

Material Safety Data Sheet

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DURAGAL PROFILES- FLATS, CHANNELS AND ANGLES

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1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Product Name DURAGAL PROFILES- FLATS, CHANNELS AND ANGLES

Product Code

Company Name OneSteel Trading Pty Ltd - Newcastle Pipe Mills (ABN 50 007 519 646)

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NSW 2300

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Recommended Use As in-line hot dip galvanized steel sections for structural, machinery, construction applications etc.
COATING USED: In-line hot-dip galvanized zinc, minimum average 100 g/m², with the zinc surface passivated by a surface conversion treatment less than 1 micrometre thick.

Other Names None Listed

2. HAZARDS IDENTIFICATION

Hazard Classification Not classified as hazardous
NON-HAZARDOUS SUBSTANCE.
NON-DANGEROUS GOODS.

Hazard classification according to the criteria of NOHSC.
Dangerous goods classification according to the Australia Dangerous Goods Code.

Risk Phrase(s) Not classified as hazardous

Safety Phrase**(s)** S22 Do not breathe dust.**Other Information**

FROM HEAT GENERATED FUME ONLY: With burning or welding, moderate amounts of fume are emitted which contain mostly visible finely divided zinc oxide (ZnO) and iron oxide (Fe₂O₃) fume. Fume flocculates as it ages. Small amounts of ozone and other gases may be emitted.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Information on Composition

Ingredients	Name	CAS	Proportion
	Steel	7439-89-6	95-100 %
	Zinc	7440-66-6	0-5 %
	Manganese	7439-96-5	0.2-1.3 %
	Chromate passivation treatment, less than 1 micrometre (0.04 mil) thick, with 1-2 microgram Cr/cm ²		0-0.1 %

4. FIRST AID MEASURES

Inhalation	It is unlikely that this product can be inhaled in the as supplied form. If exposed to zinc oxide fume from welding operations, remove to fresh air.
Ingestion	It is unlikely that this product can be ingested in the as supplied form.
Skin	It is unlikely that this product will cause irritation to the skin in the as supplied form. For lacerations, clean and dress wound. For burns, apply copious amounts of cool water.
Eye	It is unlikely that this product will enter the eye(s) in the as supplied form. If steel splinters enter the eye, obtain medical treatment immediately.
First Aid Facilities	Eye wash fountains and normal washroom facilities.
Advice to Doctor	Treat symptomatically.

5. FIRE FIGHTING MEASURES

Suitable Extinguishing Media

Use appropriate fire extinguisher for surrounding environment.

**Hazards from
Combustion
Products**

The product as supplied is inert.

**Special
Protective
Equipment
for fire
fighters**

Fire-fighters should wear full protective clothing and self contained breathing apparatus (SCBA).

6. ACCIDENTAL RELEASE MEASURES

**Emergency
Procedures**

Pick up mechanically or by hand tools.

7. HANDLING AND STORAGE

**Precautions
for Safe
Handling**

Always wash hands before eating, drinking, smoking or using the toilet. See Section 8 Exposure Controls/Personal Protection for specific control recommendations.

**Conditions
for Safe
Storage**

Store in a dry environment to prevent corrosion in storage.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

National Exposure Standards	Name	STEL (mgm3)	STEL (ppm)	TWA (mgm3)	TWA
	Steel			5	
	Zinc	10		5	
	Manganese	3		1	

**Biological
Limit Values**

No biological limit allocated.

**Other
Exposure
Information**

No exposure standards have been established for this material by the National Occupational Health And Safety Commission (NOHSC). However, all exposure should be kept to the least possible levels as over-exposure to any chemical may result in enhancement of pre-existing adverse medical conditions and/or allergic reactions. Exposure standards for individual constituents are listed above.

TWA - the Time-Weighted Average airborne concentrations over an eight-hour working day, for a five-day working week over an entire working life.

STEL (Short Term Exposure Limit) - the average airborne concentration over a 15 minute period which should not be exceeded at any time during a normal eight-hour work day.

According to current knowledge these concentrations should neither impair the health of, nor cause undue discomfort to, nearly all workers.

