SDS 2801 Iron

Date of Issue/re-issue: 15/02/2019 Expiry: 01/03/2024

1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Company Name	**ECP Limited**
Address:	39 Woodside Ave, Northcote, Auckland , New Zealand

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Product	Iron Powder				**Code**	2801
CAS#	**HSNO#**	**UN #**	**DG Class/es**	**Packing group #**	**Tracking?**	**Handlers Certificate?**
7439-89-6	NA	3178	4.1	III	No	No

Recommended use: Laboratory Investigations

2. Hazards identification

2.1 Classification of the substance or mixture

Flammable solids (Category 1), H228

2.2 Label elements

Pictogram  Signal word **Danger**

Hazard statement(s)

H228 Flammable solid.

Precautionary statement(s)

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

P370 + P378 In case of fire: Use dry powder or dry sand to extinguish.

Supplemental Hazard Statements

None

2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

3. Composition/information on ingredients

3.1 Substances

Formula: Fe

Molecular weight: 55.85 g/mol

CAS No.: 7439-89-6

4. First aid measures

4.1 Description of first aid measures

General advice

Consult a 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

Flush eyes with water as a precaution.
If swallowed
Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.
4.2 Indication of any immediate medical attention and special treatment needed
No data available

5. Firefighting measures
5.1 Extinguishing media
Suitable extinguishing media
Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
5.2 Special hazards arising from the substance or mixture
Iron oxides
5.3 Advice for firefighters
Wear self-contained breathing apparatus for firefighting if necessary.
5.4 Further information
Use water spray to cool unopened containers.

6. Accidental release measures
6.1 Personal precautions, protective equipment and emergency procedures
Avoid dust formation. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas.
6.2 Environmental precautions
Prevent further leakage or spillage if safe to do so. Do not let product enter drains.
6.3 Methods and materials for containment and cleaning up
Sweep up and shovel. Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal. Keep in suitable, closed containers for disposal. Contain spillage, pick up with an electrically protected vacuum cleaner or by wet-brushing and transfer to a container 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. Keep away from sources of ignition - No smoking. Take measures to prevent the build-up of electrostatic charge.
7.2 Conditions for safe storage, including any incompatibilities
Store in cool place. Keep container tightly closed in a dry and well-ventilated place.
Storage class (TRGS 510): Flammable solid hazardous materials

8. Exposure controls/personal protection
8.1 Exposure controls
Appropriate engineering controls
Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.
Personal protective equipment
Eye/face protection
Face shield and safety glasses. Use equipment for eye protection tested and approved under appropriate government standards.
Skin protection
Handle with gloves. 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 in accordance with applicable laws and good laboratory practices.
Wash and dry hands.
Full contact
Material: Nitrile rubber
Minimum layer thickness: 0.11 mm
Break through time: 480 min
Splash contact
Material: Nitrile rubber
Minimum layer thickness: 0.11 mm
Break through time: 480 min
Body Protection
Flame retardant antistatic protective clothing. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.
Respiratory protection
Where risk assessment shows air-purifying respirators are appropriate use respirator cartridges as a backup to engineering controls. Use respirators and components tested and approved under appropriate government standards.
Control of environmental exposure
Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

9. Physical and chemical properties
9.1 Information on basic physical and chemical properties
a) Appearance
Form: powder
Colour: light grey
b) Odour
odourless
c) Odour Threshold
No data available
d) pH
Not applicable
e) Melting point/freezing point
Melting point/range: 1,538 °C at 1,023 hPa
f) Initial boiling point and boiling range
2,861 °C at 1,013 hPa
g) Flash point
Not applicable
h) Evaporation rate
No data available
i) Flammability (solid, gas)
The substance or mixture is a flammable solid with the category 1.
j) Upper/lower flammability or explosive limits
No data available
k) Vapour pressure
Not applicable
l) Vapour density
No data available
m) Relative density
No data available
n) Water solubility
insoluble

o) Partition coefficient: n-octanol/water
Not applicable
p) Auto-ignition temperature
No data available
q) Decomposition temperature
No data available
r) Viscosity
No data available
s) Explosive properties
Not explosive
t) Oxidizing properties
The substance or mixture is not classified as oxidizing.
9.2 Other safety information
Dust explosion class St1
Bulk density 0.002 - 0.003 kg/m3

10. Stability and reactivity
10.1 Reactivity
No data available
10.2 Chemical stability
Stable under recommended storage conditions.
10.3 Possibility of hazardous reactions
No data available
10.4 Conditions to avoid
Heat, flames and sparks.
10.5 Incompatible materials
Strong oxidizing agents, strong acids
10.6 Hazardous decomposition products
Hazardous decomposition products formed under fire conditions
Iron oxides
Other decomposition products
No data available

11. Toxicological information
11.1 Information on toxicological effects
Acute toxicity
LD50 Oral - Rat - 7,500 mg/kg
Skin corrosion/irritation
No skin irritation
Serious eye damage/eye irritation
Eyes - Rabbit
Result: No eye irritation (OECD Test Guideline 405)
Respiratory or skin sensitisation
Did not cause sensitisation on laboratory animals.
Germ cell mutagenicity
S. typhimurium
Result: Not mutagenic in Ames Test
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 by IARC.
Reproductive toxicity

Did not show teratogenic effects in animal experiments.
Animal testing did not show any effects on fertility.
Specific target organ toxicity - single exposure
The substance or mixture is not classified as specific target organ toxicant, single exposure.
Specific target organ toxicity - repeated exposure
The substance or mixture is not classified as specific target organ toxicant, repeated exposure.
Aspiration hazard
No data available
Additional Information
RTECS: Not available

12. Ecological information
12.1 Toxicity
Toxicity to fish static test - Morone saxatilis - 13.6 mg/l - 96 h(Iron)
12.2 Persistence and degradability
Not applicable
12.3 Bioaccumulative potential
No data available
12.4 Mobility in soil
No data available
12.5 Results of PBT and vPvB assessment
This substance/mixture contains no components considered to be either 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 data available

13. Disposal considerations
13.1 Waste treatment methods
Product
Burn in a chemical incinerator equipped with an afterburner and scrubber b highly flammable. Offer surplus and non-recyclable solutions to a licensed disposal company.
Contaminated packaging
Dispose of as unused product.

14. Transport Information Table

		ADR/RID – European packaging certification	**IMDG International Maritime Dangerous Goods Code**	**IATA – DGR International Air Travel Association – Dangerous Goods Regulations**
14.1	**UN Number**	3178	3178	3178
14.2	**UN Proper Shipping name**	FLAMMABLE SOLID, INORGANIC, N.O.S.	FLAMMABLE SOLID, INORGANIC, N.O.S.	Flammable solid, inorganic, n.o.s.
14.3	**Transport Hazard Class**	4.1	4.1	4.1
14.4	**Packaging group**	III	III	III
14.5	**Environmental Hazards**	No	No	No
14.6	**Special precautions for user**	No data available		

15. Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
This safety datasheet complies with requirements.
15.2 Chemical safety assessment
For this product a chemical safety assessment was not carried out.

16. Disclaimer

The information above is believed to be accurate and represents the best information currently available to us. However, the information is not a guarantee expressed or implied, with respect to such information, and we assume no liability resulting from its use. Anyone using the chemical described here should ensure that he or she has the appropriate training and has the expertise and any equipment required for safe handling. If clarification or further information is required, please contact ECP Ltd or refer to the official handler of dangerous goods within your own company. The user should also make their own investigations to determine the suitability of the product for their particular purposes. In no event shall the company be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential, or exemplary damages howsoever arising, even if the company has been advised of the possibility of such damages.

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