SAFETY DATA SHEET

1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

1.1 Product identifier

Product name **ZINC-IRON METAL COATED STEEL STRIP AND SHEET**

Synonyms ZINCANNEAL® STEEL ● ZINCSEAL® STEEL

1.2 Uses and uses advised against

Uses METAL FABRICATION

1.3 Details of the supplier of the product

Supplier name **BLUESCOPE STEEL LIMITED (ABN 16 000 011 058)**

Address Level 24, 181 William Street, Melbourne, VIC, 3000, AUSTRALIA

Telephone 1800 800 789 (Australia Only)

Email steeldirect@bluescopesteel.com

Website http://www.bluescopesteel.com.au

1.4 Emergency telephone numbers

Emergency 02 4275 7522 (24h)

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

NOT CLASSIFIED AS HAZARDOUS ACCORDING TO SAFE WORK AUSTRALIA CRITERIA

2.2 GHS Label elements

No signal word, pictograms, hazard or precautionary statements have been allocated.

2.3 Other hazards

Precautionary statement – Prevention
P260 Do not breathe dust/fume.
P280 Wear protective gloves/protective clothing/eye protection.

Precautionary statement – Response
P370 In case of fire and/or explosion do not breathe fumes.

3. COMPOSITION/ INFORMATION ON INGREDIENTS

3.1 Substances / Mixtures

Ingredient	CAS Number	EC Number	Content
BASE METAL:			
STEEL, comprised of:	12597-69-2	-	100%
IRON	7439-89-6	231-096-4	97 to 99%
MANGANESE	7439-96-5	231-105-1	<2%

METALLIC COATING:			
ZINC-IRON METAL COATING, comprised of:	-	-	60-220 g/m² total both sides
IRON	-	-	<15%
ALUMINIUM	7429-90-5	231-072-3	<0.5%
ANTIMONY	7440-36-0	231-146-5	<0.1%

ZINC	7440-66-6	231-175-3	Remainder

SURFACE TREATMENT:			
ZINC PHOSPHATE	7779-90-0	231-944-3	~50 mg/m² per side

ONLY ON OILED PRODUCTS:			
CORROSION PROTECTIVE OIL	-	-	<2 g/m² per side

Ingredient Notes Steel strip with a hot dipped zinc-iron alloyed metallic coating.

Note 1: Carbon, silicon, aluminium, titanium, niobium and copper may be intentionally added to some steel products at a concentration of typically less than 0.1% each.

Note 2: Other elements may be unintentionally introduced from the recycled steel used in our processes, including trace amounts of copper, chromium, silicon, molybdenum, vanadium, tin and nickel (typically <0.1% each).

4. FIRST AID MEASURES

4.1 Description of first aid measures

Eye It is unlikely that this product will enter the eye(s) in the supplied form. If steel splinters enter the eye, obtain medical attention immediately.

Inhalation It is unlikely that this product can be inhaled in the supplied form. If exposed to fumes from welding operations, remove to fresh air.

Skin It is unlikely that this product will cause irritation to the skin in the supplied form. Wash affected area thoroughly with soap and water.

Ingestion It is unlikely that this product can be ingested in the supplied form.

First aid facilities Eye wash facilities and normal washroom facilities should be available.

4.2 Most important symptoms and effects, both acute and delayed

See Section 11 for more detailed information on health effects and symptoms.

4.3 Immediate medical attention and special treatment needed

Treat symptomatically.

5. FIRE FIGHTING MEASURES

5.1 Extinguishing media

Use an extinguishing agent suitable for the surrounding fire.

5.2 Special hazards arising from the substance or mixture

Non-combustible material. Some parts of the packaging are combustible. When burnt or overheated the product and packaging may release combustion products including carbon monoxide and metallic oxides.

5.3 Advice for firefighters

Fire fighters should wear Self-Contained Breathing Apparatus (SCBA) operated in positive pressure mode and full protective clothing to prevent exposure to vapours or fumes.

5.4 Hazchem code

None allocated.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Product should be picked up with suitable lifting equipment. Wear appropriate gloves to avoid cuts when handling.

