# MATERIAL SAFETY DATA SHEET
# STEEL PRODUCTS

**CODE NO. N/A.**
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## I. IDENTIFICATION

**INFORMATION & EMERGENCY TELEPHONE NUMBERS**
**(708) 339-1610**

**PRODUCT NAME: UNISTRUT DEFENDER**

**COMMON NAME(S): METAL FRAMING STRUT**

**PRODUCTS AFFECTED:**
1) **CHANNEL (STRUT)**
2) **PIPE CLAMPS (EXCEPT HARDWARE)**
3) **CONCRETE INSERTS (P3200 & P3300)**

**MANUFACTURER:**
UNISTRUT INTERNATIONAL
16100 SOUTH LATHROP AVE.
HARVEY, IL 60426

## 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 | 95.1 – 99.8 | 10 mg/M$^3$ as $Fe_2O_3$ Fume | 5 mg/M$^3$ as $Fe_2O_3$ Fume |
| Manganese | < 0.5 | 5 mg/M$^3$ | 1 mg/M$^3$ as Fume |
| Zinc | 0.2 ~ 4.0 | 5 mg/M$^3$ as ZnO Fume | 5 mg/M$^3$ as ZnO Fume |
| Aluminum | 0.01 ~ 0.30 | None Listed | 10 mg/M$^3$ |
| Magnesium | 0.01 ~ 0.10 | 15 mg/M$^3$ as Oxide Fume | 10 mg/M$^3$ |

Note:
1) These products contain trace quantities of various elements but not at reportable levels under the OSHA Hazard Communication Standard Limit (29 CFR 1910.1200).
2) The weight of additional coating film shall be 0.001% or less of total product weight.

## III. PHYSICAL DATA

**MELTING POINT**

**BASE METAL:** > 2,550 °F **METALLIC COATING:** > 570 °F

**APPEARANCE and ODOR** **Metallic Luster No Odor**

## IV. FIRE AND EXPLOSION HAZARD DATA

STEEL PRODUCTS IN THE SOLID STATE PRESENT NO FIRE OR EXPLOSION HAZARD.

## V. REACTIVITY DATA

Stable under normal conditions of use, storage and transport.

## VI. HEALTH HAZARD DATA

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.

EFFECTS OF OVEREXPOSURE: MAJOR EXPORSURE HAZARD

- [x] INHALATION
- [ ] SKIN CONTACT
- [ ] EYE CONTACT
- [ ] INGESTION

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.

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.

EMERGENCY AND FIRST AID PROCEDURES

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.

**VII. SPILL OR LEAK PROCEDURES**

NOT APPLICABLE TO STEEL IN THE SOLID STATE.

**VIII. SPECIAL PROTECTION INFORMATION**

RESIPIRATORY: 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 should be worn as required for welding, burning or handling operations.

EYE:
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, emphyseme, etc.) may be adversely affected by any fume or airborne particulate matter exposure.

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