

MATERIAL SAFETY DATA SHEET

STEEL PRODUCTS

CODE NO. N/A
 ORIGINAL ISSUE DATE: 4/7/2014 REVISED -

I. IDENTIFICATION PRODUCT NAME: UNISTRUT DEFENDER COMMON NAME(S): METAL FRAMING STRUT PRODUCTS AFFECTED: 1) GENERAL FITTINGS 2) FASTENERS & HARDWARE 3) CHANNEL NUTS	INFORMATION & EMERGENCY TELEPHONE NUMBERS (708) 339-1610 MANUFACTURER: UNISTRUT INTERNATIONAL 16100 SOUTH LATHROP AVE. HARVEY, IL 60426
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II. INGREDIENTS AND RECOMMENDED OCCUPATIONAL EXPOSURE LIMITS

Note: Steel Products under normal conditions do not present an inhalation, ingestion or contact health hazard (see Section VI)

BASE METAL, ALLOYING ELEMENTS AND METALLIC COATINGS	% WEIGHT	EXPOSURE LIMITS	
		OSHA PEL	ACGIH TLV (1992-1993)
Base Metal: Iron	95.70 - 98.3	15mg/M ³ for total particulate as iron oxide-total dust 5mg/M ³ for total particulate respirable fraction	5mg/M ³ for iron oxide fumes
Alloying Elements; Carbon	0.07 – 0.14	None established	None established
Manganese	0.25 – 0.60	(c) 5mg/M ³ - compounds (b) 3mg/M ³ - fume 1 mg/M ³ - fume	5mg/M ³ - dust & compounds 1mg/M ³ - fume (b) 3mg/M ³ - fume
Phosphorus	0.04 max	None for inorganic phosphates	None for inorganic phosphates
Sulfur	0.05 max	5 mg/M ³ as sulfur dioxide (b) 10 mg/M ³ as sulfur dioxide	5.2 mg/M ³ as sulfur dioxide (b) 13 mg/M ³ as sulfur dioxide
Metallic Coating Zinc	0.005 max	5 mg/M ³ – fume and respirable fraction 15 mg/M ³ – total dust	(b) 10 mg/M ³ – all forms (c) 15 mg/M ³ - dust 5 mg/M ³ – dust and fumes
Metallic Coating Zinc Oxide	0.01 max	5 mg/M ³ – fume and respirable fraction 15 mg/M ³ – total dust	(b) 10 mg/M ³ – all forms (c) 15 mg/M ³ - dust 5 mg/M ³ – dust and fumes
Top Coat Chromium Nitrate	.005 max	None	5 mg/M ³ as Cr

(b) Denotes short-term exposure limit (STEL).
 (c) Denotes "ceiling limit which is not to be exceeded at any time
 * Subject to Section EPCRA 313 reporting

Note: These products contain trace quantities of various elements but not at reportable levels under the OSHA Hazard Communication Standard Limit (29 CFR 1910.1200)

III. PHYSICAL DATA	
MELTING POINT	APPEARANCE and ODOR Gray No Odor
BASE METAL: 2750 °F	METALLIC COATING: 788 °F
IV. FIRE AND EXPLOSION HAZARD DATA	
<p>Flammability: May be combustible at high temperatures.</p> <p>Products of Combustion: Some metallic oxides</p> <p>Extinguishing Media: <i>Suitable:</i> Use an extinguishing agent suitable for the surrounding fire. <i>Not Suitable:</i> None known.</p> <p>Special Exposure Hazards: In case of fire, may produce hazardous decomposition products specifically including oxides of nitrogen.</p> <p>Special Protective Equipment for Fire Fighters: Fire Fighters should wear appropriate protective equipment and self contained breathing apparatus (SCBA) with a full face piece operated in positive pressure mode.</p>	

V. REACTIVITY DATA
<p>Stability and Reactivity: The product is stable.</p> <p>Incompatibility with Various Substances: Reactive with oxidizing materials, acids and cyanides.</p>

VI. HEALTH HAZARD DATA
<p>NOTE: Steel products under normal conditions do not present an inhalation, ingestion, or contact health hazard. However, operations such as burning, welding, sawing, brazing, grinding, and possibly machining, etc., which result in elevating the temperature of the product to or above its melting point or result in the generation of airborne particulates, may present health hazards.</p>
<p>EFFECTS OF OVEREXPOSURE: MAJOR EXPORSURE HAZARD</p> <p style="text-align: center;"> <input checked="" type="checkbox"/> INHALATION <input type="checkbox"/> SKIN CONTACT <input type="checkbox"/> EYE CONTACT <input type="checkbox"/> INGESTION </p> <p>Chronic inhalation of high concentrations of iron oxide fumes or dusts may lead to a benign pneumoconiosis (siderosis). Inhalation of high concentrations of ferric oxide may possibly enhance the risk of lung cancer development in workers exposed to pulmonary carcinogens.</p> <p>The inhalation of high concentrations of freshly formed oxide fumes and dusts of Manganese, Copper, Lead and/or Zinc in the respirable particle size range can cause an influenza-like illness termed metal fume fever. Typical symptoms last 12 to 48 hours and are characterized by metallic taste in the mouth, dryness and irritation of the throat, followed by weakness, muscle pain and chills. No long-term effects of metal fume fever have been noted.</p>
EMERGENCY AND FIRST AID PROCEDURES
<p>Eye Contact: Check for and remove any contact lenses. In case of contact with eyes, rinse immediately with plenty of water. Get medical attention is symptoms occur.</p> <p>Skin Contact: Wash with soap and water. Get medical attention if symptoms occur.</p> <p>Inhalation: For overexposure to airborne fumes and particulates, remove exposed person to fresh air. If breathing is difficult or has stopped, administer artificial respiration or oxygen as indicated. Seek medical attention promptly. Treat metal fume fever by bed rest, and administer a pain and fever reducing medication.</p> <p>Notes to Physician: No specific antidote. Medical staff must contact poison center.</p> <p>Protection of First-Aiders: No action shall be taken involving any personal risk or without suitable training.</p>

VII. SPILL OR LEAK PROCEDURES

Not applicable to steel in the solid state.

VIII. SPECIAL PROTECTION INFORMATION

Respiratory: For welding or burning – **NIOSH/MSHA** – approved dust and fume respirators should be used to avoid excessive inhalation of particulates. Appropriate respirator selection depends on the magnitude of exposure.

Skin: Protective gloves and coat should be worn as required for welding, burning or handling operations.

Eyes: Use safety glasses or goggles as required for welding, burning, or handling operations.

Ventilation: Local exhaust ventilation should be provided when sawing, grinding or machining to prevent excessive dust or fume exposure. During welding, burning or brazing please follow the ANSI Standard Z49.1 "Safety in Welding and Cutting".

Other Protective Equipment: Depending upon the conditions of use and specific work situations, additional protective equipment and/or clothing may be required to control exposures.

IX. SPECIAL PRECAUTIONS

Precautions to be taken in handling and storage: Operations with the potential for generating high concentrations of airborne particulates should be evaluated and controlled as necessary. Avoid breathing metal fumes and/or dusts.

OTHER COMMENTS:

Medical Conditions Aggravated by Exposure: Individuals with chronic respiratory disorders (i.e.: asthma, chronic bronchitis, emphysema, etc.) may be adversely affected by any fume or airborne particulate matter exposure.

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