Safety Data Sheet IRON(III) OXIDE

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SECTION 1: Identification

GHS Product identifier

Product name	IRON(III) OXIDE

Other means of identification

Product	Product Code
Iron (III) Oxide AR	FA012
Iron (III) Oxide Red	FL012
Iron (III) Oxide Red	FT012

Recommended use of the chemical and restrictions on use

Metallurgy, gas purification, paint and rubber pigment, electronic pigments for TV, component of thermite, polishing compounds, mordant, laboratory reagent, memory cores for computers, semi-conductors, permanent magnets, magnetic tapes and feed additive. Used medicinally in the treatment of arsenic poisoning in oral doses of up to 1 gram.

Supplier's details

Name	ChemSupply Australia Pty Ltd
Address	38-50 Bedford Street 5013 Gillman South Australia Australia
Telephone	08 8440 2000
email	www.chemsupply.com.au

Emergency phone number

CHEMCALL 1800 127 406 (Australia) / +64-4-917-9888 (International)

SECTION 2: Hazard identification

General hazard statement

Not classified as dangerous goods according to the Australian Dangerous Goods Code (ADG).

Classified as non-Hazardous according to the Globally Harmonised System of classification and labelling of Chemicals (GHS) including Work, Health and Safety regulations, Australia.

Classification of the substance or mixture

GHS classification in accordance with: UN GHS revision 7

Not a hazardous substance or mixture.

GHS label elements, including precautionary statements

Not a hazardous substance or mixture.

Other hazards which do not result in classification

Not a hazardous substance or mixture.

SECTION 3: Composition/information on ingredients

Mixtures

Molecular weight	159.7

Component	Identification	Weight %
Iron (III) oxide	CAS no.: 1309-37-1 EC no.: 215-168-2	94 - 100 %

SECTION 4: First-aid measures

Description of necessary first-aid measures

General advice	First Aid Facilities: Maintain eyewash fountain in work area.
If inhaled	If inhaled, remove from contaminated area to fresh air immediately. Apply artificial respiration if not breathing. If breathing is difficult, give oxygen. Get medical aid if cough or other symptoms appear.
In case of skin contact	Rinse with plenty of water. Get medical attention if irritation develops and persists.
In case of eye contact	If contact with the eye(s) occurs, wash with copious amounts of water for approximately 15 minutes holding eyelid(s) open. Take care not to rinse contaminated water into the non-affected eye. If persistent irritation occurs, obtain medical attention.
If swallowed	Rinse mouth thoroughly with water immediately, repeat until all traces of product have been removed. DO NOT INDUCE VOMITING. Seek medical advice if effects persist.

Most important symptoms/effects, acute and delayed
The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

Indication of immediate medical attention and special treatment needed, if necessary
Treat symptomatically based on judgement of doctor and individual reactions of the patient.

SECTION 5: Fire-fighting measures

Suitable extinguishing media
Material does not burn.
Small fire: Use dry chemical, CO2, water spray or foam.
Large fire: Use water spray, fog or foam.

Specific hazards arising from the chemical
Under fire conditions this product may emit toxic and/or irritating fumes and gases

Special protective actions for fire-fighters
Wear SCBA and structural firefighter's uniform.

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures
Avoid substance contact. Avoid generation of dusts: do not inhale dusts.
Ensure supply of fresh air in enclosed rooms.
Wear protective clothing specified for normal operations (see Section 8)

Methods and materials for containment and cleaning up
Sweep up (avoid generating dust) and using clean non-sparking tools transfer to a clean, suitable, clearly labelled container for disposal in accordance with local regulations.

SECTION 7: Handling and storage

Precautions for safe handling
Avoid substance contact and generation and inhalation of dust. face thoroughly after working with material.

Conditions for safe storage, including any incompatibilities
Keep container tightly closed and dry, away from direct sunlight. room temperature (15 - 25 °C).

Unsuitable Materials: Aluminium.

SECTION 8: Exposure controls/personal protection

Appropriate engineering controls
Use ventilation adequate to keep exposures (airborne levels of dust, fume, vapor, gas, etc.) below recommended exposure limits.

Individual protection measures, such as personal protective equipment (PPE)

Eye/face protection
The use of a face shield, chemical goggles or safety glasses with side shield protection as appropriate. Must comply with Australian Standards AS 1337 and be selected and used in accordance with AS 1336.

Skin protection
Clean impervious clothing should be worn. Clothing for protection against chemicals should comply with AS 3765 Clothing for Protection Against Hazardous Chemicals.

Body protection
Footwear: Safety boots in industrial situations is advisory, foot protection should comply with AS 2210, Occupational protective footwear - Guide to selection, care and use.

Body Protection: Clean clothing or protective clothing should be worn, preferably with and apron. Clothing for protection against chemicals should comply with AS 3765 Clothing for Protection Against Hazardous Chemicals.

Respiratory protection
If engineering controls are not effective in controlling airborne exposure then an approved respirator with a replaceable vapor/ mist filter should be used. Refer to relevant regulations for further information concerning respiratory protective requirements. Reference should be made to Australian Standards AS/ NZS 1715, Selection, Use and Maintenance of Respiratory Protective Devices; and AS/ NZS 1716, Respiratory Protective Devices, in order to make any necessary changes for individual circumstances.

