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## PRODUCT HEALTH AND SAFETY DATA SHEET No 18

### ZINC-COATED STEEL SHEETS AND COILS February 1995

Minor changes 3/96, 8/98, 5/01 and 8/01

#### 1. Identification of the Substance and Company

ZINC-COATED STEEL SHEETS AND COILS

Trade names: Galvatite, Zintec

Corus Colors. Corus Strip Products UK  
Environment Officer - Innovation Centre P.O. Box 10  
Shotton Works Newport  
Deesside Gwent  
CH5 2NH NP9 0XN

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Normal Hours: Innovation Centre  
(for additional H & S data sheets)  
Emergency : Security Emergency:  
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#### 2. Composition/Information on Ingredients

Mild steel sheet coated with zinc by electrolytic processes (e.g. Zintec) or hot dip processes (e.g. Galvatite) including zinc-iron alloy (Galvatite IZ). The hot dip coatings may contain up to 0.002% 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.



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VAT No. GB 428 7252 38.

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ONE STEP AHEAD.

### **3. 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.

### **4. First Aid Measures**

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

### **5. Fire Fighting Measures**

Non-flammable material but see '3. Hazards Identification' above.

### **6. Accidental Release Measures**

Not applicable.

### **7. 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 hazards 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.

### **8. 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 mg/m<sup>3</sup> 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 are no substitute for full physical protection.

## Current Occupational Exposure Limits

	Type of Limit	Reference Period	
		8 hr TWA*	(15 min)
Iron Oxide, fume (as Fe)	Occ. Exposure Standard	5 mg/m <sup>3</sup>	10 mg/m <sup>3</sup>
Zinc Oxide, fume	Occ. Exposure Standard	5 mg/m <sup>3</sup>	10 mg/m <sup>3</sup>
Chromium metal, also chromium (II) and (III) compounds (as Cr)	Occ. Exposure Standard	0.5 mg/m <sup>3</sup>	-
Chromium (VI) compounds (as Cr)	Max. Exposure Limit	0.05 mg/m <sup>3</sup>	-
Lead and Lead compounds Excluding tetraethyl lead (as Pb)	Approved Code of Practice Lead in Air Standard	0.15 mg/m <sup>3</sup>	
Antimony and it's compounds (as Sb)	Max. Exposure Limit	0.5 mg/m <sup>3</sup>	

\* Time Weighted Average

## 9. Physical and Chemical Properties

Coating - Melting point in range 419-450°C

Steel - Melting point in range 1450-1520°C

Density around 7.85 kg/dm<sup>3</sup> at 20°C

## 10. Stability and Reactivity

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

## 11. 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 (see EH40) 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.

## **12. Ecological Information**

No known harmful effects.

## **13. Disposal Considerations**

Recycle, or landfill.

## **14. Transport Information**

No special precautions.

## **15. Regulatory Information**

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

Compliant with the Packaging & Packaging Waste EC Directive 94/62/EEC on heavy metal content.

## **16. Other Information**

Some relevant references:-

HSE Guidance Notes

EH2 (Rev.): Chromium and its Inorganic Compounds - Health & Safety Precautions

EH26: Occupational Skin Diseases - Health & Safety Precautions

EH40: Occupational Exposure Limits - Current Edition

EH42: Monitoring Strategies for Toxic Substances

EH54: Assessment of Exposure to Fume from Welding and Allied Processes

EH55: The Control of Exposure to Fume from Welding, Brazing and Similar Processes