Peak Limitation - a ceiling concentration which should not be exceeded over a measurement period which should be as short as possible but not exceeding 15 minutes.

'Sk' notice - absorption through the skin may be a significant source of exposure. The exposure standard is invalidated if such contact should occur. These 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. 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.

Engineering Controls No special ventilation is required for the product as supplied. For welding or cutting operations, local filtered extraction may be necessary to maintain the air concentration of fumes below the National Exposure Standards.

Dust from processing operations should not be allowed to build up in the workplace and should be removed for disposal. If possible, cleanup should be undertaken using a vacuum with a high efficiency filter. Ensure dust generation during cleanup is minimized, using appropriate work practices.

Respiratory Protection Not normally required. However, if engineering controls are not effective in controlling airborne exposure then respiratory protective equipment should be used suitable for protecting against airborne contaminants. Final choice of appropriate breathing protection is dependant upon actual airborne concentrations and the type of breathing protection required will vary according to individual circumstances. Expert advice may be required to make this decision. 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.

Eye Protection Safety glasses with side shields, goggles or full-face shield as appropriate recommended. Final choice of appropriate eye/face protection will vary according to individual circumstances i.e. methods of handling or engineering controls and according to risk assessments undertaken. Eye protection should conform with Australian/New Zealand Standard AS/NZS 1337 - Eye Protectors for Industrial Applications.

Hand Protection Cut resistant or leather gloves should be worn when handling strip or sheet steel, to avoid cuts from splinters, burrs or sharp edges. A rubber dipped glove may be necessary to avoid skin contact with chromium surface treatments. 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.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance Metal section, flat, channel or angle shapes.

Melting Point 1300°C (Steel)

Boiling Point 3000°C

Solubility in Water Insoluble

Specific

Gravity	7.7
Vapour Pressure	0 torr @ 20°C
Vapour Density (Air=1)	Not available.
Flash Point	Not applicable.
Flammability	Non-combustible
Auto-Ignition Temperature	Not applicable.
Flammable Limits - Lower	Not applicable.
Flammable Limits - Upper	Not applicable.

10. STABILITY AND REACTIVITY

Chemical Stability	Stable under normal conditions of use.
Conditions to Avoid	None known.
Incompatible Materials	None known.
Hazardous Decomposition Products	None known.
Hazardous Reactions	Not known
Hazardous Polymerization	Will not occur.

11. TOXICOLOGICAL INFORMATION

Inhalation	Not expected to be inhaled in the form supplied. Slitting and/or roll forming operations can generate dust particles from the resin coating which may cause irritation if inhaled.
Ingestion	Not expected to be swallowed in the form supplied.
Skin	Sharp burrs on the edges of steel products can cause lacerations to unprotected skin. Burns may result from contact with hot surfaces.
Eye	Not irritating to eyes in the form supplied. Dust: may cause mechanical irritation. May result in mild abrasion.

Chronic Effects Chronic exposure to iron oxide fumes over the standard may lead to Siderosis which is a benign lung condition.
Chronic exposure to manganese fumes over the standard may lead to disorders of the nervous and reproductive systems.
Metal Fume Fever or 'zinc chills' is a self-limiting acute illness. No chronic effects are known.

12. ECOLOGICAL INFORMATION

Ecotoxicity No data is available for this material.

Persistence / Degradability No data is available for this material.

Mobility No data is available for this material.

Environment Protection The material as supplied is not known to be hazardous to the environment.

13. DISPOSAL CONSIDERATIONS

Disposal Considerations Dispose of waste according to federal, E.P.A., state and local regulations or this material should be undertaken by a registered chemical disposal company. Assure conformity with all applicable regulations. This product can be recycled.

14. TRANSPORT INFORMATION

Transport Information Not classified as a Dangerous Good, according to the Australian Code for the Transport of Dangerous Goods by Road and Rail.

Storage and Transport Not classified as dangerous goods.

15. REGULATORY INFORMATION

Poisons Schedule Not Scheduled

16. OTHER INFORMATION

Date of preparation or last revision of MSDS MSDS review: May 2006
MSDS superseded: March 2000

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End of MSDS

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