

Safety Data Sheet



Hazardous Substance, Dangerous Goods

1. MATERIAL AND SUPPLY COMPANY IDENTIFICATION

Product name: **FERRIC CHLORIDE 42% SOLUTION**

Recommended use: General chemical. Coagulant for water and waste water treatment.

Supplier: DuluxGroup (PNG) Pte. Ltd.

Street Address: Air Corps Road
Lae Morobe Province
PNG

Telephone: 4723633

Emergency telephone number: Australia – +613 9663 2130

2. HAZARDS IDENTIFICATION

This material is hazardous according to health criteria of Safe Work Australia.



Signal Word

Danger

Hazard Classification

Acute Toxicity - Oral - Category 4

Corrosive to Metals - Category 1

Skin Corrosion/Irritation - Category 2

Serious Eye Damage/Irritation - Category 1

Hazard Statement(s)

H290 May be corrosive to metals

H302 Harmful if swallowed

H315 Causes skin irritation

H318 Causes serious eye damage

Prevention Precautionary Statement(s)

P102 Keep out of reach of children

P103 Read label before use

P234 Keep only in original container

P264 Wash hands, face and all exposed skin thoroughly after handling

P270 Do not eat, drink or smoke when using this product

P280 Wear protective clothing, gloves, eye/face protection and suitable respirator

Response Precautionary Statement(s)

P101 If medical advice is needed, have product container or label at hand.

P301+P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.

P330 Rinse mouth.

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P302+P352 IF ON SKIN: Wash with plenty of soap and water.
P332+P313 If skin irritation occurs: Get medical advice/attention.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310 Immediately call a POISON CENTER or doctor/physician.
P362 Take off contaminated clothing and wash before reuse.
P390 Absorb spillage to prevent material damage.

Storage Precautionary Statement(s)

P406 Store in a corrosive resistant container with a resistant inner liner

Disposal Precautionary Statement(s)

P501 Dispose of contents/container in accordance with regional and national regulations

Poisons Schedule (Aust): Not applicable

DA NGER O U S G O O D S C L A S S I F I C A T I O N

Classified as Dangerous Goods by the criteria of the "Australian Code for the Transport of Dangerous Goods by Road & Rail" and the "New Zealand NZS5433: Transport of Dangerous Goods on Land".

Class: 8 Corrosive

3. COMPOSITION INFORMATION

| CHEMICAL ENTITY | CAS NO. | PROPORTION |
|--|-----------|------------|
| Iron chloride | 7705-08-8 | 30 - 60% |
| Hydrochloric acid | 7647-01-0 | <1% |
| Ingredients determined to be non-hazardous | - | Balance |
| | | 100% |

4. FIRST AID MEASURES

If poisoning occurs, contact a doctor or Poisons Information Centre (Phone Australia 131 126, New Zealand 0800 764 766).

Inhalation: Remove victim from exposure - avoid becoming a casualty. Remove contaminated clothing and loosen remaining clothing. Allow patient to assume most comfortable position and keep warm. Keep at rest until fully recovered. Seek medical advice if effects persist.

Skin contact: If skin or hair contact occurs, immediately remove contaminated clothing and flush skin and hair with running water. Continue flushing with water until advised to stop by the Poisons Information Centre or a Doctor; or for 15 minutes and transport to Doctor or Hospital.

Eye contact: Immediately irrigate with copious quantities of water for 15 minutes. Eyelids to be held open. Remove clothing if contaminated and wash skin. Urgently seek medical assistance. Transport to hospital or medical centre.

Ingestion: Rinse mouth with water. If swallowed, do NOT induce vomiting. Give a glass of water to drink. Never give anything by the mouth to an unconscious patient. If vomiting occurs give further water. Seek medical advice.

