

SAFETY DATA SHEET



Revision date: 08-Jun-2020

Revision Number 1

1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Product identifier

Product Name PROFLOC C4012TW

Product Code(s) 000000053879

Other means of identification

UN number 1773

CAS No. 7705-08-0

Synonyms Ferric trichloride, Ferric perchloride, Iron (III) chloride, Ferric chloride crystals

Pure substance/mixture Substance

Recommended use of the chemical and restrictions on use

Recommended use General chemical

Uses advised against No information available.

Supplier

Ixom Operations Pty Ltd
ABN: 51 600 546 512
Level 8, 1 Nicholson Street
Melbourne 3000
Australia

Telephone Number: +61 3 9906 3000

Emergency telephone number

Emergency telephone number **1 800 033 111 (ALL HOURS)**

Please ensure you refer to the limitations of this Safety Data Sheet as set out in the "Other Information" section at the end of this Data Sheet.

2. HAZARDS IDENTIFICATION

GHS Classification

Classified as dangerous goods in accordance with the Australian Code for the Transport of Dangerous Goods by Road and Rail (ADG).

Classified as a hazardous chemical in accordance with the criteria of Safe Work Australia - Globally Harmonized System (GHS).

| | |
|-----------------------------------|---------------------------|
| Corrosive to metals | Category 1 |
| Acute toxicity - Oral | Category 4 |
| Skin corrosion/irritation | Category 1 Sub-category C |
| Serious eye damage/eye irritation | Category 1 |

SIGNAL WORD

Danger

Label elementsCorrosion
Exclamation mark**Hazard statements**

H290 - May be corrosive to metals
 H302 - Harmful if swallowed
 H314 - Causes severe skin burns and eye damage

Precautionary Statements - Prevention

Keep only in original container
 Do not breathe dusts or mists
 Wash hands thoroughly after handling
 Do not eat, drink or smoke when using this product
 Wear protective gloves, protective clothing, eye protection, face protection

Precautionary Statements - Response

Specific treatment (see First aid on this SDS)
 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
 Immediately call a POISON CENTER or doctor/physician
 IF ON SKIN: Wash with plenty of soap and water
 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower
 Wash contaminated clothing before reuse
 Call a POISON CENTER or doctor/physician if you feel unwell
 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
 Immediately call a POISON CENTER or doctor/physician
 IF SWALLOWED: Rinse mouth. DO NOT induce vomiting
 IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell
 In case of fire: Use extinguishing media as outlined in Section 5 of this Safety Data Sheet for extinction.
 Absorb spillage to prevent material damage

Precautionary Statements - Storage

Store locked up
 Store in corrosive resistant container with a resistant inner liner

Precautionary Statements - Disposal

Dispose of contents/container in accordance with local, regional, national, and international regulations as applicable

Other hazards which do not result in classification

Poisons Schedule (SUSMP) None allocated

3. COMPOSITION/INFORMATION ON INGREDIENTS**Substance****Mixture**

| Chemical name | CAS No. | Weight-% |
|-----------------|-----------|----------|
| Ferric chloride | 7705-08-0 | 95-100 |

4. FIRST AID MEASURES

Description of first aid measures

| | |
|-----------------------------------|---|
| General advice | Show this safety data sheet to the doctor in attendance. |
| Emergency telephone number | Poisons Information Center, Australia: 13 11 26 Poisons Information Center, New Zealand: 0800 764 766 |
| Inhalation | Remove to fresh air. Get medical attention immediately if symptoms occur. |
| Eye contact | Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician. |
| Skin contact | IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. Immediate medical attention is required. |
| Ingestion | Do NOT induce vomiting. Clean mouth with water and drink afterwards plenty of water. Never give anything by mouth to an unconscious person. Call a physician immediately. |

Most important symptoms and effects, both acute and delayed

Symptoms Burning.

