



SAFETY DATA SHEET

1. Identification

Product Identifier: **Stainless Steel Wire (Types 304 and 316)**

Manufacturer/Supplier: 3GEN Masonry Products, Inc. Mailing Address: 8528 Davis Blvd., #134-246, North Richland Hills, TX 76182 Warehouse Address: 8550 Parkway Drive, Leeds, AL 35094 Tel#: 1-800-556-5785 3genmp.com

Recommended use: Stainless steel wire for various masonry construction applications.

Recommended restrictions: None known.

2. Hazards Identification

Description of hazards

Dust and fumes may be generated during working, e.g. during welding, cutting or grinding. Long term over-exposure to air pollutants in the form of dust or fumes may affect health and cause, for instance, chronic bronchitis.

A thin coat of anti-corrosion oil is applied to certain materials. This should be taken into account during handling and working. Heating and working of materials that have been coated with anti-corrosion oil may cause irritating and hygienically harmful fumes. Skin irritation may be caused by repeated or extended contact with anti-corrosion oil.

3. Composition/Information on Ingredients

Material/Component CAS Number % Weight

Alloying Elements

Carbon (C)	7440-44-0	0.08 max	0.08 max
Manganese (Mn)	7439-96-5	2.0 max	2.0 max
Phosphorous (P)	7723-14-0	0.045 max	0.045 max
Sulfur (S)	7704-34-9	0.030 max	0.030 max

Material/Component CAS Number % Weight

Silicon (Si)	7440-21-3	2.0 max	0.75 max
Chromium (Cr)	7440-47-3	18.0-20.0	18.0-20.0
Nickel (Ni)	7440-02-0	8.0-12.0	8.0-12.0
Molybdenum (Mo)	7439-98-7	0.0	2.0-3.0
Nitrogen (N)	7727-37-9	0.10 max	0.10 max
Base Metal			
Iron (Fe)	7439-89-6	Balance	Balance

NOTE: The above listing is a summary of elements used to alloy stainless steel. Various grades of steel will contain different combinations of these elements. Trace elements may also be present in minute amounts.

4. First-Aid Measures**Description of Necessary First Aid Measures:**

Eye contact: flush eyes with plenty of water for at least 15 minutes. seek medical attention if eye irritation persists.

Skin contact: maintain good personal hygiene. wash affected area with mild soap and water. seek medical attention if skin irritation persists.

Inhalation: remove to fresh air. check for clear airway, breathing and presence of pulse. If necessary administer CPR. Consult a physician immediately.

Ingestion: Rare in industry. dust may irritate mouth and gastrointestinal tract. If ingested, seek medical attention promptly.

Most important symptoms/effects, acute and delayed:

Stainless steel as sold and shipped is not likely to present an acute or chronic health effects. However, during processing (cutting, milling, grinding, melting or welding) emitted byproducts may cause irritations, difficulty in breathing, coughing or wheezing. may cause allergic skin reactions. Indication of immediate medical attention and special treatment needed, if necessary:

Notes to physician: May cause sensitization by skin contact or inhalation. Treat symptomatically.

5. Fire-fighting measures

SUITABLE EXTINGUISHING MEDIA: Non-flammable. Will not support combustion. Not applicable for solid product. Use extinguishers appropriate for surrounding materials.

Do not use water on molten metal.

SPECIFIC HAZARDS ARISING FROM MATERIAL: Not applicable for solid product.

HAZARDOUS COMBUSTION PRODUCTS: At temperatures above the melting point, fumes containing metal oxides and other alloying elements may be liberated.

SPECIAL PROTECTIVE EQUIPMENT AND PRECAUTIONS FOR FIRE FIGHTERS:

Firefighters should wear self-contained NIOSH-approved breathing apparatus and full protective clothing.

EXPLOSION DATA:

SENSITIVITY TO MECHANICAL IMPACT: None.

SENSITIVITY TO STATIC DISCHARGE: N/A

6. Accidental release measures

PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES:

Not applicable to stainless steel in solid state. Avoid dust formation. Ensure adequate ventilation. Clean-up personnel should be protected against contact with eyes and skin protection.

ENVIRONMENTAL PRECAUTIONS: Not applicable to stainless steel in solid state.

METHODS AND MATERIALS FOR CONTAINMENT AND CLEANING UP:

Not applicable to stainless steel in solid state. For spills involving fine dusts, remove by vacuuming or wet sweeping methods to prevent spreading of dust. Avoid inhalation of dusts.

7. Handling and storage

PRECAUTIONS FOR SAFE HANDLING: Not applicable to stainless steel in solid state. Operations with the potential for generating high concentrations of airborne particulates should be evaluated and controlled as necessary. Practice good housekeeping. Avoid breathing metal fumes and/or dust.

CONDITIONS FOR SAFE STORAGE: No special storage conditions for stainless steel in solid state.

INCOMPATIBLE PRODUCTS: Store away from acids and incompatible materials.

8. Exposure controls/personal protection

CONTROL PARAMETERS: There are no exposure limits for stainless steel.

The exposure limit for iron-containing fumes has been established at 5 mg/m³ with ACGIH's TWA. The individual complex compounds within the fume may have lower exposure limits than the general fume.

