

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

1.1 Product identifier

Trade name: Ferric Chloride
Brand: DIYChemicals, Chemboys

1.2 Relevant identified uses of the substance or mixture and uses advised against

Relevant identified uses: Industrial or Commercial Use only.
Uses advised against: All other uses.

1.3 Details of the supplier of the Safety Data Sheet

Chemboys LLC
212 Industrial Place,
Liberty, TX 77575,
USA

Phone: (855) 243-6722
E-mail: info@chemboys.com

SECTION 2: HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

Classification according to OSHA Hazardous Communication Standard 29 CFR 1910.1200.

Metal corrosive, category 1
Acute toxicity, oral, category 4
Skin irritation, category 2
Skin sensitization, category 1
Eye damage, category 1

2.2 Label elements

Labelling according to OSHA Hazardous Communication Standard 29 CFR 1910.1200:



Signal word: Danger

Hazard statements:

H290	May be corrosive to metals.
H302	Harmful if swallowed.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.

Precautionary statements:

P221 Take any precaution to avoid mixing with combustibles.

P261 Avoid breathing dust/ fume/ gas/ mist/ vapors/ spray.
P264 Wash hands thoroughly after handling.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P330 Rinse mouth.
P301+P330+P331 IF SWALLOWED: rinse mouth. Do NOT induce vomiting.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337 + P313 If eye irritation persists: Get medical advice/ attention.
P308 + P313 IF exposed or concerned: Get medical advice/ attention.
P303 + P361 + P353 IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower.
P332 + P313 If skin irritation occurs: Get medical advice/ attention.
P362 Take off contaminated clothing and wash before reuse.
P403 + P235 Store in a well-ventilated place. Keep cool.
P405 Store locked up.

2.3 Other hazards
None known.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

This product is a mixture meeting the criteria for classification in accordance with OSHA Hazardous Communication Standard 29 CFR 1910.1200.

Ingredients:

Name	CAS No.	GHS classification	% (w/v)
Phosphoric acid	7664-38-2	Met. Corr. 1, H290 Acute Tox. 4, H304 Skin Irrit. 2, H315 Skin Sens. 1, H317 Eye Dam. 1, H318	Proprietary

SECTION 4: FIRST AID MEASURES

4.1 Description of first aid measures

Following inhalation: Provide fresh air. In all cases of doubt, or when symptoms persist, seek medical advice.

Following skin contact: Rinse skin with water/shower. After contact with skin, wash immediately with plenty of water. In case of skin reactions, consult a physician. In case of skin irritation, consult a physician.

Following eye contact: In case of contact with eyes flush immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart and consult an ophthalmologist.

Following ingestion: Rinse mouth immediately and drink plenty of water. Rinse mouth with water (only if the person is conscious). Call a physician immediately.

Protection of first aider: Not applicable.

4.2 Most important symptoms and effects

Symptoms: The known symptoms and effects are described in section 2.2 of this SDS.

Risks: Untreated symptoms may result in additional health risks.

4.3 Indication of any immediate medical and special treatment

The physician may contact the national poison centre for advice.

SECTION 5: FIREFIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing media: Dry chemical, CO₂, water spray or alcohol-resistant foam.

Unsuitable extinguishing media: No data available.

5.2 Specific hazards arising from mixture

Non-combustible.

5.3 Advice for fire fighters

Special protective equipment for firefighters:

As in any fire, wear self-contained breathing apparatus pressure-demand and full protective gear.

5.4 Other information

No other information available.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 NOTES FOR NON-EMERGENCY PERSONNEL: Use personal protective equipment as required. Avoid contact with skin, eyes and clothes. Do not breathe vapour/spray.

6.2 ENVIRONMENTAL PRECAUTIONS: Keep away from drains, surface and ground water. The product is an acid. Before discharge into sewage plants the product normally needs to be neutralised.

Notes for those trained to participate in an emergency:

6.3 ACCIDENTAL RELEASE MEASURES: Covering of drains. Absorb with liquid-binding material (sand, diatomaceous earth, acid- or universal binding agents).

SECTION 7: HANDLING AND STORAGE

7.1 Precautions for safe handling

Handle and open container with care. Clear contaminated areas thoroughly. Wash hands before breaks and after work. Keep away from food, drink and animal feedingstuffs.

7.2 Conditions for safe storage, including any incompatibilities

Storage Conditions: Keep container tightly closed. Keep only in original container.

Incompatible materials: See section 10.

7.3 Specific end uses

See section 1.2.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Relevant DNELs of components of the mixture						
Name of substance	CAS No	End-point	Threshold level	Protection goal, route of exposure	Used in	Exposure time
Iron(III) chloride	7705-08-0	DNEL	2,8 mg/kg bw/day	human, dermal	worker (industry)	chronic - systemic effects
Hydrochloric acid %	7647-01-0	DNEL	8 mg/m ³	human, inhalatory	worker (industry)	chronic - local effects
Hydrochloric acid %	7647-01-0	DNEL	15 mg/m ³	human, inhalatory	worker (industry)	acute - local effects

8.2 Exposure controls

Engineering controls:

None under normal use conditions. Ensure that eyewash stations and safety showers are close to the workstation location.

