

Safety Data Sheet

Section 1: Identification

Product Identifier:

Hi-Alloy 100

Manufacturer:

Inweld Corporation

3962 Portland St

Coplay, PA 18037

UNITED STATES

Telephone (General Information): (800) 346-5368

Emergency Phone Number: (800) 424-9300 (CHEMTREC)

Recommended Use: Welding applications

Restrictions on Use: For industrial use only

Section 2: Hazard(s) Identification

Classification of the substance or mixture:

- Skin irritation – Category 2
- Eye irritation – Category 2A
- Carcinogenicity – Category 1A
- Specific Target Organ Toxicity, Repeated Exposure – Category 2
- Reproductive toxicity – Category 2
- Acute toxicity (inhalation, dust/fume) – Category 4

Signal Word:

DANGER

Hazard Statements:

- Causes skin irritation

- Causes serious eye irritation
- May cause cancer
- May damage fertility or the unborn child
- Harmful if inhaled
- May cause 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 dust/fume/gas/mist/vapors/spray
- Wash hands thoroughly after handling
- 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

GHS Pictograms:



Section 3: Composition/Information on Ingredients

Component	CAS Number	Weight %
Iron (Fe)	7439-89-6	Balance
Chromium (Cr)	7440-47-3	10–25%
Nickel (Ni)	7440-02-0	5–15%
Manganese (Mn)	7439-96-5	1–5%
Silicon (Si)	7440-21-3	<2%

Note: Exact percentages are withheld as a trade secret.

Section 4: First-Aid Measures

Inhalation:

Move to fresh air. Seek medical attention if symptoms persist.

Skin Contact:

Wash skin thoroughly with soap and water. Seek medical attention if irritation develops.

Eye Contact:

Flush eyes with plenty of water for at least 15 minutes. Remove contact lenses if present and easy to do. Get medical attention.

Ingestion:

Not expected under normal use. Seek medical advice if symptoms occur.

Section 5: Fire-Fighting Measures

Suitable Extinguishing Media:

Use extinguishing agents suitable for surrounding fire.

Special Hazards Arising from the Chemical:

Fumes may contain metal oxides and other hazardous decomposition products.

Protective Equipment for Firefighters:

Wear self-contained breathing apparatus and full protective gear.

Section 6: Accidental Release Measures

Personal Precautions:

Wear appropriate personal protective equipment. Avoid breathing dust/fumes.

Environmental Precautions:

Prevent material from entering waterways.

Methods for Cleanup:

Sweep or vacuum up material and place in a suitable container for disposal.

Section 7: Handling and Storage

Precautions for Safe Handling:

Avoid breathing fumes. Use only with adequate ventilation. Wear protective equipment.

Conditions for Safe Storage:

Store in a dry, cool, well-ventilated place away from incompatible materials.

Section 8: Exposure Controls/Personal Protection

Occupational Exposure Limits:

Component OSHA PEL (mg/m³) ACGIH TLV (mg/m³)

Iron	10 (fume)	5 (respirable)
Chromium	1.0	0.5
Nickel	1.0	0.2
Manganese	5.0 (Ceiling)	0.1 (inhalable)

Engineering Controls:

Use local exhaust ventilation during welding.

Personal Protective Equipment (PPE):

- **Eye/Face Protection:** Safety goggles or face shield
- **Skin Protection:** Protective gloves and clothing
- **Respiratory Protection:** Use NIOSH-approved respirators if exposure limits are exceeded

Section 9: Physical and Chemical Properties

Property	Value
Appearance	Metallic solid rod/wire
Odor	Odorless
Odor threshold	Not applicable

Property	Value
pH	Not applicable
Melting point	> 1300°C (varies by alloy)
Boiling point	Not available
Flash point	Not applicable
Flammability	Not flammable
Vapor pressure	Not applicable
Solubility in water	Insoluble

Section 10: Stability and Reactivity

Reactivity: Not reactive under normal conditions.

Chemical Stability: Stable under recommended conditions.

Hazardous Reactions: None under normal processing.

Incompatible Materials: Strong acids, oxidizers.

Hazardous Decomposition Products: Metal oxides and fumes during welding.

Section 11: Toxicological Information

Routes of Exposure: Inhalation, skin contact, eye contact

Symptoms:

- Irritation to eyes and skin
- Respiratory effects from fumes
- Chronic overexposure may cause lung damage, reproductive effects, and cancer (Nickel and Chromium VI compounds)

Carcinogenicity:

- Nickel and hexavalent chromium are classified as carcinogenic by IARC and NTP

Section 12: Ecological Information

Ecotoxicity: Harmful to aquatic life in large quantities.

Persistence and Degradability: Not readily biodegradable.

Bioaccumulative Potential: Possible for some metals.

Mobility in Soil: Low mobility under normal conditions.

Section 13: Disposal Considerations

Dispose of in accordance with local, state, and federal regulations. Do not dispose of in waterways.

Section 14: Transport Information

DOT (U.S.):

Not regulated as hazardous material

IMDG/IATA:

Not classified as dangerous goods

Section 15: Regulatory Information

OSHA: This product is classified as hazardous under 29 CFR 1910.1200

SARA 313:

Contains reportable quantities of Chromium, Nickel, and Manganese

TSCA: All ingredients listed

Section 16: Other Information

SDS Revision Date: July 2, 2025

Prepared By: Inweld Corporation – Safety Compliance Department

Disclaimer:

The information in this SDS is believed to be accurate but is not guaranteed. It is the user's responsibility to determine the suitability of this information for the safe use of the product.