

Material Safety Data Sheet (COSHH)

- 1. Identification of Substance and Company:** Galvanised plain carbon steel (Zinc coated) products, supplied by voestalpine Metsec plc.
- 2. Hazard Identification:** When zinc-coated steel is heated to high temperatures, e.g. during welding or flame cutting, it may emit irritant fumes, which can cause metal fume fever. Repeated contact with protective coatings on the sheet may cause skin problems.
- 3. Composition/Information on Ingredients:** Mild steel, zinc coated by electrolytic or hot dip processes, includes zinc-iron alloy. The section may have a thin coating of coolant oil.

Table showing typical composition of zinc-coated steel.

| Product area | Substance | EINECS No. | CAS No. | Range (%) by weight |
|-----------------|-----------|------------|-----------|--|
| Steel substrate | Iron | 231-096-4 | 7439-89-6 | Balance |
| | Carbon | 231-153-3 | 7440-44-0 | 0.001 - 0.50 |
| | Manganese | 231-105-1 | 7439-96-5 | 0.0 - 2.5 |
| | Chromium | 231-157-3 | 7440-47-3 | 0.0 - 0.60 |
| Zinc coating | Zinc | 231-175-3 | 7440-66-6 | Applied up to 300g/m ² /surface |

4. First Aid Measures

Skin contact: Cuts (lacerations) to the skin from sharp steel edges should be treated as normal cuts and, if required, seek medical attention. Wash if contaminated with oil coating.

Eye contact: If particles enter the eye, wash the eye with running water for at least ten minutes. Seek medical advice if irritation persists.

Inhalation: If hot work such as welding / burning causes exposure to significant concentrations of fume, remove exposed personnel to fresh air. Seek medical attention if symptoms such as coughing persist.

Ingestion: None required. In the event of injury to skin or eyes seek immediate medical attention.

5. Fire Fighting Measures: Non-flammable material.

6. Accidental Release Measures: Not applicable.

7. Handling and Storage:

Banding/strapping securing products is not to be used for lifting. 1. Products have sharp edges that may cause laceration. 2. Caution is to be taken when releasing/removing banding or strapping as tension is released. In both cases, suitable protective clothing required, such as face protector shields and cut resistant gloves. A safe system of work will be required for removing strapping/banding and handling of products with sharp edges. Care should be taken when lifting heavy loads and, where necessary, use appropriate lifting equipment.

8. Risks to Health, Exposure Control and Personal Protection:

Hazard phrases:

H335 – May cause respiratory irritation.

Precautionary phrases:

P281 – Use personal protection equipment as required.

P285 – In case of inadequate ventilation wear respiratory protection.

If fume or dust is generated, provide adequate ventilation ensuring the work exposure limits are not exceeded, inhalable dust to be below 5mg/m³. Where exceeded provide local exhaust ventilation and appropriate

respiratory protective equipment. Good housekeeping is essential to reduce the risk of dust inhalation. Use suitable cut resistant gloves and goggles when handling/drilling/cutting this product.

| Substance | Work Exposure Limit | |
|--|----------------------|---------------------|
| | 8hr TWA | STEL (15 min) |
| Iron oxide (Fe ₂ O ₃ & FeO) as iron | 5mg/m ³ | 10mg/m ³ |
| Zinc oxide (ZnO) as zinc fume/resp dust below: | | |
| Chromium metal, also Chromium (II) and (III) compounds (as Cr) | 0.5mg/m ³ | - |
| Manganese | 0.5mg/m ³ | - |

9. Physical and Chemical Properties:

Coating melting point in range 419-450°C
 Steel melting point in range 1450-1520°C
 Density around 7.85kg/dm³ at 20°C

- 10. Stability and Reactivity:** product is stable under normal conditions, fume produced under elevated temperatures.
- 11. Toxicological Information:** Under the normal applications of this product, health effects should not occur owing to the low risk of exposure to minimal hazard material. If mechanical activities, such as dry grinding or machining, or hot work, such as welding and burning, are carried out, dust / fume will be produced which may irritate the respiratory system at high airborne concentrations. The principal route of entry into the body is via inhalation of fume/dust. Please note: Under raised temperatures, the protective coating will breakdown.
- 12. Ecological Information:** No known harmful effects.
- 13. Disposal Considerations:** Reuse, recycle or landfill.
- 14. Transport Arrangements:** Zinc-coated steel is not classified as dangerous under CLP Regulations (EC) 1272/2008. No special precautions required.
- 15. Regulatory Information:** Coated steel products are articles and not substances. Compliant with the Packaging and Packing waste directive on heavy metal content.
- 16. Other Information:** Hazard phrases listed below will only occur when performing certain activities such as welding or cutting.

Hazard phrases:

H335 – May cause respiratory irritation.

Precautionary phrases:

P281 – Use personal protection equipment as required.

P285 – In case of inadequate ventilation wear respiratory protection.