6.2 Environmental precautions

Prevent product from entering drains and waterways.

6.3 Methods of cleaning up

If spilt, collect and reuse where possible.

6.4 Reference to other sections

See Sections 8 and 13 for exposure controls and disposal.

7. HANDLING AND STORAGE

7.1 Precautions for safe handling

Product is expected to be formed and otherwise fabricated. This may include cutting, welding, painting and powder coating. Product should be picked up with suitable lifting equipment. Wear appropriate gloves to avoid cuts when handling. Maintain high standards of personal hygiene i.e. washing hands prior to eating, drinking, smoking or using toilet facilities. If welding this product there is a possibility of aluminium, iron oxide, manganese and zinc fume generation.

7.2 Conditions for safe storage, including any incompatibilities

The material as supplied is not known to be hazardous to the environment. Product must be stored and secured to prevent movement during storage and transport. Store in a dry environment to prevent corrosion in storage. For more information on storing this product, refer to the document 'Guidelines for storage and handling of BlueScope products' available from BlueScope Steel sales offices and website.

7.3 Specific end uses

No information provided.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Control parameters

Exposure standards Any operation, which has the potential of generating particulates including dust or fume, requires a risk assessment to be undertaken. This may require the involvement of an experienced Occupational Hygienist.

No exposure standards have been established for this material, however, the TWA exposure standards for dust not otherwise specified is 10 mg/m³.

Ingredient	Reference	TWA		STEL	
		ppm	mg/m³	ppm	mg/m³
Aluminium (metal dust)	SWA [AUS]	--	10	--	--
Aluminium (welding fumes)	SWA [AUS]	--	5	--	--
Iron oxide fume (Fe2O3) (as Fe)	SWA [AUS]	--	5	--	--
Manganese, fume (as Mn)	SWA [AUS]	--	1	--	3
Zinc oxide (fume)	SWA [AUS]	--	5	--	10

Biological limits

No biological limit values have been entered for this product.

8.2 Exposure controls

Engineering controls Use with good general ventilation. No special ventilation is required for the product as supplied. For processing operations that generate dust or fumes, the use of engineering controls may be necessary to maintain air concentrations below the relevant Workplace Exposure Standards.

PPE

Eye / Face Safety glasses with side shields, chemical goggles or full-face shield as appropriate should be used. Final choice of appropriate eye/face protection will vary according to individual circumstances. Eye protection devices should conform to relevant regulations. Eye protection should conform with Australian/New Zealand Standard AS/NZS 1337 Eye Protectors for Industrial Applications.

Hands Appropriate gloves should be worn when handling strip or sheet steel, to avoid cuts from splinters, burrs, sharp edges, and contact with any surface treatments including oils if they are present. Final choice of appropriate gloves will vary according to individual circumstances i.e. methods of handling or according to risk assessments undertaken. Reference should be made to AS/NZS 2161.1: Occupational protective gloves - Selection, use and maintenance.

Body Suitable protective workwear, e.g. cotton overalls buttoned at neck and wrist is recommended.

Respiratory Not generally required. If engineering controls are not effective in controlling airborne exposure then an approved respirator with a replaceable filter should be used. 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.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Appearance	THIN STEEL COIL OR SHEET WITH MATTE GREY APPEARANCE
Odour	NOT APPLICABLE
Flammability	NON FLAMMABLE
Flash point	NOT APPLICABLE
Boiling point	NOT AVAILABLE
Melting point	Base metal: 1500°C (Approximately)
Evaporation rate	NOT APPLICABLE
pH	NOT APPLICABLE
Vapour density	NOT APPLICABLE
Relative density	7.85
Solubility (water)	INSOLUBLE
Vapour pressure	NOT APPLICABLE
Upper explosion limit	NOT APPLICABLE
Lower explosion limit	NOT APPLICABLE
Partition coefficient	NOT APPLICABLE
Autoignition temperature	NOT APPLICABLE
Decomposition temperature	NOT AVAILABLE
Viscosity	NOT APPLICABLE
Explosive properties	NOT AVAILABLE
Oxidising properties	NOT AVAILABLE
Odour threshold	NOT APPLICABLE

10. STABILITY AND REACTIVITY

10.1 Reactivity

Refer to 'Hazardous Reactions' below.

