



SALES & SERVICES

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Safety Data Sheet

1. IDENTIFICATION OF THE PRODUCT AND THE SUPPLIER

1.1 Product identifiers

Product name : FERRO SILICON

1.2 Other means of identification

Iron-Silicon, FeSi

1.3 Recommended use of the product and restrictions on use

In the manufacture of steel and iron.

1.4 Details of supplier of the safety data sheet

Company : AGent Sales & Services Pty Ltd

Street address : 38 May Holman Drive, Bassendean, Western Australia 6054

Telephone : (+61 8) 6270 4500

Fax : (+61 8) 6270 4544

1.5 Emergency telephone number

Telephone : 1300 883 844

2. HAZARDS IDENTIFICATION

Not classified as Dangerous Goods by the criteria of the Australian Dangerous Goods Code (ADG Code) for transport by Road and Rail; **NON-DANGEROUS GOODS.**

This material is hazardous according to Safe Work Australia; **HAZARDOUS SUBSTANCE.**

2.1 GHS Classification

Substance in contact with water releases flammable gas (Category 3)

Acute Toxicity Oral (Category 3)

Acute Toxicity Inhalation (Category 3)

2.2 GHS Label elements, including precautionary statements

Pictogram :



Signal word : DANGER

Hazard statement(s)

H261 In contact with water releases flammable gas

H330 Toxic if swallowed

H331 Toxic if inhaled

Precautionary statement(s)

Prevention

P232 Protect from moisture.

P261 Avoid breathing dusts/fumes/gas.

P262 Do not get in eyes, on skin or on clothing.

P264 Wash hands thoroughly after handling.

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

P271 Use only in well-ventilated area.
P280 Wear protective gloves/protective clothing/eye protection/face protection.

Response

P301 + P330 + P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P304 + P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P310 Immediately call a POISON CENTRE or doctor.
P370 + P378 In case of fire: use Dry Agent. Water MUST NOT be allowed to come into contact with the product since a dangerous reaction is likely to take place. Try to contain spills, minimise spillage entering drains or water courses.

Storage

P405 Store locked up.
P402 + P404 Store in a dry place. Store in a closed container.
P403 + P233 Store in a well-ventilated place. Keep container tightly closed

Disposal

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

2.3 Other hazards

None

3. COMPOSITION / INFORMATION ON INGREDIENTS

Component	CAS Number	Classification	Concentration (%)
Ferrosilicon	8049-17-0	H261; H330; H331	100

For the full text of the H-Statements mentioned in this section, see Section 16

4. FIRST AID MEASURES

4.1 Description of First Aid measures

General advice

Contact the Poisons Information Centre (Phone: Australia 131 126; New Zealand 0800 764 766) or consult a doctor/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.

In case of skin contact

Wash off with soap and plenty of water. Consult a physician.

In case of eye contact

In case of eye contact, check for and remove any contact lenses. Immediately rinse thoroughly with plenty of running water for at least 15 minutes, keeping eyelids open. In all cases of eye contamination it is a sensible precaution to seek medical advice.

If swallowed

Never give anything by mouth to an unconscious person. Rinse mouth with water. If swallowed, give a glass of water to drink. Seek medical advice.

4.2 Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in Section 2.2 and/or Section 11.

4.3 Indication of any immediate medical attention and special treatment needed

No data available.

4.4 First Aid facilities

Eye wash facilities and safety shower should be available.

5. FIRE FIGHTING MEASURES

5.1 Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

5.2 Special hazards arising from the chemical

Sulphur oxides, Aluminium oxide

5.3 Special protective equipment and precautions for fire fighters
Wear self-contained breathing apparatus for firefighting if necessary.

5.4 Hazchem code
Not applicable

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures
Use personal protective equipment. Avoid dust formation. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust. For personal protection see Section 8.

6.2 Environmental precautions
Do not let product enter drains or waterways.

6.3 Methods and materials for containment and cleaning up
Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

7. HANDLING AND STORAGE

7.1 Precautions for safe handling
Avoid formation of dust and aerosols. Provide appropriate exhaust ventilation at places where dust is formed. For precautions see Section 2.2.

7.2 Conditions for safe storage, including any incompatibilities
Store in cool place. Keep container tightly closed in a dry, well-ventilated place. Store away from incompatible materials described in Section 10.

8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

8.1 Control parameters
Occupational Exposure Limits

Chemical Name	Reference	TWA – Peak Limitation		STEL		Carcinogen Category	Notices
		ppm	mg/m ³	ppm	mg/m ³		
Aluminium, soluble salts (as Al)	ASCC	-	2	-	-	-	-
Inspirable dust	ASCC	-	10	-	-	-	-

As published in "Workplace Exposure Standards for Airborne Contaminants, December 2011" by SWA.

Biological Limits
None allocated for this product.

8.2 Exposure controls

Appropriate engineering controls
Ensure ventilation is adequate to maintain air concentrations below Workplace Exposure Standards. Keep containers closed when not in use.

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.

Personal protective equipment (PPE)
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.

Eye/face protection
Safety glasses with side shields or goggles. See Australian Standards (AS/NZS 1336 & 1337).

Skin protection

Wear protective gloves and protective clothing appropriate for the risk of exposure. See Australian Standards (AS 2161 & 2919 and AS/NZS 2210). 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. Wash and dry hands.

Respiratory protection

If determined by a risk assessment an inhalation risk exists, wear a dust mask/respirator. See Australian Standards (AS/NZS 1715 & 1716).