SECTION 9: Physical and chemical properties

Basic physical and chemical properties

Physical state	Solid

Appearance	Reddish-brown powder or lumps.
Color	No data available.
Odor	Odourless.
Odor threshold	No data available.
Melting point/freezing point	1565 °C
Boiling point or initial boiling point and boiling range	No data available.
Flammability	No data available.
Lower and upper explosion limit/ flammability limit	No data available.
Flash point	No data available.
Explosive properties	No data available.
Auto-ignition temperature	No data available.
Decomposition temperature	No data available.
Oxidizing properties	No data available.
pH	5 - 8 (of a 5% powder in water slurry)
Kinematic viscosity	No data available.
Solubility	Solubility in Water: Insoluble.
Partition coefficient n-octanol/ water (log value)	No data available.
Vapor pressure	No data available.
Evaporation rate	No data available.
Density and/or relative density	Specific Gravity: 4.5 - 5.0 (tamped down apparent density 0.9 - 1.3)
Relative vapor density	No data available.
Particle characteristics	No data available.

Supplemental information regarding physical hazard classes
No data available.

Further safety characteristics (supplemental)
Other Information: Soluble in acids.

SECTION 10: Stability and reactivity

Reactivity
Stable under normal conditions of storage and handling.

Chemical stability
Stable at room temperature in closed containers under normal storage and handling conditions.

Possibility of hazardous reactions
Reacts violently with aluminium, calcium hypochlorite, cesium carbide, hydrazine and ethylene oxide.

Conditions to avoid
Incompatible materials, dust generation, excess heat.

Incompatible materials
Aluminium (risk of explosion!), bromine pentafluoride, calcium hypochlorite, carbon dioxide, cesium carbide, ethylene oxide, hydrazine, performic acid.

Hazardous decomposition products
Irritating and toxic fumes and gases.

SECTION 11: Toxicological information

Information on toxicological effects

Acute toxicity
Inhalation: Dust may be irritating to the respiratory tract. Symptoms may include coughing and shortness of breath. Inhalation of fumes may cause metal fume fever, which is characterized by flu-like symptoms with metallic taste, fever, chills, cough, weakness, chest pain, muscle pain and increased white blood cell count. Inhalation of the dusts should be avoided as even inert dusts may impair respiratory organ functions.

Skin corrosion/irritation
Dust may cause mechanical irritation.

Serious eye damage/irritation
May cause mechanical irritation.

Respiratory or skin sensitization
Not classified based on available information.

Germ cell mutagenicity
Not classified based on available information.

Carcinogenicity
Ferric oxide [1309-37-1] is evaluated in the IARC Monographs (Vol. 1, Suppl. 7; 1987) as Group 3: Not classifiable as to carcinogenicity to humans.
Not classified based on available information.

Reproductive toxicity
Not classified based on available information.

Specific target organ toxicity (STOT) - single exposure
Not classified based on available information.

Specific target organ toxicity (STOT) - repeated exposure
Not classified based on available information.

Aspiration hazard
Not classified based on available information.

Additional information
Chronic Effects: Long term inhalation exposure to iron has resulted in mottling of the lungs, a condition referred to as siderosis. On x-rays it appears to be a benign pneumoconiosis and is not associated with pulmonary fibrosis or disability unless there is concurrent exposure to other fibrosis-producing materials such as silica. Liver damage, coma and death have been recorded after chronic poisoning. Long term eye exposures may stain the eyes and leave a 'rust ring'.

SECTION 12: Ecological information

Toxicity
This substance is not expected to be hazardous to the environment. Practically insoluble in water, it is able to be separated by almost any filtration and sedimentation process.

SECTION 13: Disposal considerations

Disposal methods

Product disposal
Waste material must be disposed of in accordance with the national and local regulations. Leave chemicals in original containers.

Other disposal recommendations
Do not discharge this material into waterways, drains and sewers.

SECTION 14: Transport information

ADG (Road and Rail)
Not dangerous goods

IMDG
Not dangerous goods

IATA
Not dangerous goods

SECTION 15: Regulatory information

Safety, health and environmental regulations specific for the product in question

Australia SUSMP
Poison Schedule: NS

SECTION 16: Other information

Further information/disclaimer
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Standard for the Uniform Scheduling of Medicines and Poisons, Commonwealth of Australia
National Road Transport Commission, 'Australian Code for the Transport of Dangerous Goods by Road and Rail 7th. Ed.'
Safe Work Australia, 'National Code of Practice fot the Preparation of Safety Data Sheets for Hazardous Chemicals', July 2020.
Safe Work Australia, 'National Guide for Classifying Hazardous Chemicals', July 2020.

Safe Work Australia, Workplace Exposure Standards for Airbourne Contaminants, December 2019
Safe Work Australia, Hazardous Chemical Information System (HCIS), hcis.safeworkaustralia.gov.au
IATA, Dangerous Goods Regulations (DGR)
IMO, International Maritime Dangerous Goods Code (IMDG)