

Safety Data Sheet

Section 1: Identification

Product Name: Hi-Alloy 500

Product Type: Filler Metal (Welding Alloy)

Manufacturer: Inweld Corporation

Address: 3962 Portland St, Coplay, PA 18037, UNITED STATES

Emergency Phone Number: (800) 424-9300

Inweld Phone Number: (800) 346-5368

Recommended Use: Welding filler metal

Restrictions on Use: For industrial use only

Section 2: Hazard(s) Identification

Classification:

- Carcinogenicity — Category 1
- Specific Target Organ Toxicity — Repeated Exposure (STOT RE) — Category 1
- Acute Toxicity (Inhalation) — Category 4
- Skin Sensitization — Category 1

Signal Word: Danger

Hazard Statements:

- May cause cancer.
- Causes damage to organs through prolonged or repeated exposure.
- Harmful if inhaled.
- May cause an allergic skin reaction.

Precautionary Statements:

- Avoid breathing dust/fume/gas/mist/vapors/spray.
- Use only outdoors or in a well-ventilated area.

- Wear protective gloves/protective clothing/eye protection/face protection.
- If exposed or concerned: Get medical advice/attention.
- Wash thoroughly after handling.
- Contaminated work clothing should not be allowed out of the workplace.

GHS Hazard Pictograms:



Section 3: Composition/Information on Ingredients

Chemical Name	CAS Number	Approx. % by Weight	Hazard Classification
Nickel (Ni)	7440-02-0	40-60	Carcinogen (1), STOT RE (1)
Chromium (Cr)	7440-47-3	10-30	Carcinogen (1), STOT RE (1)
Iron (Fe)	7439-89-6	Balance	Not classified
Other Alloying Elements —		<10	Various

Section 4: First-Aid Measures

Inhalation:

Remove victim to fresh air and keep at rest in a position comfortable for breathing. Seek medical attention if symptoms persist.

Skin Contact:

Wash skin thoroughly with soap and water. If irritation or allergic reaction occurs, seek medical attention.

Eye Contact:

Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing. Seek medical attention if irritation persists.

Ingestion:

Rinse mouth. Do not induce vomiting. Seek immediate medical attention.

Section 5: Fire-Fighting Measures

Suitable Extinguishing Media:

Use dry chemical, CO₂, water spray (fog), or foam.

Unsuitable Extinguishing Media:

Do not use water jet directly on molten metal.

Specific Hazards Arising from the Chemical:

Fumes and metal dust may form combustible mixtures in air. Welding fumes are hazardous when inhaled.

Protective Equipment for Firefighters:

Wear full protective gear and self-contained breathing apparatus (SCBA).

Section 6: Accidental Release Measures

Personal Precautions:

Avoid dust generation. Use personal protective equipment.

Environmental Precautions:

Prevent entry into drains or waterways.

Methods for Cleanup:

Sweep up or vacuum dust; place in a suitable disposal container.

Section 7: Handling and Storage

Handling:

- Avoid breathing dust/fume.
- Use local exhaust ventilation.
- Wear appropriate PPE.
- Wash hands and exposed skin after handling.

Storage:

- Store in a dry, well-ventilated area.

- Keep away from incompatible materials.

Section 8: Exposure Controls/Personal Protection

Exposure Limits:

Component	OSHA PEL (TWA)	ACGIH TLV (TWA)
Nickel	1 mg/m ³ (metal, inhalable)	1.5 mg/m ³
Chromium (VI)	0.005 mg/m ³	0.01 mg/m ³
Iron	10 mg/m ³ (total dust)	5 mg/m ³ (respirable)

Engineering Controls:

Use adequate ventilation to keep airborne concentrations below exposure limits.

Personal Protective Equipment (PPE):

- Respiratory protection: NIOSH-approved respirator when exposure limits are exceeded.
- Eye protection: Safety goggles or face shield.
- Skin protection: Gloves and protective clothing.

Section 9: Physical and Chemical Properties

Property	Value
Appearance	Solid wire, metallic color
Odor	Odorless
Odor Threshold	Not applicable
pH	Not applicable
Melting Point	Approx. 1400°C (depends on alloy)
Boiling Point	Not applicable

Property	Value
Flash Point	Not applicable
Evaporation Rate	Not applicable
Flammability	Not flammable
Vapor Pressure	Not applicable
Vapor Density	Not applicable
Relative Density	Approx. 7.5-8.5 g/cm ³
Solubility	Insoluble in water
Partition Coefficient	Not applicable
Auto-ignition Temp	Not applicable
Decomposition Temp	Not applicable

Section 10: Stability and Reactivity

Reactivity:

Stable under normal conditions.

Chemical Stability:

Stable.

Possibility of Hazardous Reactions:

None known.

Conditions to Avoid:

Avoid dust generation and high temperatures beyond melting point.

Incompatible Materials:

Strong acids, bases, and oxidizers.

Hazardous Decomposition Products:

Fumes containing metal oxides and possibly toxic gases during welding.

Section 11: Toxicological Information

Routes of Exposure: Inhalation, skin contact, eye contact, ingestion (unlikely).

Symptoms:

- Inhalation: Respiratory irritation, metal fume fever.
- Skin contact: Allergic dermatitis.
- Eye contact: Irritation.
- Ingestion: Gastrointestinal irritation.

Chronic Effects:

May cause cancer (lung, nasal, sinus). Prolonged exposure may damage lungs and kidneys.

Carcinogenicity:

Nickel and chromium compounds are classified as carcinogens by OSHA, IARC, and NTP.

Section 12: Ecological Information

Ecotoxicity:

May be toxic to aquatic life with long lasting effects.

Persistence and Degradability:

Metal does not biodegrade but may bioaccumulate.

Mobility:

Low mobility in soil due to metal nature.

Section 13: Disposal Considerations

Dispose of in accordance with local, state, and federal regulations. Do not dispose of metal dusts into the environment or drains.

Section 14: Transport Information

UN Number: Not regulated as hazardous for transport.

Proper Shipping Name: Not applicable.

Transport Hazard Class: Not regulated.

Packing Group: Not applicable.

Section 15: Regulatory Information

OSHA: Hazardous chemical under HCS.

CERCLA: Not listed.

SARA Title III: Contains chemicals subject to reporting under Sections 302, 311/312, and 313 (Nickel, Chromium).

TSCA: All components listed.

Section 16: Other Information

Preparation Date: 2025-07-02

Revision: 1.0

Disclaimer: This SDS was prepared based on information believed to be accurate and reliable at the time of preparation. Users should verify information for their specific conditions of use.