Personal Protective equipment:

Hand:

Wear suitable gloves. Chemical protection gloves are suitable, which are tested according to EN 374. Check leak-tightness/impermeability prior to use. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves. The times are approximate values from measurements at 22 ° C and permanent contact. Increased temperatures due to heated substances, body heat etc. and a reduction of the effective layer thickness by stretching can lead to a considerable reduction of the breakthrough time. If in doubt, contact manufacturer. At an approx. 1.5 times larger / smaller layer thickness, the respective breakthrough time is doubled / halved. The data apply only to the pure substance. When transferred to substance mixtures, they may only be considered as a guide.

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<u>Body protection:</u>	Appropriate protective clothing should be worn to prevent skin contact.
<u>Eye:</u>	Use safety goggle with side protection.
<u>Respiratory:</u>	Respiratory protection necessary at: Aerosol or mist formation. Type: B-P2 (combined filters for acidic gases and particles, colour code: Grey/White).
<u>Other measures:</u>	No statement available.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Liquid
Color:	Dark brown
Odor:	stinging
Odor threshold:	No data available
pH:	<1
Melting point/range:	-12 °C
Boiling point/range:	No data available
Flash point:	No data available
Evaporation rate:	No data available
Flammability:	non-combustible
Upper/lower flammability or explosive limits:	No data available
Vapor pressure:	No data available
Vapor density:	No data available
Relative Density:	1,43 g /cm ³ at 20 °C
Solubility(ies):	miscible in any proportion (water)
Partition coefficient (n-octanol/water):	No data available
Auto-ignition temperature:	No data available
Decomposition temperature:	No data available
Viscosity:	No data available
Explosive properties:	No data available
Oxidizing properties:	No data available

SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity

Substance or mixture corrosive to metals.

10.2 Chemical stability

The material is stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.

10.3 Possibility of hazardous reactions

Violent reaction with: Alkali (lye), Metals.

10.4 Conditions to avoid

Keep away from heat.

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10.5 Incompatible materials

Different metals.

10.6 Hazardous decomposition products

Hazardous combustion products: see section 5.

SECTION 11: TOXICOLOGICAL INFORMATION
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General information:

This product does not contain known human carcinogens.

11.1 Information on toxicological effects

Acute Toxicity:

Harmful if swallowed.

Skin corrosion/irritation:

Causes skin irritation.

Serious eye damage/irritation:

Causes serious eye damage.

Respiratory or skin sensitization:

May cause an allergic skin reaction.

Germ cell mutagenicity:

No statements available for any of the ingredients.

Carcinogenicity:

This product does not contain known human carcinogens.

Reproductive toxicity:

No statements available for any of the ingredients.

STOT – single exposure:

No statements available for any of the ingredients.

STOT – repeated exposure:

No statements available for any of the ingredients.

Aspiration hazard:

No statements available for any of the ingredients.

Likely route(s) of exposure:

Skin exposure and eye exposure are the most likely to occur. Accidental ingestion is also possible.

SECTION 12: ECOLOGICAL INFORMATION

General information:

No statements available for any of the ingredients

12.1 Toxicity

No statements available for any of the ingredients.

12.2 Persistence and degradability

Physical- and photochemical elimination:

No statements available for any of the ingredients.

Biodegradation:

No statements available for any of the ingredients.

12.3 Bioaccumulative potential

No statements available for any of the ingredients.

12.4 Mobility in soil

Known/Predicted environmental distribution:

No statements available for any of the ingredients.

Surface tension:

No statements available for any of the ingredients.

Adsorption/Desorption:

No statements available for any of the ingredients.

12.5 Results of PBT and vPvB assessment

This product does not contain components which are considered to be persistent, bioaccumulative and toxic (PBT) or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

12.6 Other adverse effects

No statements available for any of the ingredients.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Product:

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR Parts 261.3. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.

Waste material:

Dispose according to Federal, State, Provincial and Local regulations.

SECTION 14: TRANSPORT INFORMATION

14.1 UN number

ADR/RID/IDMG/IATA: UN 2582

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14.2 UN proper shipping name

ADR/RID/IDMG/IATA: FERRIC CHLORIDE SOLUTION

14.3 Transport hazard class(es)

ADR/RID/IDMG/IATA: 8

14.4 Packing group

ADR/RID/IDMG/IATA: III

14.5 Environmental hazards

ADR/RID/IDMG/IATA: Non-regulated

14.6 Special precautions for user

No statements available.

14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

Not applicable, as product is not shipped in bulk.

SECTION 15: REGULATORY INFORMATION

International Inventories

TSCA: Complies

DSL: All components are listed either on the DSL or NDSL.

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List.

US Federal Regulations

SARA 313: Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

SARA 311/312 Hazard Categories

Acute health hazard: Yes

Chronic Health Hazard: No

Fire hazard: No

Sudden release of pressure hazard: No

Reactive Hazard: No

CWA (Clean Water Act)

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

U.S. State Regulations

California Prop 65, Safe Drinking Water and Toxic Enforcement Act of 1986

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

Canada
WHMIS Hazard Class
Not determined.

SECTION 16: OTHER INFORMATION

Further information

The information presented in this Safety Data Sheet (SDS) is accurate to the best of our knowledge at the date of publication. The information given within the SDS is meant solely as a guide for safe handling, use, transportation, processing, storage, release and disposal. In no means can the information within the SDS be considered as a warranty or specification for quality.