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PPE for First Aiders: Wear overalls, chemical goggles and impervious gloves. Use with adequate ventilation. If inhalation risk exists wear organic vapour/particulate respirator meeting the requirements of AS/NZS 1715 and AS/NZS 1716. Available information suggests that gloves made from nitrile rubber should be suitable for intermittent contact. However, due to variations in glove construction and local conditions, the user should make a final assessment. Always wash hands before smoking, eating, drinking or using the toilet. Wash contaminated clothing and other protective equipment before storing or re-using.

Notes to physician: Treat symptomatically. Can cause corneal burns.

5. FIRE-FIGHTING MEASURES

Hazchem Code: 2X

Suitable extinguishing media: If material is involved in a fire use water fog (or if unavailable fine water spray), foam, dry agent (carbon dioxide, dry chemical powder).

Specific hazards: Non-combustible material.

Fire fighting further advice: Not combustible. Can liberate (flammable) hydrogen gas upon contact with most metals. On burning may emit toxic fumes, including those of hydrogen chloride. Fire fighters to wear self-contained breathing apparatus and suitable protective clothing if risk of exposure to products of decomposition.

6. ACCIDENTAL RELEASE MEASURES

SMALL SPILLS

Wear protective equipment to prevent skin and eye contamination. Avoid inhalation of vapours. Wipe up with absorbent (clean rag or paper towels). Allow absorbent to dry before disposing with normal household garbage.

LARGE SPILLS

Slippery when spilt. Avoid accidents, clean up immediately. Wear protective equipment to prevent skin and eye contamination and the inhalation of vapours. Work up wind or increase ventilation. Contain - prevent run off into drains and waterways. Use absorbent (soil, sand or other inert material). Collect and seal in properly labelled containers or drums for disposal.

If contamination of sewers or waterways has occurred advise local emergency services.

Dangerous Goods – Initial Emergency Response Guide No: 37

7. HANDLING AND STORAGE

Handling: Avoid skin and eye contact and inhalation of vapour, mist or aerosols.

Storage: Store in a cool, dry, well-ventilated place and out of direct sunlight. Store away from foodstuffs. Store away from incompatible materials described in Section 10. Keep containers closed when not in use - check regularly for leaks.

This material is classified as a Dangerous Good Class 8 Corrosive as per the criteria of the Australian Dangerous Goods Code and must be stored in accordance with the relevant regulations.

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8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

National occupational exposure limits: No value assigned for this specific material by Safe Work Australia.

However for:

| | TWA | | STEL | | CARCINOGEN | NOTICES |
|----------------------------|---------------------|----------------------|------|-------|------------|---------|
| | ppm | mg/m3 | ppm | mg/m3 | CATEGORY | |
| Iron soluble salts (as Fe) | - | 1 | - | - | - | - |
| Hydrogen chloride | 5 | 7.5 | - | - | - | - |
| | (Peak limitation | (Peak limitation) | | | | |

As published by Safe Work Australia.

TWA - The time-weighted average airborne concentration over an eight-hour working day, for a five-day working week over an entire working life.

Peak Limitation - a ceiling concentration that should not be exceeded over a measurement period, which should be as short as possible, but not exceeding 15 minutes.

No Exposure Standards assigned to other constituents.

These Exposure Standards are guides to be used in the control of occupational health hazards. All atmospheric contamination should be kept too as low a level as is workable. These exposure standards should not be used as fine dividing lines between safe and dangerous concentrations of chemicals. They are not a measure of relative toxicity.

If the directions for use on the product label are followed, exposure of individuals using the product should not exceed the above standard. The standard was created for workers who are routinely, potentially exposed during product manufacture.

Biological Limit Values: As per the "National Model Regulations for the Control of Workplace Hazardous Substances (Safe Work Australia)" the ingredients in this material do not have a Biological Limit Allocated.

Engineering measures: Ensure ventilation is adequate to maintain air concentrations below Exposure Standards. Use only in well ventilated areas. Use with local exhaust ventilation or while wearing appropriate respirator. Vapour heavier than air - prevent concentration in hollows or sumps. DO NOT enter confined spaces where vapour may have collected. Keep containers closed when not in use.

