

Safety Data Sheet

Section 1: Identification

Product Identifier: 80S-D2

Other means of identification: Mild Steel Welding Wire (Low Alloy)

Recommended use: Arc Welding Electrode

Restrictions on use: Use only as directed by welding guidelines.

Manufacturer:

Inweld Corporation
3962 Portland St
Coplay, PA 18037
UNITED STATES

Phone: (800) 346-5368

Emergency Phone Number: CHEMTREC (800) 424-9300

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Section 2: Hazard(s) Identification

Classification (in accordance with 29 CFR 1910.1200):

- Carcinogenicity – Category 1B
- Reproductive Toxicity – Category 2
- Specific Target Organ Toxicity (Repeated Exposure) – Category 1
- Acute Toxicity (Inhalation) – Category 4
- Skin Sensitization – Category 1
- Eye Irritation – Category 2A

Label Elements

Signal Word: DANGER

Hazard Pictograms:



Hazard Statements:

- H332: Harmful if inhaled
- H317: May cause an allergic skin reaction
- H319: Causes serious eye irritation
- H350: May cause cancer (inhalation)
- H361: Suspected of damaging fertility or the unborn child
- H372: Causes damage to organs through prolonged or repeated exposure

Precautionary Statements:

- P201: Obtain special instructions before use
- P202: Do not handle until all safety precautions have been read and understood
- P260: Do not breathe dust/fumes/gas/mist/vapors/spray
- P280: Wear protective gloves/protective clothing/eye protection/face protection
- P304 + P340: IF INHALED: Remove person to fresh air and keep comfortable for breathing
- P308 + P313: IF exposed or concerned: Get medical advice/attention
- P501: Dispose of contents/container in accordance with local/regional/national/international regulations

Section 3: Composition/Information on Ingredients

Chemical Name CAS Number % Weight Classification

Iron (Fe)	7439-89-6	Balance	Not classified
Manganese (Mn)	7439-96-5	1–3%	STOT RE 2, H373
Silicon (Si)	7440-21-3	0.5–1.0%	Not classified

Chemical Name CAS Number % Weight Classification

Chromium (Cr) 7440-47-3 <0.5% Carc. 2, H351

Nickel (Ni) 7440-02-0 <0.5% Carc. 1B, STOT RE 1, H350, H372

Note: Fume composition during welding may vary depending on process, base metal, and conditions.

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. Remove contaminated clothing. Seek medical attention if irritation develops.

Eye contact:

Flush eyes with water for at least 15 minutes. Seek medical attention if irritation persists.

Ingestion:

Not a likely route of exposure. If swallowed, seek medical help immediately.

Most important symptoms:

May cause irritation, respiratory issues, and allergic skin reactions. Chronic exposure may result in lung damage or cancer.

Section 5: Fire-Fighting Measures

Suitable Extinguishing Media:

Use extinguishing agent suitable for surrounding fire (dry chemical, CO₂, water spray, foam).

Unsuitable Media:

None known.

Special hazards:

Welding operations may produce sparks and hot metal, which can ignite flammable materials.

Protective equipment:

Wear full firefighting gear and self-contained breathing apparatus.

Section 6: Accidental Release Measures

Personal precautions:

Avoid dust formation. Avoid breathing fumes or dust.

Environmental precautions:

Prevent product from entering drains or waterways.

Methods for cleanup:

Sweep up material and place in suitable container for disposal. Avoid generating dust.

Section 7: Handling and Storage

Handling:

Use adequate ventilation. Do not breathe welding fumes. Use proper PPE.

Storage:

Store in dry, ventilated area away from moisture and incompatible materials.

Section 8: Exposure Controls/Personal Protection

Substance	OSHA PEL	ACGIH TLV
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Iron Oxide	10 mg/m ³ (fume)	5 mg/m ³ (resp.)
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Manganese	5 mg/m ³ Ceiling	0.02 mg/m ³ (resp.)
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Nickel	1 mg/m ³	0.1 mg/m ³
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Chromium	1 mg/m ³	0.5 mg/m ³
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Engineering Controls:

Provide local exhaust ventilation during welding.

Personal Protective Equipment (PPE):

- **Eye/face:** Welding helmet with proper filter lens

- **Skin:** Flame-resistant gloves and protective clothing
- **Respiratory:** Use NIOSH-approved respirators if ventilation is inadequate
- **Hygiene:** Do not eat, drink, or smoke while using this product

Section 9: Physical and Chemical Properties

- **Appearance:** Solid wire, metallic gray
- **Odor:** None
- **Melting point:** Approx. 1420°C – 1480°C (2608°F – 2696°F)
- **Boiling point:** Not applicable
- **Solubility:** Insoluble in water
- **Flammability:** Not flammable
- **Explosive limits:** Not applicable

Section 10: Stability and Reactivity

Reactivity: Not reactive under normal conditions.

Chemical stability: Stable under recommended storage conditions.

Conditions to avoid: Moisture and incompatible materials.

Incompatible materials: Strong acids, strong oxidizers.

Hazardous decomposition products: Welding fumes, metal oxides.

Section 11: Toxicological Information

Routes of exposure: Inhalation, skin contact, eye contact

Acute effects: Respiratory irritation, metal fume fever

Chronic effects: Lung damage, cancer (from nickel, chromium), nervous system effects (from manganese)

Carcinogenicity:

- **Nickel** – IARC Group 1 (Carcinogenic to humans)
- **Chromium** – IARC Group 2B (Possibly carcinogenic)

- **Manganese** – Neurological toxicity with chronic exposure

Section 12: Ecological Information

Ecotoxicity: No data available

Persistence/Degradability: Not biodegradable

Bioaccumulative potential: Potential for bioaccumulation in aquatic organisms

Mobility in soil: Not expected to be mobile

Section 13: Disposal Considerations

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

Do not allow into water systems or sewers.

Section 14: Transport Information

UN Number: Not regulated

Proper Shipping Name: Not regulated as hazardous material

Hazard Class: Not applicable

Packing Group: Not applicable

Environmental Hazards: None

Special precautions: Avoid packaging damage and moisture

Section 15: Regulatory Information

TSCA Inventory: All components listed

SARA Title III:

- Section 313: Manganese, Chromium, Nickel – subject to reporting

California Proposition 65:

WARNING: This product contains chemicals (e.g., nickel, chromium) known to the State of California to cause cancer and reproductive harm.

Section 16: Other Information



Prepared by: Inweld Corporation

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Disclaimer:

The information herein is believed to be accurate at the time of preparation, but Inweld Corporation makes no guarantees as to its accuracy or completeness. It is the user's responsibility to determine the suitability of this information for their particular purposes.