

SAFETY DATA SHEET

Low-Carbon Steel Wire Rod | C1008 | Conforms to OSHA HCS 29 CFR 1910.1200 (GHS 16-section format)

SECTION 1 - PRODUCT AND COMPANY IDENTIFICATION

Product name	Low-Carbon Steel Wire Rod - C1008
Other identifiers	C1008 carbon steel; SAE 1008; uncoated steel wire rod
SDS number	3GEN-SDS-WIREROD-001
Recommended use	Raw material used by 3GEN Masonry Products, Inc. to manufacture ladder-type joint reinforcement, truss-type joint reinforcement, and carbon-steel veneer ties.
Uses advised against	Not intended to cover mill-galvanized, hot-dip-galvanized, stainless-steel, coated, or leaded products. Separate SDSs apply to coated products.
Manufacturer / supplier	3GEN Masonry Products, Inc. 8620 Spruiell Street, Leeds, Alabama 35094 USA
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Emergency (24-hour)	CHEMTREC 1-800-424-9300 (US/Canada) +1-703-527-3887 (international)
Prepared / revised	2 September 2026 Version 1.0

SECTION 2 - HAZARDS IDENTIFICATION

GHS classification (29 CFR 1910.1200): The solid wire rod as supplied is not classified as hazardous. It is a massive metal product. Processing operations that generate airborne dust or fume require hazard controls.

Signal word	None for the solid product as supplied.
Hazard statements	None required for the solid product as supplied.
Pictograms	None required for the solid product as supplied.
Precautionary statements	Use ventilation and appropriate PPE when cutting, grinding, welding, heating, or otherwise processing the product.
Other hazards	Dust or fume generated during processing may irritate the eyes, skin, and respiratory tract. Welding or heating may generate iron oxide and manganese-containing fumes. Fine metal dust may form combustible concentrations in air. Hot or molten metal can cause severe thermal burns.

SECTION 3 - COMPOSITION / INFORMATION ON INGREDIENTS

C1008 is a low-carbon steel. Composition is based on the grade designation; actual heat chemistry is stated on the applicable mill test report.

Ingredient	CAS No.	Typical / specified wt. %	Notes
Iron	7439-89-6	Balance (typically >99)	Base metal
Manganese	7439-96-5	0.30-0.50	Alloy constituent
Carbon	7440-44-0	0.10 max.	Alloy constituent
Phosphorus	7723-14-0	0.040 max.	Residual
Sulfur	7704-34-9	0.050 max.	Residual

SECTION 4 - FIRST-AID MEASURES

General. Under normal handling, the solid product presents few health hazards. First-aid measures below primarily address dust, fume, sharp edges, and hot material.

Inhalation. Move to fresh air. Keep at rest. Seek medical attention if symptoms develop or persist. If breathing is difficult, trained personnel may administer oxygen.

Skin. Wash dust from skin with soap and water. Remove contaminated clothing. For cuts, obtain appropriate first aid. Cool thermal burns with clean running water; do not remove solidified metal from skin. Obtain medical attention.

Eyes. Flush cautiously with water for at least 15 minutes, including beneath eyelids. Remove contact lenses if easy to do. Seek medical attention if irritation persists. Embedded iron particles require prompt professional removal because they may produce rust staining and tissue injury. Obtain immediate care for hot-metal injury.

Ingestion. Not an expected route of exposure. Rinse mouth. Do not induce vomiting. Seek medical advice if material is swallowed or symptoms occur.

Most important symptoms. Dust or fume may cause eye and respiratory irritation, coughing, sore throat, headache, or nausea. Symptoms from excessive metal-fume exposure may be delayed. Treat symptomatically.

SECTION 5 - FIRE-FIGHTING MEASURES

Suitable media	Use extinguishing media appropriate for the surrounding fire. For burning metal fines, use dry sand or an extinguishing agent suitable for metal fires.
Unsuitable media	Do not apply water to molten metal. Avoid methods that disperse burning dust.
Specific hazards	Solid wire rod is not combustible under ordinary conditions. Fine dust may burn or form an explosive mixture in air. Fire or high heat may produce metal-oxide fumes.
Protective equipment	Firefighters should wear full protective clothing and positive-pressure self-contained breathing apparatus when smoke, dust, or fumes are present.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

Personal precautions. Solid rod may be heavy and may have sharp edges. Use suitable gloves and safe material-handling practices. For dust or scale, avoid breathing airborne material and use the PPE described in Section 8.