10.2 Chemical stability

Stable under recommended conditions of storage and handling.

10.3 Possibility of hazardous reactions

Hazardous polymerisation will not occur. Contact of metallic substances with acids and alkalis liberates hydrogen gas.

10.4 Conditions to avoid

None expected, when used as intended.

10.5 Incompatible materials

Incompatible with acids (e.g. nitric acid) and alkalis (e.g. sodium hydroxide).

10.6 Hazardous decomposition products

When burnt or overheated the product and packaging may emit carbon monoxide, metallic oxides and other products of combustion.

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity This product is expected to be of low toxicity. Based on available data, the classification criteria are not met. It is unlikely that this product can be ingested in the supplied form. It is unlikely that this product can be inhaled in the supplied form. Inhalation of product vapours may cause irritation of the nose, throat and respiratory system. If welding this product there is a possibility of zinc fume generation.

Information available for the ingredients:

Ingredient	Oral LD50	Dermal LD50	Inhalation LC50
IRON	30000 mg/kg (rat)	--	--
MANGANESE	9000 mg/kg (rat)	--	> 5.14 mg/L/4hrs (rat)

Skin It is unlikely that this product will cause irritation to the skin in the supplied form. The surface oil used for corrosion protection may irritate the skin in sensitive individuals.

Eye It is unlikely that this product will enter the eye(s) in the supplied form.

Sensitisation Not expected to be a skin or respiratory sensitiser.

Mutagenicity Not considered to be a mutagenic hazard.

Carcinogenicity Not considered to be a carcinogenic hazard.

Reproductive	Not considered to be toxic to reproduction.
STOT - single exposure	Not expected to cause toxicity to a specific target organ.
STOT - repeated exposure	Not expected to cause toxicity to a specific target organ.
Aspiration	Not expected to be an aspiration hazard.

12. ECOLOGICAL INFORMATION

12.1 Toxicity
No ecological data available for this material.

12.2 Persistence and degradability
Not available.

12.3 Bioaccumulative potential
Not available.

12.4 Mobility in soil
Not available.

12.5 Other adverse effects
Not available.

13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Waste disposal	This product and packaging can be recycled. If not recycled, any disposal of waste product should be in accordance with local regulations.
Legislation	Dispose of in accordance with relevant local legislation.

14. TRANSPORT INFORMATION

NOT CLASSIFIED AS A DANGEROUS GOOD BY THE CRITERIA OF THE ADG CODE, IMDG OR IATA

	LAND TRANSPORT (ADG)	SEA TRANSPORT (IMDG / IMO)	AIR TRANSPORT (IATA / ICAO)
14.1 UN Number	None allocated.	None allocated.	None allocated.
14.2 Proper Shipping Name	None allocated.	None allocated.	None allocated.
14.3 Transport hazard class	None allocated.	None allocated.	None allocated.
14.4 Packing Group	None allocated.	None allocated.	None allocated.

14.5 Environmental hazards
Not a Marine Pollutant.

14.6 Special precautions for user

Hazchem code	None allocated.

15. REGULATORY INFORMATION

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

Poison schedule

Products supplied with corrosion inhibiting oil are classified as a Schedule 5 (S5) poison according to the Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP).

Manufactured in accordance with Part 2, Section 7, Appendix I, Paints or Tinters, of the SUSMP. The Poison schedule classification has been derived from a removable oil layer, which is part of the protective coating layer on the steel.

Classifications

Safe Work Australia criteria is based on the Globally Harmonised System (GHS) of Classification and Labelling of Chemicals (GHS Revision 7).

Inventory listings

AUSTRALIA: AIIC (Australian Inventory of Industrial Chemicals)
All components are listed on AIIC, or are exempt.

Regulatory information

Not classified as Hazardous according to the Globally Harmonised System of Classification and Labelling of Chemicals (GHS) including Work, Health and Safety Regulations, Australia.