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Form : Crystalline solid Colour : White
Odour:	Odourless
Odour Threshold:	Not applicable
pH:	No data available
Melting Point:	No data available
Boiling Point:	No data available
Decomposition Temperature:	770°C
Evaporation Rate:	Not applicable
Flash Point:	No data available
Auto Ignition Temperature:	No data available
Flammability:	Not flammable
Upper Explosive Limit:	No data available
Lower Explosive Limit:	No data available
Density:	2.71 g/mL @ 25°C
Vapour Density (air=1):	No data available
Vapour Pressure:	No data available
% Volatiles:	No data available
Solubility in water:	1000 g/L @ 20°C

10. STABILITY AND REACTIVITY

10.1 Reactivity

Corrosive to metals in the presence of water.

10.2 Chemical stability

Stable under normal ambient, and anticipated storage and handling conditions of temperature and pressure.

10.3 Possibility of hazardous reactions

Corrosive to damp steel. Dust explosion hazard.

10.4 Conditions to avoid

Avoid dust generation. Avoid exposure to heat, sources of ignition, and open flame.

10.5 Incompatible materials

Incompatible with strong oxidising agents.

10.6 Hazardous decomposition products

When involved in a fire, this product may generate sulphur oxides. Hydrolysis to form dilute sulphuric acid.

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity

LD50 Oral (rat) : > 5,000 mg/kg

Skin corrosion/irritation

Skin – Rabbit : Result: No skin irritation - 4 h.

Serious eye damage/eye irritation

Eyes – Rabbit : Result: Irritating to eyes.

Respiratory or skin sensitisation

No data available

Germ cell mutagenicity

Non mutagenic

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.

Reproductive toxicity

No data available

Specific target organ toxicity (STOT) - single exposure

No data available

Specific target organ toxicity (STOT) - repeated exposure

No data available

Aspiration hazard

No data available

Health Effects

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:

Eye contact : May be an eye irritant.

Skin contact : Slight irritations.

Ingestion : Irritations of mucous membranes in the mouth, pharynx, esophagus and gastrointestinal tract.

Inhalation : No information available on the symptoms of inhalation for this product.

11.2 Information on possible routes of exposure

The substance can be absorbed into the body by ingestion and by inhalation.

11.3 Additional Information

RTECS: BD1700000

12. ECOLOGICAL INFORMATION**12.1 Ecotoxicity**

Avoid contaminating waterways.

Quantitative data on the ecological effects of this product are not available.

Further ecologic data: The following applies to aluminium compounds in general : for acidic aluminium compounds : biological effect : toxic for water organisms. Fish : toxic as from 0.55 mg/l; in very soft water toxic as from 0.1 mg/l; crustaceans : D magna toxic as from 136 mg/l; algae : Sc quadricauda toxic as from 1.5mg/L (all values referring to dissolved Al). In the case of alkaline aluminium compounds, flocculation may cause mechanical damage in aquatic organisms. The following applies to sulphate in general : biological effects : fish : toxic as from 7g/L bacteria : toxic as from 2.5 g/l.

No ecological problems are to be expected when the product is handled and used with due care and attention.

12.2 Persistence and degradability

No data available

12.3 Bioaccumulative potential

No data available

12.4 Mobility in soil

No data available

12.5 Other adverse effects

No data available

13. DISPOSAL CONSIDERATIONS

13.1 Disposal methods and containers

Ensure waste disposal conforms to relevant local, state and federal authority waste disposal regulations. All empty packaging should be disposed of as unused product.

13.3 Special precautions for landfill or incineration

Contact a specialist disposal company or the local waste regulator for advice.

14. TRANSPORT INFORMATION

Not classified as Dangerous Goods by the criteria of the Australian Dangerous Goods Code (ADG Code) for transport by Road and Rail; **NON-DANGEROUS GOODS**

14.1 UN number	Not applicable
14.2 Proper shipping name	Not applicable
14.3 Transport hazard class	Not applicable
14.4 Packing group	Not applicable
14.5 Environmental hazards	Not applicable
14.6 Special precautions for users	Not applicable
14.7 Hazchem code	Not applicable
14.8 Dangerous goods initial emergency response guide (SAA/SNZ HB76:2010)	Not applicable

15. REGULATORY INFORMATION

15.1 Safety, health and environmental regulations

Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP)

None allocated

Carcinogen classification under WHS Regulations 2011, Schedule 10

Not listed

Notification status

AICS On the inventory or in compliance with the inventory

16. OTHER INFORMATION

Key / legend to abbreviations and acronyms used in the MSDS

ADG	Australian Dangerous Goods
ASCC	Australian Safety and Compensation Council
DEC	Department of Environment and Conservation
NOHSC	National Occupational Health and Safety Commission
SUSDP	Standard for the Uniform Scheduling of Drugs and Poisons
Eye Dam.	Serious eye damage
TWA	Time weighted average
STEL	Short term exposure level
SWA	Safe Work Australia
Peak Limitations	A ceiling concentration that should not be exceeded over a measurement period, which should be as short as possible, but not exceeding 15 minutes
LD ₅₀	Lethal dose 50. The single dose of a substance that causes the death of 50% of an animal population from exposure to the substance by any route other than inhalation
LC ₅₀	Lethal concentration that kills 50% of an animal population within a specified time
TD Lo	The lowest dose of a substance known to have produced signs of toxicity
RTECS	Registry of Toxic Effects of Chemical Substances
g/L	Grams per litre
g/cm ³	Grams per cubic centimetre
mg/m ³	Milligrams per cubic metre
mg/kg	Milligrams per kilogram
pH	Relates to hydrogen ion concentration - this value will relate to a scale of 0 - 14, where 0 is highly acidic and 14 is highly alkaline
WHS	Work Health and Safety

Literature references

“Workplace Exposure Standards for Airborne Contaminants, December 2011” by SWA
Work Health and Safety Regulations 2011

Reason(s) for Issue:

Revised primary SDS
Alignment to GHS requirements

Disclaimer

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