Clean-up. Collect solid material mechanically for reuse or recycling. Vacuum dust using equipment suitable for combustible metal dust, or sweep carefully without creating airborne dust. Do not use compressed air.

Environmental precautions. Prevent fines and metal-containing process water from entering drains, soil, or surface water.

SECTION 7 - HANDLING AND STORAGE

Safe handling. Use mechanical aids and safe lifting practices for coils or bundles. Beware of stored energy in coiled rod, spring-back, sharp ends, and pinch points. Avoid generating dust. Provide local exhaust for cutting, grinding, welding, heating, or other dust/fume-producing operations. Wash hands before eating, drinking, or smoking.

Storage. Store dry, stable, and secured against rolling, shifting, or collapse. Keep away from strong acids and strong oxidizers. Protect from moisture where corrosion is undesirable.

SECTION 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

Occupational exposure limits apply to airborne contaminants generated during processing, not to the intact solid rod.

Substance	OSHA PEL	NIOSH REL	Form / note
Iron oxide	10 mg/m3	5 mg/m3	Fume, as Fe
Manganese compounds	5 mg/m3 ceiling	1 mg/m3 TWA; 3 mg/m3 STEL	Fume/dust, as Mn
Particulates not otherwise regulated	15 mg/m3 total; 5 mg/m3 respirable	-	Dust

Engineering controls. Use local exhaust ventilation at the source of dust or fume. Maintain airborne concentrations below applicable limits. Control dust accumulation through suitable housekeeping.

Respiratory protection. When engineering controls cannot maintain exposures below applicable limits, use a NIOSH-approved respirator selected under an OSHA-compliant respiratory-protection program.

Eye / face protection. Wear safety glasses with side shields. Use goggles or a face shield for grinding, cutting, or operations with flying particles. Use appropriate welding protection for hot work.

Skin / body protection. Wear cut-resistant work gloves and protective footwear. Select heat-resistant clothing and gloves for hot work. Do not wear loose clothing around moving wire-processing equipment.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

Appearance / form	Solid metallic wire rod, commonly supplied in coils
Color	Gray to silver; surface scale may appear dark gray
Odor / threshold	Odorless / not applicable
pH	Not applicable
Melting point	Approximately 1,425-1,540 C (2,597-2,804 F)
Boiling point	Not determined for the alloy
Flash point / flammability	Not applicable to solid rod; fine metal dust may be combustible
Vapor pressure / evaporation	Not applicable
Relative density	Approximately 7.8
Solubility in water	Insoluble
Autoignition / explosive limits	Not established for solid rod
Viscosity	Not applicable

SECTION 10 - STABILITY AND REACTIVITY

Reactivity	Not reactive under recommended handling and storage conditions.
Chemical stability	Stable as supplied.
Hazardous reactions	Strong acids may react with steel and release flammable hydrogen gas. Fine metal dust may present a combustion or explosion hazard.
Conditions to avoid	Uncontrolled dust generation or accumulation; contact of molten metal with water; excessive heat except in controlled processing.
Incompatible materials	Strong acids and strong oxidizing agents.
Hazardous decomposition	Metal-oxide fumes may be generated by welding, thermal cutting, or fire.

SECTION 11 - TOXICOLOGICAL INFORMATION

Likely routes of exposure. The intact solid product is not an inhalation hazard. Processing may create dust or fume that can be inhaled or contact the eyes and skin.

Acute effects. Dust may cause mechanical irritation of the eyes, skin, nose, and throat. Excessive inhalation of freshly formed metal fumes may cause flu-like symptoms sometimes described as metal fume fever. Hot material causes thermal burns.

Iron / iron oxide. Repeated excessive exposure to iron-oxide fume or dust may cause benign lung changes (siderosis).