Personal protection equipment: H: OVERALLS, SAFETY SHOES, CHEMICAL GOGGLES, GLOVES, RESPIRATOR.

Wear overalls, chemical goggles and impervious gloves. Use with adequate ventilation. If inhalation risk exists wear organic vapour/particulate respirator meeting the requirements of AS/NZS 1715 and AS/NZS 1716. Available information suggests that gloves made from butyl rubber/leather/natural rubber/neoprene/nitrile rubber/polyethylene/polyvinyl alcohol (PVA)/polyvinyl chloride (PVC)/teflon should be suitable for intermittent contact. However, due to variations in glove construction and local conditions, the user should make a final assessment. Always wash hands before smoking, eating, drinking or using the toilet. Wash contaminated clothing and other protective equipment before storing or re-using.

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Hygiene measures: Keep away from food, drink and animal feeding stuffs. When using do not eat, drink or smoke. Wash hands prior to eating, drinking or smoking. Avoid skin and eye contact and inhalation of vapour, mist or aerosols. Ensure that eyewash stations and safety showers are close to the workstation location.

9. PHYSICAL AND CHEMICAL PROPERTIES

Form / Colour / Odour: Reddish liquid with a faint hydrogen chloride odour.

| | |
|---|------------------|
| Solubility: | Soluble in water |
| Specific Gravity (20°C): | 1.45 |
| Relative Vapour Density (air=1): | >1 |
| Vapour Pressure (20°C): | N Av |
| Flash Point (°C): | N App |
| Flammability Limits (%): | N App |
| Autoignition Temperature (°C): | N App |
| % Volatile by Volume: | 58 |
| Melting Point/Range (°C): | N Av |
| Boiling Point/Range (°C): | 105 - 110 |
| pH: | 1 - 2 |
| Viscosity (mPa.s): | 13 |

(Typical values only - consult specification sheet)

N Av = Not available

N App = Not applicable

10. STABILITY AND REACTIVITY

Reactivity: No reactivity hazards are known for the material.

Chemical stability: This material is thermally stable when stored and used as directed.

Hazardous reactions: Highly corrosive to most metals liberating (flammable) hydrogen gas. Hydrogen chloride is produced on hydrolysis (including atmospheric moisture).

Conditions to avoid: Contact with metals.

Incompatible materials: Oxidising agents and strong bases.

Hazardous decomposition products: Hydrogen chloride.

11. TOXICOLOGICAL INFORMATION

No adverse health effects expected if the product is handled in accordance with this Safety Data Sheet and the product label. Symptoms or effects that may arise if the product is mishandled and overexposure occurs are:

Acute Effects

Inhalation: Material may be an irritant to mucous membranes and respiratory tract.

Skin contact: Contact with skin will result in irritation.

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Ingestion: Swallowing can result in nausea, vomiting and irritation of the gastrointestinal tract.

Eye contact: A severe eye irritant. Corrosive to eyes: contact can cause corneal burns. Contamination of eyes can result in permanent injury.

Acute toxicity

Inhalation: This material has been classified as non-hazardous.
Acute toxicity estimate (based on ingredients): >20 mg/L

Skin contact: This material has been classified as non-hazardous.
Acute toxicity estimate (based on ingredients): >2,000 mg/Kg

Ingestion: This material has been classified as a Category 4 Hazard.
Acute toxicity estimate (based on ingredients): 300 - 2,000 mg/Kg

Corrosion/Irritancy: Eye: this material has been classified as a Category 1 Hazard (irreversible effects to eyes).
Skin: this material has been classified as a Category 2 Hazard (irritant to skin).

Sensitisation: Inhalation: this material has been classified as not a respiratory sensitiser.
Skin: this material has been classified as not a skin sensitiser.

Aspiration hazard: This material has been classified as non-hazardous.

Specific target organ toxicity (single exposure): This material has been classified as non-hazardous.

Chronic Toxicity

Mutagenicity: This material has been classified as non-hazardous.