Indication of any immediate medical attention and special treatment needed

Note to physicians Treat symptomatically. Can cause corneal burns.

5. FIRE FIGHTING MEASURES

Suitable Extinguishing Media

Suitable Extinguishing Media Dry chemical, CO₂, water spray or regular foam.

Unsuitable extinguishing media No information available.

Specific hazards arising from the chemical

Specific hazards arising from the chemical Non-combustible. Corrosive.

Special protective actions for fire-fighters

Special protective equipment for fire-fighters Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

Hazchem code 2X

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal precautions Avoid breathing vapors or mists. Do not get in eyes, on skin, or on clothing. Evacuate personnel to safe areas. Stop leak if you can do it without risk. Wear protective gloves/protective clothing and eye/face protection.

For emergency responders Use personal protection recommended in Section 8.

Environmental precautions

Environmental precautions See Section 12 for additional Ecological Information.

Methods and material for containment and cleaning up

Methods for containment Prevent further leakage or spillage if safe to do so.

Methods for cleaning up Use appropriate personal protective equipment (PPE). Carefully shovel or sweep up spilled material and place in suitable container. Avoid generating dust. Keep dry. Keep in suitable, closed containers for disposal.

7. HANDLING AND STORAGE**Precautions for safe handling**

Advice on safe handling Handle in accordance with good industrial hygiene and safety practice.

Conditions for safe storage, including any incompatibilities

Storage Conditions Keep containers tightly closed in a dry, cool and well-ventilated place. Keep dry, reacts with water. Protect from moisture.

Incompatible materials Water Metals Alkaline earth metals Ethylene oxide Allyl chloride

Poisons Schedule (SUSMP) None allocated

8. EXPOSURE CONTROLS/PERSONAL PROTECTION**Control parameters**

Exposure Limits No value assigned for this specific material by Safe Work Australia. However, Workplace Exposure Standard(s) for constituent(s):

Iron salts, soluble (as Fe): 8hr TWA = 1 mg/m³

As published by Safe Work Australia Workplace Exposure Standards for Airborne Contaminants.

TWA - The time-weighted average airborne concentration of a particular substance when calculated over an eight-hour working day, for a five-day working week.

These Workplace Exposure Standards are guides to be used in the control of occupational health hazards. All atmospheric contamination should be kept to as low a level as is workable. These workplace 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.

Appropriate engineering controls

Engineering controls Apply technical measures to comply with the occupational exposure limits. Eyewash stations. Showers.

If in the handling and application of this material, safe exposure levels could be exceeded, the use of engineering controls such as local exhaust ventilation must be considered and

the results documented. If achieving safe exposure levels does not require engineering controls, then a detailed and documented risk assessment using the relevant Personal Protective Equipment (PPE) (refer to PPE section below) as a basis must be carried out to determine the minimum PPE requirements.

Individual protection measures, such as personal protective equipment

The selection of PPE is dependent on a detailed risk assessment. The risk assessment should consider the work situation, the physical form of the chemical, the handling methods, and environmental factors.

OVERALLS, SAFETY SHOES, CHEMICAL GOGGLES, GLOVES, DUST MASK.



Eye/face protection

Tight sealing safety goggles.

Skin and body protection

Boots. Wear suitable protective clothing. Overalls.

Hand protection

Impervious gloves.

Respiratory protection

If determined by a risk assessment an inhalation risk exists, wear a dust mask/respirator meeting the requirements of AS/NZS 1715 and AS/NZS 1716.