Manganese. Prolonged or repeated excessive inhalation of manganese-containing dust or fume may affect the central nervous system. Symptoms can include weakness, movement changes, or behavioral effects.

Carcinogenicity. C1008 steel and its specified constituents are not classified in this SDS as carcinogenic at the stated composition. IARC classifies welding fumes as carcinogenic to humans (Group 1); the composition and hazard of welding fume depend on the process, consumables, surface condition, and contaminants.

Medical conditions aggravated by exposure. Individuals with asthma, chronic bronchitis, emphysema, or other respiratory disorders may be more susceptible to the effects of excessive dust or fume exposure.

Other endpoints. The solid alloy has not been tested as a whole. It is not classified in this SDS for acute toxicity, skin corrosion, serious eye damage, sensitization, germ-cell mutagenicity, reproductive toxicity, or aspiration hazard.

SECTION 12 - ECOLOGICAL INFORMATION

Ecotoxicity	Massive solid steel is expected to present low immediate aquatic hazard. Fine particles or dissolved metal ions may affect aquatic organisms.
Persistence / degradability	Metals are persistent and do not biodegrade.
Bioaccumulative potential	Not determined for the alloy as a whole.
Mobility in soil	Low for massive solid material; may increase after corrosion or acid contact.
Other adverse effects	Do not release metal-bearing dust, sludge, or process wastewater without appropriate control.

SECTION 13 - DISPOSAL CONSIDERATIONS

Recycle as steel scrap whenever practicable. Dispose of product, dust, scale, sludge, and contaminated packaging in accordance with applicable federal, state, and local requirements. Waste generators must determine whether a particular waste is hazardous based on the process and contaminants involved.

SECTION 14 - TRANSPORT INFORMATION

DOT / ADR / IATA / IMDG	Not regulated as a hazardous material or dangerous good in solid form.
UN number / shipping name	Not applicable
Hazard class / packing group	Not applicable
Marine pollutant	No, in solid form
Special precautions	Secure coils and bundles against rolling, shifting, or release during transport. Protect from moisture as appropriate.

SECTION 15 - REGULATORY INFORMATION

TSCA. The constituent elements are listed on, or otherwise compliant with, the U.S. Toxic Substances Control Act inventory requirements.

EPCRA / SARA Title III. Manganese compounds may be subject to Section 313 reporting when applicable thresholds and reporting criteria are met. The user is responsible for evaluating site-specific processing and reporting obligations.

California Proposition 65. C1008 steel is not intentionally formulated with a Proposition 65-listed constituent; however, commercial steel may contain incidental trace impurities not included in the grade limits. The applicable mill test report and the user's processing and exposure conditions must be evaluated before determining warning obligations. Welding may create additional substances requiring separate evaluation.

OSHA. This SDS is provided for hazard communication regarding foreseeable processing hazards. Applicability of OSHA's article exemption depends on the product's use and whether hazardous chemicals are released under normal conditions.

HMIS	Health 1* Flammability 0 Physical Hazard 0 (*dust/fume processing hazard)
NFPA	Health 1 Flammability 0 Instability 0

SECTION 16 - OTHER INFORMATION

This Safety Data Sheet follows the 16-section format of OSHA 29 CFR 1910.1200. It is specific to uncoated C1008 low-carbon steel wire rod supplied for conversion into masonry reinforcement and veneer-tie products. It does not cover mill-galvanized, hot-dip-galvanized, stainless-steel, coated, or leaded materials.

Composition values reflect the commonly specified chemistry for C1008 steel; the applicable mill test report controls for a particular heat. Exposure information is based on OSHA air-contaminant requirements and NIOSH occupational guidance available as of the revision date.

The information is believed accurate as of the revision date and is provided as guidance for safe handling and use. Conditions of processing and use are outside 3GEN Masonry Products, Inc.'s control. Users must evaluate their operations, maintain appropriate engineering controls and PPE, and comply with applicable occupational-safety, environmental, transportation, and other legal requirements.

Prepared by	3GEN Masonry Products, Inc. - Product Technical / EHS
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24-hour emergency	CHEMTREC 1-800-424-9300