Inweld
Welding Alloys and Supplies

Safety Data Sheet

Section 1: Identification

Product Identifier:
410NiMo

Recommended Use:
Welding filler metal for martensitic stainless steels

Manufacturer:
Inweld Corporation
3962 Portland St
Coplay, PA 18037
United States

Inweld Phone Number:
(800) 346-5368

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

Section 2: Hazard(s) Identification

OSHA HCS Classification (29 CFR 1910.1200):

- Carcinogenicity – Category 1
- Acute Toxicity (Inhalation) – Category 3
- Specific Target Organ Toxicity (Repeated Exposure) – Category 1
- Skin Sensitization – Category 1

Signal Word:
DANGER

GHS Hazard Pictograms:

Hazard Statements:

- May cause cancer by inhalation.
- Toxic if inhaled.
- May cause damage to lungs and respiratory system through prolonged or repeated exposure.
- May cause skin sensitization.
- Welding fumes and gases may be hazardous to health.

Precautionary Statements:

- Do not breathe fumes, vapors, or dust.
- Use only with adequate ventilation or respiratory protection.
- Wear protective gloves, clothing, eye and face protection.
- Obtain special instructions before use.

Section 3: Composition/Information on Ingredients

(Customized for ER410NiMo wire classification)

Component	CAS Number	Weight % (Typical)
Iron (Fe)	7439-89-6	Balance
Chromium (Cr)	7440-47-3	11.0 – 12.5
Nickel (Ni)	7440-02-0	4.0 – 5.0
Molybdenum (Mo)	7439-98-7	0.4 – 0.7
Manganese (Mn)	7439-96-5	≤ 1.0
Silicon (Si)	7440-21-3	≤ 1.0
Carbon (C)	7440-44-0	≤ 0.03
Phosphorus (P)	7723-14-0	≤ 0.03

Component	CAS Number	Weight % (Typical)
Sulfur (S)	7704-34-9	≤ 0.03

Note: Welding fumes may contain **hexavalent chromium compounds** formed during welding, which are carcinogenic.

Section 4: First-Aid Measures

Inhalation:
Move person to fresh air. If breathing is difficult, administer oxygen. Seek medical attention.

Skin Contact:
Wash with soap and water. Remove contaminated clothing.

Eye Contact:
Flush eyes with water for at least 15 minutes. Seek medical attention.

Ingestion:
Not a normal route of exposure. Seek medical attention if symptoms occur.

Section 5: Fire-Fighting Measures

Suitable Extinguishing Media:
Dry chemical, CO_2, water spray, or foam.

Specific Hazards:
Welding fumes may contain toxic metal oxides.

Protective Equipment:
Self-contained breathing apparatus (SCBA).

Section 6: Accidental Release Measures

- Avoid generating dust or fumes
- Use appropriate personal protective equipment
- Collect mechanically and dispose of in accordance with regulations

Section 7: Handling and Storage

- Use with adequate ventilation
- Avoid breathing fumes
- Store in a dry location
- Keep containers closed when not in use

Section 8: Exposure Controls/Personal Protection

Occupational Exposure Limits (OSHA PEL / ACGIH TLV):

- Iron Oxide Fume: 5 mg/m^3
- Chromium (VI): 0.005 mg/m^3
- Nickel (Insoluble Compounds): 1 mg/m^3

Engineering Controls:

Local exhaust ventilation recommended.

PPE:

- Respiratory protection as needed
- Welding helmet with proper filter
- Protective gloves and clothing

Section 9: Physical and Chemical Properties

- Appearance: Solid metallic wire/rod
- Odor: Odorless
- Melting Point: ~1400–1450°C
- Solubility: Insoluble in water

Section 10: Stability and Reactivity

- Stable under normal conditions

- Avoid strong acids and oxidizers
- Hazardous decomposition: Metal oxides, chromium fumes

Section 11: Toxicological Information

- Inhalation of welding fumes may cause metal fume fever
- Chromium VI and nickel compounds are known carcinogens
- Prolonged exposure may damage lungs and respiratory tract

Section 12: Ecological Information

- Not readily biodegradable
- Metal compounds may be toxic to aquatic life

Section 13: Disposal Considerations

Dispose of in accordance with local, state, and federal regulations.

Section 14: Transport Information

Not regulated as a hazardous material for transport.

Section 15: Regulatory Information

- OSHA Hazard Communication Standard: Hazardous
- IARC: Nickel compounds and Cr(VI) – Carcinogenic

Section 16: Other Information

Prepared for: Inweld Corporation

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Disclaimer:

This SDS is provided for guidance only and is believed to be accurate as of the date prepared. It does not constitute a guarantee.