Environmental exposure controls

No information available.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

| | |
|----------------|-----------------------------|
| Physical state | Solid |
| Appearance | No information available. |
| Color | Dark grey to Black or Brown |
| Odor | Slight Pungent |
| Odor threshold | No information available. |

| <u>Property</u> | <u>Values</u> | <u>Remarks • Method</u> |
|--|---------------------|-------------------------|
| pH | 2.0 (0.1M aq. sol.) | None known |
| Melting point / freezing point | 300°C | None known |
| Boiling point / boiling range | 316°C | None known |
| Flash point | Not applicable | None known |
| Evaporation rate | No data available | None known |
| Flammability (solid, gas) | No data available | None known |
| Flammability Limit in Air | | None known |
| Upper flammability or explosive limits | No data available | |
| Lower flammability or explosive limits | No data available | |
| Vapor pressure | No data available | None known |
| Vapor density | 5.61 | None known |
| Relative density | 2.9 | None known |
| Water solubility | Soluble in water | None known |
| Solubility(ies) | No data available | None known |
| Partition coefficient | No data available | None known |
| Autoignition temperature | No data available | None known |
| Decomposition temperature | No data available | None known |

| | | |
|----------------------------|-------------------|------------|
| Kinematic viscosity | No data available | None known |
| Dynamic viscosity | No data available | None known |

Other information**10. STABILITY AND REACTIVITY**Reactivity

Reactivity Reacts with metals.

Chemical stability

Stability Stable. Unstable on exposure to moisture.

Explosion data

Sensitivity to mechanical impact None.

Sensitivity to static discharge None.

Possibility of hazardous reactions

Possibility of hazardous reactions Corrosive to metals.

Conditions to avoid

Conditions to avoid Heat, flames and sparks.

Incompatible materials

Incompatible materials Water Metals Alkaline earth metals Ethylene oxide Allyl chloride

Hazardous decomposition products

Hazardous decomposition products Carbon oxides. Nitrogen oxides. Hydrogen chloride. Hydrogen cyanide.

11. TOXICOLOGICAL INFORMATIONAcute toxicityInformation on likely routes of exposure

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

Inhalation Inhalation of dust in high concentration may cause irritation of respiratory system.

Eye contact Severely irritating to eyes. Causes burns. Causes serious eye damage.

Skin contact Causes burns.

Ingestion Causes burns

Symptoms No information available.

Numerical measures of toxicity - Product Information

The following values are calculated based on chapter 3.1 of the GHS document

Component Information

| Chemical name | Oral LD50 | Dermal LD50 | Inhalation LC50 |
|-----------------|--|-------------|-----------------|
| Ferric chloride | = 450 mg/kg (Rat) = 316 mg/kg (Rat) | - | - |

See section 16 for terms and abbreviations

Delayed and immediate effects as well as chronic effects from short and long-term exposure

| | |
|--|---------------------------|
| Skin corrosion/irritation | Causes burns. |
| Serious eye damage/eye irritation | Causes burns. |
| Respiratory or skin sensitization | No information available. |
| Germ cell mutagenicity | No information available. |
| Carcinogenicity | No information available. |
| Reproductive toxicity | No information available. |
| STOT - single exposure | No information available. |
| STOT - repeated exposure | No information available. |
| Aspiration hazard | No information available. |

12. ECOLOGICAL INFORMATION**Ecotoxicity**

Ecotoxicity . Keep out of waterways.

Persistence and degradability

Persistence and degradability No information available.

Bioaccumulative potential

Bioaccumulation No information available.

Component Information

| Chemical name | Partition coefficient |
|-----------------|-----------------------|
| Ferric chloride | -4 |

Mobility

Mobility in soil No information available.

Other adverse effects**13. DISPOSAL CONSIDERATIONS****Waste treatment methods**

Waste from residues/unused products

Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.

