東和鋼鐵企業股份有限公司
TUNG HO STEEL ENTERPRISE CORPORATION

# SAFETY DATA SHEET

**May be used to comply with OSHA's Hazardous Communications Standards**
**29 CFR 1910.1200**

**Common Product Name：** **STRUCTURAL STEEL**

## Section 1 — Manufacture information

Manufacture's Name： TUNG HO STEEL ENTERPRISE CORPORATION (HEAD OFFICE)
Address： 6th F1., 9 Chang An E. Road, Sec. 1 Taipei, Taiwan
Telephone Number： +886 (0)2-2551-1100
Date SDS issued： April 2025

## Section 2— Hazardous ingredients

| Components | CAS No. | wt. % |
|---|---|---|
| Iron | 7439-89-6 | ＞97.0 |
| Manganese | 7439-96-5 | 0.40-1.60 |
| Carbon | 7440-44-0 | 0.20 max |
| Silicon | 7440-21-5 | 0.40 max |
| Copper | 7440-50-8 | 0.45 max |
| Chromium | 7440-47-3 | 0.30 max |
| Nickel | 7440-02-0 | 0.30 max |
| Molybdenum | 7439-98-7 | 0.05 max |
| Vanadium | 7440-62-2 | 0.08 max |
| Columbium | 7440-03-1 | 0.05 max |
| Phosphorus | 7723-14-0 | 0.04 max |
| Sulfur | 7704-03-1 | 0.04 max |
| Nitrogen | 7727-37-9 | 0.015 max |
| Aluminum | 7429-90-5 | 0.05 max |
| Tin | 7440-31-5 | 0.03 max |
| Boron | 7440-42-8 | 0.0008 max |

## Section 3— Physical / Chemical Characteristics

Boiling Point： N/A
Vapor Pressure： N/A
Vapor Density： N/A
Evaporation Rate： N/A
Solubility： N/A
Specific： Gravity >1
Appearance： Solid Gray Color

**Section 4— Fire and Explosion Hazard Data**

Flash Point：

N/A

Flammable Limits：

N/A

Extinguishing Media：

Dry Powder, Dry Sand, Dry Dolomite, Dry Graphite.

Special Fire Fighting Procedures：

In a situation where molten metal may be present during fire fighting, a respirator should be worn to minimize exposure.

Unusual Fire and Explosion Hazards：

Molten Steel may explode on contact to water.

**Section 5— Reactivity Data**

Stability：

Stable

Conditions to Avoid：

None

Incompatibility (Materials to Avoid)：

None

Hazardous Decomposition or Byproducts：

None

Hazardous Polymerization Data：

Will Not Occur

**Section 6— Health Hazard Data**

Route of Exposure：

Inhalation of dust or fume associated with thermal cutting, grinding, and melting.

Chronic Over Exposure：

Of iron oxide fumes may cause an apparent benign pneumoconiosis (siderosis) with few or no symptoms, Over exposure to dust and especially fumes containing the component elements of carbon steel may cause skin, nose, mouth, and eye irritation, and lung changes in workers leading to pulmonary and other disabling diseases.

Acute Effect：

Dust or fume from cutting, grinding or melting may cause an allergic reaction.

Potential Fire and Explosion Hazards：

Under normal conditions, steel products do not present fire or explosion hazards, and dust generated by handling steel products is oxidized and not combustible. Processing of steel product by some individual customers may produce potentially combustible dust that may represent a fire or explosion hazard

Chronic or Special Toxic Effects：

Repeated exposure to fine dusts may inflame the nasal mucosa and cause changes to the lung. In

addition, a red-brown pigmentation of the eye and/or skin may occur. Welding fumes have been associated with adverse health effects.

Target Organs：

Overexposure to specific components of this product that are generated in dusts or fumes may cause adverse effects to the following organs or systems: eyes, skin, liver, kidney, central nervous system, cardiovascular system, respiratory system.

Medical Conditions Aggravated by Exposure：

Diseases of the skin such as eczema may be aggravated by exposure. Also, disorders of the respiratory system including asthma, bronchitis, and emphysema. Long-term inhalation exposure to agents that cause pneumoconiosis (e.g. dust) may act synergistically with inhalation of oxide fumes or dusts of this product.

**Section 7— Emergency and First Aid Procedures**

Eye contact：

Flush with water for 15 minutes, then seek medical attention

Skin contact：

Flush with water, wash with soapy water, seek medical attention if irritation persists.