Carcinogenicity: This material has been classified as non-hazardous.

Reproductive toxicity (including via lactation): This material has been classified as non-hazardous.

Specific target organ toxicity (repeat exposure): This material has been classified as non-hazardous.

12. ECOLOGICAL INFORMATION

Avoid contaminating waterways.

Acute aquatic hazard: No information is available to complete an assessment.

Long-term aquatic hazard: No information is available to complete an assessment.

Ecotoxicity: No information available.

Persistence and degradability: No information available.

Bioaccumulative potential: No information available.

Mobility: No information available.

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13. DISPOSAL CONSIDERATIONS

Persons conducting disposal, recycling or reclamation activities should ensure that appropriate personal protection equipment is used, see "Section 8. Exposure Controls and Personal Protection" of this SDS.

If possible material and its container should be recycled. If material or container cannot be recycled, dispose in accordance with local, regional, national and international Regulations.

14. TRANSPORT INFORMATION

ROAD AND RAIL TRANSPORT

Classified as Dangerous Goods by the criteria of the "Australian Code for the Transport of Dangerous Goods by Road & Rail" and the "New Zealand NZS5433: Transport of Dangerous Goods on Land".

UN No: 2582
Dangerous Goods Class: 8 Corrosive
Packing Group: III
Hazchem Code: 2X
Emergency Response Guide No: 37

Proper Shipping Name: FERRIC CHLORIDE SOLUTION

Segregation Dangerous Goods: Not to be loaded with explosives (Class 1), dangerous when wet substances (Class 4.3), oxidising agents (Class 5.1), organic peroxides (Class 5.2), cyanides of Class 6, radioactive substances (Class 7) or food and food packaging in any quantity, however exemptions may apply. Note that concentrated strong acids are incompatible with concentrated strong alkalis.

MARINE TRANSPORT

Not classified as Dangerous Goods by the criteria of the International Maritime Dangerous Goods Code (IMDG Code) for transport by sea.

UN No: 2582
Dangerous Goods Class: 8 Corrosive
Packing Group: III

Proper Shipping Name: FERRIC CHLORIDE SOLUTION

AIR TRANSPORT

Classified as Dangerous Goods by the criteria of the International Air Transport Association (IATA) Dangerous Goods Regulations for transport by air.

UN No: 2582
Dangerous Goods Class: 8 Corrosive
Packing Group: III

Proper Shipping Name: FERRIC CHLORIDE SOLUTION

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15. REGULATORY INFORMATION

This material is not subject to the following international agreements:

Montreal Protocol (Ozone depleting substances)
The Stockholm Convention (Persistent Organic Pollutants)
The Rotterdam Convention (Prior Informed Consent)
International Convention for the Prevention of Pollution from Ships (MARPOL)

This material is subject to the following international agreements:

Basel Convention (Hazardous Waste)
• Acidic solutions or acids in solid form

This material/constituent(s) is covered by the following requirements:

- All the constituents of this material are listed on the *Australian Inventory of Chemical Substances (AICS)*.

16. OTHER INFORMATION

Literary reference

This Safety Data Sheet has been prepared by Chemical Data Services Pty Ltd (chemdata.com.au) on behalf of its client.

Reason(s) For Issue: First Issue

Safety Data Sheets are updated frequently. Please ensure that you have a current copy.

This SDS summarises at the date of issue our best knowledge of the health and safety hazard information of the product, and in particular how to safely handle and use the product in the workplace. Since DuluxGroup (Australia) Pty Ltd and DuluxGroup (New Zealand) Pty Ltd cannot anticipate or control the conditions under which the product may be used, each user must, prior to usage, review this SDS in the context of how the user intends to handle and use the product in the workplace.

If clarification or further information is needed to ensure that an appropriate assessment can be made, the user should contact this company.

Our responsibility for product as sold is subject to our standard terms and conditions, a copy of which is sent to our customers and is also available upon request.