dose/Conc: LD [Rat] - Route: Oral; Dose: >2000 mg/kg

LD50 80 µg/h/96 hr. (*Anguilla japonica* or japanese eel, injectable)

LD50 123 µg/g/96 hr. (*Plecoglossus altivelis*, injectable)

Toxicity

Toxicity to fish static test LC50 - Fish - > 100 mg/l - 96 h

(OECD Test Guideline 203)

Remarks: The value is given in analogy to the following substances:

Diammonium hydrogen citrate

Toxicity to daphnia and other aquatic invertebrates

static test EC50 - *Daphnia magna* (Water flea) - > 100 mg/l - 48 h

(OECD Test Guideline 202)

Remarks: The value is given in analogy to the following substances:

Diammonium hydrogen citrate

Toxicity to algae Remarks: The value is given in analogy to the following substances:

Diammonium hydrogen citrate

Remarks: The value is given in analogy to the following substances:

Diammonium hydrogen citrate

12.2 Persistence and degradability

Biodegradability Biochemical oxygen demand - Exposure time 14 d

Result: 77 % - Readily biodegradable.

Remarks: (ECHA)

The value is given in analogy to the following substances: citric acid

Section 13 - Disposal Considerations

Waste must be disposed of in accordance with federal, state and local environmental control regulations.



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Section 14 - Transport Information

DOT Classification : Not a DOT controlled material
Air transport Goods : Nonhazardous/non-dangerous as per IATA DGR.
Special Provision for Transport : Not applicable
IATA Specification Non-dangerous, non-hazardous

DOT (Pictograms)

AS PER IATA REGULATION SAFE FOR CARRAGE, NON-HAZARDOUS AND NON-RESTRICTED.

NO SPECIAL LABELLING OR TRANSPORT MEASURE HAVE BEEN IDENTIFIED.

THIS IS NOT REGULATED AS PER IATA REGULATION



Section 15 - Regulatory Information

Federal and State Regulations:

Connecticut hazardous material survey.: Ferric ammonium citrate B.P. Illinois chemical safety act: Ferric ammonium citrate New York release reporting list: Ferric ammonium citrate Pennsylvania RTK: Ferric ammonium citrate Massachusetts RTK: Ferric ammonium citrate Massachusetts spill list: Ferric ammonium citrate New Jersey: Ferric ammonium citrate New Jersey spill list: Ferric ammonium citrate Louisiana spill reporting: Ferric ammonium citrate TSCA 8(b) inventory: Ferric ammonium citrate CERCLA: Hazardous substances.: Ferric ammonium citrate: 1000 lbs. (453.6 kg)
Other Regulations: EINECS: This product is on the European Inventory of Existing Commercial Chemical Substances.

Other Classifications:

WHMIS (Canada): Not controlled under WHMIS (Canada).

DSCL (EEC): This product is not classified according to the EU regulations. Not applicable.

HMIS (U.S.A.):

Health Hazard: 1

Fire Hazard: 1

Reactivity: 0

Personal Protection: E

National Fire Protection Association (U.S.A.):

Health: 1

Flammability: 1

Reactivity: 0

Specific hazard:

Protective Equipment: Gloves. Lab coat. Dust respirator. Be sure to use an approved/certified respirator or equivalent. Safety glasses.



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Section 16 - Other Information

Disclaimer:

This material safety data sheet is provided as an information resource only. WEST BENGAL CHEMICAL INDUSTRIES LIMITED believes the information herein is accurate and compiled from reliable sources. It is the responsibility of the user to verify its validity. The buyer assumes all responsibility of using and handling the product in accordance with federal, state, and local regulations.

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