Inhalation：

Move to fresh air, get medical attention if irritation persists

Ingestion：

Swallowing of structural steel is unlikely.

Notes to Physician：

Inhalation of metal fume or metal oxides may produce an acute febrile state, with cough, chills, weakness, and general malaise, nausea, vomiting, muscle cramps, and remarkable leukocytosis. Treatment is symptomatic, and condition is self limited in 24-48 hours. Chronic exposure to dusts may result in pneumoconiosis of mixed type.

**Section 8— Precautions for Safe Handling and Use**

Special Steps to be taken in case of spill：

None

Precautions in Handling and Storing：

None

Waste Disposal Methods：

Follow State and local Regulations for disposal of an industrial solid waste

**Section 9— Control Measure**

Ventilation：

Local exhaust should be used when dust or fumes are generated which could exceed the OSHA TLV.

Respiratory Protection：

Use NIOSH approved respirator should OSHA TLV’s be exceeded.

Protective Gloves：

Recommended to avoid Cuts.

Eye Protection：

Recommended while cutting, grinding or melting.

Other Protective Equipment or Work/Hygienic Practices：

None.

**Section 10— Supplier Notification**

This product contains the following toxic chemicals subject to the reporting requirements of section 313 of the Emergency Planning and Community Right to Know Act of 1986 49 CFR 372：Chromium and Nickel

TUNG HO STEEL has used sources in this SDS believed reliable, however. The information is provided without any representation or warranty expressed or implied regarding accuracy of correctness.

**Section 11—Accidental Release Measures**

**Precautions if Material is Spilled or Released**：

Emergency response is unlikely unless in the form of combustible dust. Avoid inhalation, eye, or skin contact of dusts by using appropriate precautions outlined in this SDS. Fine turnings and small chips should be swept or vacuumed and placed into appropriate disposable containers. Keep fine dust or powder away from sources of ignition. Scrap should be reclaimed for recycling. Prevent materials from entering drains, sewers, or waterways. Specific standards and regulations may be applicable to materials generated by individual customer processes. As appropriate, these standards and regulations should be consulted for applicability.

**Fire and Explosion Hazards**：

Some customer processes may generate combustible dust that may require specific precautions when cleaning spills or releases of dust.

**Environmental Precautions**：

Some grades of steel may contain reportable quantities of alloying elements.

**Waste Disposal Methods**：

Dispose of used or unused product in accordance with applicable Federal, State, and Local regulations. Please recycle.

**Section 12—Handling and Storage**

**Storage Temperatures**：

Stable under normal temperatures and pressures.

**Precautions to be Taken in Handling and Storing**：

Store away from strong oxidizers. Dusts and/or powders, alone, or combined with process specific fluids, may form explosive mixtures with air. Applicable Federal, state and local laws and regulations may require testing dust generated from processing of steel products to determine if it represents a fire or explosion hazard and to determine appropriate protection methods. Avoid breathing dusts or fumes.

## Section 13—Stability and Reactivity

**Stability**：

Stable.

**Conditions to Avoid**：

Steel at temperatures above the melting point may liberate fumes containing oxides of iron and alloying elements. Avoid generation of airborne fume.

**Hazardous Polymerization**：

Will not occur.

**Incompatibility (Materials to Avoid)** ：

Reacts with strong acids to form hydrogen gas. Do not store near strong oxidizers.

**Hazardous Decomposition Products**：

Metallic fumes may be produced during welding, burning, grinding, and possibly machining or any situation with the potential for thermal decomposition.

## Section 14—Ecological Information

**Aquatic Ecotoxicological Data**：

No specific information available on this product.

**Environmental Fate Data**：

No specific information available on this product.

## Section 15—Disposal Consideration

Recovery and reuse, rather than disposal, should be the ultimate goal of handling efforts. Dispose in accordance with federal, state, and local health and environmental regulations. Prevent materials from entering drains, sewers, or waterways.

## Section 16—Other Information

The information in this Safety Data Sheet (SDS) was obtained from sources which we believe are reliable; however, the information is provided without any representation or warranty, expressed or implied, regarding the accuracy or correctness. The conditions or methods of handling, storage, use and disposal of the product are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage, or expense arising out of or in any way connected with the handling, storage, use, or disposal of this product.