



SAFETY DATA SHEET

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: Carbon and Alloy Steel

MANUFACTURER: *Alton Steel Inc.*
ADDRESS: 5 Cut Street
Alton, IL 62002

EMERGENCY PHONE: 618-610-9593
OTHER CALLS: 618-463-4490

PRODUCT USE: Bar and structural steel

SECTION 2: HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW:

There are no chemical exposure hazards associated with uncoated steel products at room temperature. As supplied, this product is not classified as an OSHA hazardous chemical. However, the processing of this product may generate dusts, particulates and/or fumes that are hazardous, accordingly:

GHS CLASSIFICATION:

Carcinogenicity – Category 2
Skin Sensitization – Category 1
Target Organ Systemic Toxicity (Repeated Exposure) – Category 1

LABELLING:

Symbol:



Signal Word: Danger

PRECAUTIONARY STATEMENTS:

Avoid breathing dust/fumes.

SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS

COMPONENT	CAS No.	OSHA PEL mg/m3	% BY WEIGHT
Iron	7439-89-5	10 (oxide fume)	95-99
Carbon	7440-44-0	PNOR	.05 – 1
Manganese	7439-96-5	5 (fume)	.05 – 2
Phosphorus	7723-14-0	0.1	<0.05
Sulfur	7446-09-05	PNOR	<0.15
Silicon	7440-21-3	15	<0.5
Nickel	7440-02-0	1	0 – 0.75
Chromium	7440-47-3	1	0 – 1.20
Molybdenum	7439-98-7	15	0 – 0.35
Copper	7440-50-8	1 (dust) 0.1 (fume)	<0.5

The listed composition information represents elements from the different alloys used in the production of steel at Alton Steel Inc. The combination/concentration will vary depending on the grade of steel. The specification sheet for the grade in question should be used for exact information.

SECTION 4: FIRST AID MEASURES

EYES: If overexposed to fumes or dust, flush immediately with large amounts of water for at least 15 minutes. If eye irritation persists, seek medical attention. Thermal burns require immediate medical attention.

SKIN: If overexposed to fumes or dust, wash affected areas thoroughly with soap and water. Flush thermal burns with cold water and seek immediate medical attention.

INGESTION: Not considered an ingestion hazard.

INHALATION: Move to fresh air. Consult a physician if symptoms develop.

NOTES TO PHYSICIANS OR FIRST AID PROVIDERS: Excessive inhalation may result in metal fume fever, characterized by a metallic taste in the mouth and influenza like symptoms including, cough, shortness of breath, dizziness, weakness, fever, chills, vomiting and muscle/joint pain. Treatment is symptomatic and symptoms will normally disappear within 24 to 48 hours.

SECTION 5: FIRE-FIGHTING MEASURES

FLAMMABLE LIMITS IN AIR (% BY VOLUME): Not applicable

FLASH POINT: Not applicable

AUTOIGNITION TEMPERATURE: Not applicable

EXTINGUISHING MEDIA: For molten metal, use dry powder or sand.

SPECIAL FIRE FIGHTING PROCEDURES: Do not use water on molten metal – explosion hazard. Do not use carbon dioxide (CO₂). Full protective equipment, including self-contained breathing apparatus should be used when entering confined spaces.

UNUSUAL FIRE AND EXPLOSION HAZARDS: High concentrations of metallic fines in the air may be combustible and present an explosion hazard.

SECTION 6: ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS: Evacuate personnel to safe areas. Spills of molten material should be isolated from flammable materials.

ENVIRONMENTAL PRECAUTIONS: Prevent material from entering sewers and open bodies of water.

WASTE DISPOSAL METHODS: Waste should be recycled, if at all possible. If not, dispose of material according to federal, state and local regulations.

SECTION 7: HANDLING AND STORAGE

Dusts may form explosive mixtures with air.

Material should not be stored in areas where strong acids, liquids or mists can contact steel.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

VENTILATION : Provide sufficient mechanical ventilation and local exhaust to maintain airborne levels below exposure limits.