14. TRANSPORT INFORMATION**ADG**

Classified as Dangerous Goods by the criteria of the Australian Dangerous Goods Code (ADG Code) for Transport by Road and Rail; DANGEROUS GOODS.

| | |
|-----------------------------|----------------------------|
| UN number | 1773 |
| Proper shipping name | FERRIC CHLORIDE, ANHYDROUS |
| Hazard class | 8 |
| Packing group | III |
| Hazchem code | 2X |

IATA

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

| | |
|-----------------------------------|----------------------------|
| UN number | 1773 |
| UN proper shipping name | FERRIC CHLORIDE, ANHYDROUS |
| Transport hazard class(es) | 8 |
| Packing group | III |

IMDG

Classified as Dangerous Goods by the criteria of the International Maritime Dangerous Goods Code (IMDG Code) for transport by sea; DANGEROUS GOODS.

| | |
|-----------------------------------|----------------------------|
| UN number | 1773 |
| UN proper shipping name | FERRIC CHLORIDE, ANHYDROUS |
| Transport hazard class(es) | 8 |
| Packing group | III |
| IMDG EMS Fire | F-A |
| IMDG EMS Spill | S-B |

15. REGULATORY INFORMATION**Safety, health and environmental regulations/legislation specific for the substance or mixture****National regulations****Australia**

Classified as dangerous goods in accordance with the Australian Code for the Transport of Dangerous Goods by Road and Rail (ADG).

Classified as a hazardous chemical in accordance with the criteria of Safe Work Australia - Globally Harmonized System (GHS).

See section 8 for national exposure control parameters

| | |
|---------------------------------|----------------|
| Poisons Schedule (SUSMP) | None allocated |
|---------------------------------|----------------|

International Inventories

| | |
|-------------|---|
| AICS | This material is listed on the Australian Inventory of Chemical Substances. |
|-------------|---|

Legend:

AICS - Australian Inventory of Chemical Substances

International Regulations

The Montreal Protocol on Substances that Deplete the Ozone Layer Not applicable

The Stockholm Convention on Persistent Organic Pollutants Not applicable

The Rotterdam Convention Not applicable

16. OTHER INFORMATION

Reason(s) For Issue: First Issue Primary SDS

Issuing Date: 08-Jun-2020

This Safety Data Sheet has been prepared by Ixom Operations Pty Ltd (Toxicology and SDS Services).

Revision Note:

The symbol (*) in the margin of this SDS indicates that this line has been revised.

Key or legend to abbreviations and acronyms used in the safety data sheet

Legend Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

| | | | |
|---------|-----------------------------|------|----------------------------------|
| TWA | TWA (time-weighted average) | STEL | STEL (Short Term Exposure Limit) |
| Ceiling | Maximum limit value | * | Skin designation |
| C | Carcinogen | | |

Key literature references and sources for data used to compile the SDS

EPA (Environmental Protection Agency)
 Acute Exposure Guideline Level(s) (AEGL(s))
 U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act
 U.S. Environmental Protection Agency High Production Volume Chemicals
 Food Research Journal
 Hazardous Substance Database
 International Uniform Chemical Information Database (IUCLID)
 Japan GHS Classification
 Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)
 NIOSH (National Institute for Occupational Safety and Health)
 National Library of Medicine's ChemID Plus (NLM CIP)
 National Library of Medicine's PubMed database (NLM PUBMED)
 National Toxicology Program (NTP)
 New Zealand's Chemical Classification and Information Database (CCID)
 Organization for Economic Co-operation and Development Environment, Health, and Safety Publications
 Organization for Economic Co-operation and Development High Production Volume Chemicals Program
 Organization for Economic Co-operation and Development Screening Information Data Set
 RTECS (Registry of Toxic Effects of Chemical Substances)
 World Health Organization

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text This SDS summarises to our best knowledge at the date of issue, the chemical health and safety hazards of the material and general guidance on how to safely handle the material in the

workplace. Since Ixom Operations Pty Ltd cannot anticipate or control the conditions under which the product may be used, each user must, prior to usage, assess and control the risks arising from its use of the material.

If clarification or further information is needed, the user should contact their Ixom representative or Ixom Operations Pty Ltd at the contact details on page 1.

Ixom Operations Pty Ltd's responsibility for the material as sold is subject to the terms and conditions of sale, a copy of which is available upon request.

End of Safety Data Sheet