

Safety Data Sheet

Section 1: Identification

Product identifier:

Hi-Alloy 460

Recommended use:

Filler metal for welding applications

Manufacturer:

Inweld Corporation

3962 Portland St, Coplay, PA 18037

UNITED STATES

Emergency phone number:

(800) 424-9300

Manufacturer phone number:

(800) 346-5368

Section 2: Hazard(s) Identification

Classification (GHS):

- **Carcinogenicity** — Category 1A
- **Respiratory Sensitization** — Category 1
- **Skin Sensitization** — Category 1
- **Specific Target Organ Toxicity — Repeated Exposure** — Category 1

Signal word:

Danger

Hazard statements:

- May cause cancer.
- May cause allergy or asthma symptoms or breathing difficulties if inhaled.

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

Precautionary statements:

- Obtain special instructions before use.
- Do not handle until all safety precautions have been read and understood.
- Avoid breathing fumes/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.
- Store locked up.
- Dispose of contents/container in accordance with local regulations.

GHS Hazard pictograms:



Section 3: Composition/Information on Ingredients

Chemical Name	CAS Number	Approx. % (wt)	Classification
Nickel (Ni)	7440-02-0	40-50%	Carc. 1A, Resp. Sens. 1, Skin Sens. 1
Chromium (Cr)	7440-47-3	20-30%	Carc. 1A
Iron (Fe)	7439-89-6	Balance	Not classified
Other alloying elements	Various	<10%	Not classified

Section 4: First-Aid Measures

Inhalation:

Remove person to fresh air and keep comfortable for breathing. If symptoms persist, seek medical attention.

Skin contact:

Wash with plenty of soap and water. Remove contaminated clothing. If irritation or rash develops, get medical advice.

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, carbon dioxide, or foam.

Unsuitable extinguishing media:

Water jet may spread fire.

Specific hazards:

Metal dust or fumes may ignite and burn with intense heat. Hazardous combustion products may include metal oxides and toxic fumes.

Protective equipment:

Firefighters should wear full protective gear and self-contained breathing apparatus.

Section 6: Accidental Release Measures

Personal precautions:

Avoid dust generation. Use appropriate PPE.

Environmental precautions:

Prevent entry into waterways or drains.

Methods for containment and cleaning up:

Sweep up and place in suitable containers for disposal. Avoid creating dust.

Section 7: Handling and Storage

Handling:

Avoid inhalation of fumes or dust. Use only in well-ventilated areas. Wear protective equipment.

Storage:

Store in a cool, dry place. Keep container tightly closed and away from incompatible materials.

Section 8: Exposure Controls/Personal Protection

Exposure limits:**Substance OSHA PEL (TWA) ACGIH TLV (TWA)**

Nickel 1 mg/m³ 0.015 mg/m³ (as Ni)

Chromium 1 mg/m³ (Cr VI) 0.5 mg/m³ (Cr VI)

Iron 10 mg/m³ 5 mg/m³

Engineering controls:

Use local exhaust ventilation to keep exposure below limits.

Personal protective equipment:

- Respiratory protection: NIOSH-approved respirator if exposure exceeds limits
- Gloves: Chemical resistant
- Eye protection: Safety goggles or face shield
- Protective clothing: Long sleeves and pants

Section 9: Physical and Chemical Properties

- **Appearance:** Solid wire or rod
- **Color:** Silver-gray metallic
- **Odor:** Odorless
- **Melting point:** ~1450-1550 °C (depending on composition)

- **Boiling point:** Not applicable
- **Flash point:** Not applicable
- **Solubility in water:** Insoluble
- **Density:** Approx. 7.5–8.5 g/cm³

Section 10: Stability and Reactivity

Stability: Stable under normal conditions.

Conditions to avoid: Avoid dust accumulation and high temperatures that may generate fumes.

Incompatible materials: Strong acids, oxidizers.

Hazardous decomposition products: Metal oxides, toxic fumes.

Section 11: Toxicological Information

Routes of exposure: Inhalation, skin contact, ingestion.

Symptoms: Respiratory irritation, sensitization, allergic skin reaction, possible carcinogenic effects after prolonged exposure.

Carcinogenicity: Classified as carcinogenic to humans (IARC Group 1, Nickel and Chromium compounds).

Section 12: Ecological Information

Not expected to be harmful to the environment in typical use. Avoid release of metal dust into waterways.

Section 13: Disposal Considerations

Dispose of in accordance with local, state, and federal regulations. Metal scrap may be recycled where possible.

Section 14: Transport Information

Not regulated under DOT for shipment.

Section 15: Regulatory Information

OSHA Hazard Communication Standard: This product is classified as hazardous.

SARA Title III: Contains nickel and chromium compounds which are subject to reporting.

Section 16: Other Information

Prepared by: Inweld Corporation

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Disclaimer: The information provided is believed to be accurate and represents the best knowledge available to Inweld Corporation at the date of publication. It is intended to describe the product for safety requirements only and is not intended to guarantee any specific properties.