RESPIRATORY PROTECTION: If engineering controls do not maintain airborne levels below exposure limits in Section 3, a properly fitted, NIOSH approved (or equivalent) respirator must be worn. Whenever a respirator is used, a respiratory protection program meeting OSHA 1910.134 requirements must be followed.

EYE PROTECTION: Use safety goggles, glasses or faceshield.

SKIN PROTECTION: Use protective gloves.

EXPOSURE GUIDELINES: No permissible exposure limit (PEL) or threshold limit value (TLV) exist for steel. See Section 3 for component materials.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE:	Silver, grey
PHYSICAL STATE:	Solid
ODOR:	None
pH AS SUPPLIED:	Not applicable
BOILING POINT:	5432 °F
MELTING POINT:	2400 - 2800 °F
VAPOR PRESSURE:	Not applicable
VAPOR DENSITY (AIR = 1):	Not applicable
SPECIFIC GRAVITY:	7.6 – 7.8
EVAPORATION RATE:	Not applicable
UPPER/LOWER FLAMMABILITY LIMIT:	Not applicable
SOLUBILITY (H₂O):	Insoluble
OCTANOL/H₂O COEFF.:	Not applicable
AUTO IGNITION:	Not applicable
DECOMPOSITION TEMP.:	Not applicable

SECTION 10: STABILITY AND REACTIVITY

STABILITY: Stable

CONDITIONS TO AVOID: None

INCOMPATIBILITY (MATERIAL TO AVOID): Strong acids, strong oxidizers

HAZARDOUS DECOMPOSITION OR BY-PRODUCTS: Temperatures above the melting point may generate metal oxide fumes.

HAZARDOUS REACTIONS: Contact with strong acids may produce hydrogen gas.

SECTION 11: TOXICOLOGICAL INFORMATION

ACUTE HEALTH HAZARDS:

EYES: Dusts or particulates may cause mechanical irritation including pain, tearing, and redness. Fumes may be irritating. Thermal burns may result from contact with heated material.

SKIN: Dusts or particulates may cause mechanical irritation. An allergic reaction including redness, itching and burning may occur. Thermal burns may result from contact with heated material.

INGESTION: Not a likely route of exposure. Ingesting dust may cause irritation.

INHALATION: Short term exposure to metal fumes and dust may result in discomfort and dryness of the throat. Excessive inhalation may result in metal fume fever, characterized by a metallic taste in the mouth and influenza like symptoms including, cough, shortness of breath, dizziness, weakness, fever, chills, and muscle/joint pain.

CHRONIC HEALTH HAZARDS: Long term exposure to metal fumes may contribute to pulmonary irritation. Long-term exposure to iron dusts/fumes may produce siderosis, a benign pneumoconiosis.

CARCINOGENICITY: Welding fumes have been listed by IARC as a carcinogen (Group 2B). This product may contain small amounts of nickel which is listed as a carcinogen by NTP and IARC (Group 1 for nickel compounds and Group 2B for metallic nickel).

OTHER: There is limited evidence that welding fumes may cause adverse reproductive and fetal effects. Manganese, copper and nickel have been reported to have adverse reproductive effects in experimental animals. Copper and nickel have been shown to be fetotoxic in experimental animals.

SECTION 12: ECOLOGICAL INFORMATION

No ecological data is available for this material.

SECTION 13: DISPOSAL CONSIDERATIONS

Reuse or recycling is the preferred disposition for steel. Dispose of in accordance with local, state and federal regulations.

SECTION 14: TRANSPORT INFORMATION

Not Regulated

SECTION 15: REGULATORY INFORMATION

TSCA (TOXIC SUBSTANCE CONTROL ACT): The components of this product are listed on the TSCA Inventory.

313 REPORTABLE INGREDIENTS: Chromium
Manganese
Nickel

CALIFORNIA PROPOSITION 65:

Warning! This product contains chemicals (arsenic, beryllium, cobalt, cadmium, lead, nickel) known to the state of California to cause cancer.

Warning! This product contains chemicals (cadmium, lead) known to the state of California to cause birth defects or other reproductive harm.

SECTION 16: OTHER INFORMATION

PREPARED: 02/20/19

DISCLAIMER:

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