REGULATION (EC) No 1907/2006 (REACH) Article 7.1 - Not Applicable
REGULATION (EC) No 1907/2006 (REACH) Article 7.2 - Not Applicable
REGULATION (EC) No 1907/2006 (REACH) Article 33 - Not Applicable

16. OTHER INFORMATION

Additional information

SDS reviewed: August 2024. Supercedes: December 2023.

ZINCANNEAL®, ZINCSEAL®, Bluescope and the Bluescope brandmark are registered trademarks of BlueScope Steel Limited.

DISCLAIMER:
This SDS summarises to BlueScope Steel Limited's (BSL) best knowledge at the date of issue, the health and safety hazards of the relevant materials. As BSL is not aware of and can't control the conditions under which the material may be used, each user is responsible for making their own assessment of the appropriateness of the material for their planned use and to implement appropriate controls.

RESPIRATORS: In general the use of respirators should be limited and engineering controls employed to avoid exposure. If respiratory equipment must be worn ensure correct respirator selection and training is undertaken. Remember that some respirators may be extremely uncomfortable when used for long periods. The use of air powered or air supplied respirators should be considered where prolonged or repeated use is necessary.

EXPOSURE STANDARDS - TIME WEIGHTED AVERAGE (TWA) or WES (WORKPLACE EXPOSURE STANDARD) (NZ): Exposure standards are established on the premise of an 8 hour work period of normal intensity, under normal climatic conditions and where a 16 hour break between shifts exists to enable the body to eliminate absorbed contaminants. In the following circumstances, exposure standards must be reduced: Strenuous work conditions; hot, humid climates; high altitude conditions; extended shifts (which increase the exposure period and shorten the period of recuperation).

PERSONAL PROTECTIVE EQUIPMENT GUIDELINES:
The recommendation for protective equipment contained within this report is provided as a guide only. Factors such as form of product, method of application, working environment, quantity used, product concentration and the availability of engineering controls should be considered before final selection of personal protective equipment is made.

HEALTH EFFECTS FROM EXPOSURE:
It should be noted that the effects from exposure to this product will depend on several factors including: form of product; frequency and duration of use; quantity used; effectiveness of control measures; protective equipment used and method of application. Given that it is impractical to prepare a report which would encompass all possible scenarios, it is anticipated that users will assess the risks and apply control methods where appropriate.

Abbreviations

ACGIH	American Conference of Governmental Industrial Hygienists
CAS #	Chemical Abstract Service number - used to uniquely identify chemical compounds
CNS	Central Nervous System
EC No.	EC No - European Community Number
EMS	Emergency Schedules (Emergency Procedures for Ships Carrying Dangerous Goods)
GHS	Globally Harmonized System
GTEPG	Group Text Emergency Procedure Guide
IARC	International Agency for Research on Cancer
LC50	Lethal Concentration, 50% / Median Lethal Concentration
LD50	Lethal Dose, 50% / Median Lethal Dose
mg/m³	Milligrams per Cubic Metre
OEL	Occupational Exposure Limit
pH	relates to hydrogen ion concentration using a scale of 0 (high acidic) to 14 (highly alkaline).
ppm	Parts Per Million
STEL	Short-Term Exposure Limit
STOT-RE	Specific target organ toxicity (repeated exposure)
STOT-SE	Specific target organ toxicity (single exposure)
SUSMP	Standard for the Uniform Scheduling of Medicines and Poisons
SWA	Safe Work Australia
TLV	Threshold Limit Value
TWA	Time Weighted Average

Report status

This document has been compiled by RMT on behalf of the manufacturer, importer or supplier of the product and serves as their Safety Data Sheet ('SDS').

It is based on information concerning the product which has been provided to RMT by the manufacturer, importer or supplier or obtained from third party sources and is believed to represent the current state of knowledge as to the appropriate safety and handling precautions for the product at the time of issue. Further clarification regarding any aspect of the product should be obtained directly from the manufacturer, importer or supplier.

While RMT has taken all due care to include accurate and up-to-date information in this SDS, it does not provide any warranty as to accuracy or completeness. As far as lawfully possible, RMT accepts no liability for any loss, injury or damage (including consequential loss) which may be suffered or incurred by any person as a consequence of their reliance on the information contained in this SDS.

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