Material/Component CAS Number OSHA PEL (mg/m³) ACGIH TLV (mg/m³)

Alloying Elements

Carbon (C)	7440-44-0	None Listed	None Listed
Manganese (Mn)	7439-96-5	5.0 as Mn	1.0 as Mn
Phosphorous (P)	7723-14-0	0.1 as P	0.1 as P
Sulfur (S)	7704-34-9	13 (Sulfur Dioxide)	5 (Sulfur Dioxide)
Silicon (Si)	7440-21-3	None Listed	None Listed
Chromium (Cr)	7440-47-3	1.0 as Cr	0.5 as Cr
Nickel (Ni)	7440-02-0	1.0 as Ni	1.0 as Ni
Molybdenum (Mo)	7439-98-7	5.0 Sol. Cmpds	5.0 Sol. Cmpds
Nitrogen (N)	7727-37-9	None Listed	Simple Asphyxiant

Base Metal

Iron (Fe)	7439-89-6	(Fe ₂ O ₃ Fume)	5 (Fe ₂ O ₃ Fume)
-----------	-----------	---------------------------------------	---

Notes:

- Threshold Limit Values (TLV) established by the American Conference of Governmental Industrial Hygienists (ACGIH 2011) are 8-hour Time Weighted Average concentrations unless otherwise noted.

APPROPRIATE ENGINEERING CONTROLS: Provide general or local exhaust to minimize airborne concentrations during milling, grinding, melting and welding operations.

INDIVIDUAL PROTECTIVE MEASURES: Dependent upon process being performed on material each operation must be addressed for suitable equipment.

GLOVES (Specify): Wear gloves as required **EYES (Specify):** Safety glasses or goggles as required.

CLOTHING (Specify): N/A **FOOTWEAR (Specify):** N/A

9. Physical and Chemical Properties

Appearance: Metallic solid with gray/silver luster; may have thin anti-corrosion oil coating. **Odor:** None in solid state; metallic odor from processing fumes. **Odor Threshold:** Not applicable. **pH:** Not applicable. **Melting Point/Freezing Point:** Approximately 2,500–2,800°F (1,371–1,538°C). **Initial Boiling Point and Boiling Range:** Not applicable. **Flash Point:** Not applicable. **Evaporation Rate:** Not applicable. **Flammability (Solid, Gas):** Not flammable. **Upper/Lower Flammability or**

Explosive Limits: Not applicable. **Vapor Pressure:** Not applicable. **Vapor Density:** Not applicable. **Relative Density:** 7.7–8.0 (water = 1). **Solubility(ies):** Insoluble in water. **Partition Coefficient: n-Octanol/Water:** Not applicable. **Auto-Ignition Temperature:** Not applicable. **Decomposition Temperature:** Not applicable. **Viscosity:** Not applicable.

10. Stability and Reactivity

Reactivity: Not reactive in solid state. May react with strong acids to produce hydrogen gas. **Chemical Stability:** Stable under normal conditions. **Possibility of Hazardous Reactions:** None under normal use. Fumes from welding may contain hazardous metal oxides. **Conditions to Avoid:** Contact with strong acids or incompatible materials; excessive heat leading to melting. **Incompatible Materials:** Strong acids, oxidizers, halogens. **Hazardous Decomposition Products:** Metal oxide fumes from heating, welding, or burning.

11. Toxicological Information

Acute Toxicity: Not classified; solid product is not toxic. Dust/fumes may irritate eyes/skin/respiratory tract. **Skin Corrosion/Irritation:** May cause mechanical irritation or cuts; anti-corrosion oil may cause dermatitis. **Serious Eye Damage/Irritation:** Dust may cause mechanical irritation. **Respiratory or Skin Sensitization:** Prolonged exposure to nickel/chromium fumes may cause sensitization or allergic reactions. **Germ Cell Mutagenicity:** Not classified. **Carcinogenicity:** Hexavalent chromium in welding fumes is IARC Group 1 (carcinogenic); nickel compounds Group 2B. Solid product not carcinogenic. **Reproductive Toxicity:** Not classified. **STOT – Single Exposure:** Fumes may cause respiratory irritation. **STOT – Repeated Exposure:** Chronic exposure to fumes may cause lung damage or metal fume fever. **Aspiration Hazard:** Not classified. **Symptoms/Effects:** Acute: Irritation, coughing. Delayed: Allergic reactions, chronic bronchitis.

12. Ecological Information

Toxicity: Not toxic in solid state. Metal dust may be harmful to aquatic life if released in large quantities. **Persistence and Degradability:** Not biodegradable; persistent in environment. **Bioaccumulative Potential:** Low for stainless steel; some elements (e.g., nickel) may bioaccumulate. **Mobility in Soil:** Low mobility in solid form. **Other Adverse Effects:** None known.

13. Disposal Considerations

Disposal Methods: Recycle stainless steel scrap where possible. Dispose of dust or residues as non-hazardous industrial waste per local regulations. Do not incinerate.

14. Transport Information

UN Number: Not applicable. **UN Proper Shipping Name:** Not applicable. **Transport Hazard Class(es):** Not classified as hazardous for transport (DOT, IATA, IMDG). **Packing Group:** Not applicable. **Environmental Hazards:** Not a marine pollutant. **Special Precautions:** None.

15. Regulatory Information

Safety, Health, and Environmental Regulations:

- **U.S. Federal:** TSCA (listed), SARA Title III (chromium, nickel reportable if thresholds exceeded), Prop 65 (nickel, chromium listed as carcinogens).

- **OSHA:** Exposure limits as listed in Section 8.
- **State Regulations:** Varies; check local Right-to-Know laws.
- **International:** REACH (EU): May require registration for certain alloys; WHMIS (Canada): Not controlled in solid form.

16. Other Information

Date of Preparation/Revision: November 2025 **Prepared By:** Safety Department, 3GEN Masonry Products, Inc. **Disclaimer:** The information herein is believed to be accurate but is provided "as is" without warranty. Users should evaluate suitability for their applications.