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## **MATERIAL SAFETY DATA SHEET FOR GALVANISED STEEL PRODUCTS**

### **1. Composition/Information on Ingredients**

Mild steel sheet coated with zinc by electrolytic processes or hot dip processes, including zinc-iron alloy. The hot dip coatings (prime galvanised steel) may contain up to 0.15% lead or up to 0.12% antimony.

The base metal used for the organic coated products (Colorcoat and Stelvetite) is essentially lead free.

The sheet may have a protective film of oil, phosphate or chromate.

### **2. Hazards Identification**

When subjected to elevated temperatures e.g. during welding or flame cutting, irritant fumes may be evolved which can cause metal fume fever. Repeated contact with sheet protective coatings may cause skin problems.

### **3. First Aid Measures**

In the event of injury to skin or eyes, seek immediate medical attention.

### **4. Fire Fighting Measures**

Non-flammable material, but see Item 2 above.

### **5. Handling and Storage**

Some products may be secured by straps or bands. These should not be used for lifting and they could cause eye or other injury when tension is released. Coils may spring apart when the banding is removed. All products are likely to have sharp edges which could cause lacerations and flying particles may be produced when shearing.

Suitable protective clothing and equipment, such as hand and eye protection, should be worn and the systems of work designed to take account of any hazard arising from the risk of fracturing or the release of tension or stress when breaking open banding.

Suitable racks should be used to ensure stability when stocking narrow coils.



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## **6. Exposure Controls and Personal Protection**

If fume or dust is generated provide adequate ventilation to ensure that the Occupational Exposure Limits listed below are not exceeded. Keeping exposures of total inhalable dust below  $5\text{mg}/\text{m}^3$  should normally ensure that this is the case. If necessary, provide local fume extraction. Alternatively, where necessary, suitable and approved respiratory protective equipment should be provided for use by those at risk from inhalation of fumes. To reduce the risk of ingestion of dust, if generated, good housekeeping and personal hygiene should be practised.

Wear appropriate protective clothing. Barrier cream may help to protect exposed areas of skin but is no substitute for full physical protection.

## **7. Physical and Chemical Properties**

Coating	Melting point in range $419\text{-}450^\circ\text{C}$
Steel	Melting point in range $1450\text{-}1520^\circ\text{C}$
Density	Around $7.85\text{kg}/\text{m}^3$ at $20^\circ\text{C}$

## **8. Stability and Reactivity**

The product is stable under normal conditions but when subjected to elevated temperatures fumes are produced.

## **9. Toxicological Information**

Mechanical working such as dry grinding or machining will produce dust of the same composition as the coating and base metal. If subjected to elevated temperatures, e.g. during welding or flame cutting, fumes are produced containing oxides of zinc and iron, and also breakdown products of any protective coating, if present.

The potential effects on health include metal fume fever, a short lasting, self limiting condition with symptoms similar to influenza.

The principal mode of entry into the body is by inhalation and if airborne concentrations are excessive over long periods of time they may have a long term effect on the health of the worker, primarily affecting the lungs.

Prolonged contact with sheet protection coatings may lead to skin irritation and rarely, in susceptible cases, may lead to dermatitis.



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## 10. Disposal Considerations

Recycle, or landfill.

## 11. Regulatory Information

Coated steel products are articles not substances and, as such, are not subject to the chemicals (Hazard Information and Packaging) Regulations 1993.

## 12. Current Occupational Exposure Limits

	Type of Limit	Reference Periods	
		8 hr. TWA*	15 mins.
Iron Oxide, fume (as Fe)	Occ. Exp. Standard	5mg/m <sup>3</sup>	10mg/m <sup>3</sup>
Zinc Oxide, fume	Occ. Exp. Standard	5mg/m <sup>3</sup>	10mg/m <sup>3</sup>
Chromium metal, chromium and compounds (as Cr)	Occ. Exp. Standard	0.5mg/m <sup>3</sup>	-
Chromium compounds (as Cr)	Max. Exposure Limit	0.05mg/m <sup>3</sup>	-
Lead and lead compounds, excl. tetraethyl lead (as Pb)	Approved Code of Practice, Lead in Air Standard	0.15mg/m <sup>3</sup>	
Antimony and its compounds (as Sb)	Occ. Exposure Standard – to be reviewed	0.5mg/m <sup>3</sup>	
Antimony trioxide and trisulphide (as Sb)		0.5mg/m <sup>3</sup>	

\*Time Weighted Average

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