

Safety Data Sheet

Section 1: Identification

Product Identifier:

Carbon Steel Welding Wire / Filler Metal

AWS Classifications:

ER70S-2, ER70S-3, ER70S-4, ER70S-6, ER70S-7, RG-45, RG-60

Recommended Use:

Gas Metal Arc Welding (GMAW), Gas Tungsten Arc Welding (GTAW), Oxy-Fuel Welding

Manufacturer:

Inweld Corporation

3962 Portland St

Coplay, PA 18037

United States

Phone: (800) 346-5368

Emergency Phone (24 hr):

CHEMTREC: (800) 424-9300

Section 2: Hazard(s) Identification

Classification (GHS):

- Acute Toxicity (Inhalation) – Category 4
- Carcinogenicity – Category 1A (welding fumes)
- Specific Target Organ Toxicity (Repeated Exposure) – Category 1
- Flammable Solid – Category 2

Signal Word:

DANGER

GHS Hazard Pictograms



Hazard Statements:

- H228: Flammable solid
- H332: Harmful if inhaled
- H350: May cause cancer
- H372: Causes damage to organs through prolonged or repeated exposure

Precautionary Statements:

- Avoid breathing welding fumes and dust
- Use only with adequate ventilation or local exhaust
- Wear protective gloves, clothing, and eye/face protection
- Do not eat, drink, or smoke when using this product

Section 3: Composition/Information on Ingredients

Note: Percentages are typical ranges by weight. Exposure occurs primarily during welding when fumes are generated.

ER70S-2

Component	CAS No.	Weight %
Iron (Fe)	7439-89-6	Balance
Manganese (Mn)	7439-96-5	1.40 – 1.85
Silicon (Si)	7440-21-3	0.40 – 0.70
Carbon (C)	7440-44-0	≤ 0.15
Aluminum (Al)	7429-90-5	≤ 0.15
Titanium (Ti)	7440-32-6	≤ 0.15

Component	CAS No.	Weight %
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Zirconium (Zr)	7440-67-7	≤ 0.15
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ER70S-3

Component	CAS No.	Weight %
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Iron	7439-89-6	Balance
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Manganese	7439-96-5	0.90 – 1.40
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Silicon	7440-21-3	0.45 – 0.75
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Carbon	7440-44-0	≤ 0.15
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ER70S-4

Component	CAS No.	Weight %
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Iron	7439-89-6	Balance
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Manganese	7439-96-5	1.00 – 1.50
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Silicon	7440-21-3	0.65 – 1.00
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Carbon	7440-44-0	≤ 0.15
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ER70S-6

Component	CAS No.	Weight %
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Iron	7439-89-6	Balance
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Manganese	7439-96-5	1.40 – 1.85
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Silicon	7440-21-3	0.80 – 1.15
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Component CAS No. Weight %

Carbon 7440-44-0 ≤ 0.15

ER70S-7

Component CAS No. Weight %

Iron 7439-89-6 Balance

Manganese 7439-96-5 1.00 – 1.80

Silicon 7440-21-3 0.60 – 1.00

Carbon 7440-44-0 ≤ 0.15

RG-45

Component CAS No. Weight %

Iron 7439-89-6 Balance

Manganese 7439-96-5 0.30 – 0.60

Silicon 7440-21-3 0.10 – 0.30

Carbon 7440-44-0 ≤ 0.12

RG-60

Component CAS No. Weight %

Iron 7439-89-6 Balance

Manganese 7439-96-5 0.60 – 0.90

Silicon 7440-21-3 0.20 – 0.50

Component CAS No. Weight %

Carbon 7440-44-0 ≤ 0.15

Section 4: First-Aid Measures

Inhalation:

Remove person to fresh air. Seek medical attention if symptoms persist.

Skin Contact:

Wash with soap and water.

Eye Contact:

Flush eyes with water for at least 15 minutes.

Ingestion:

Not expected during normal use. Seek medical advice if swallowed.

Section 5: Fire-Fighting Measures

Suitable Extinguishing Media:

Dry chemical, CO₂, foam

Hazards:

Fine metal dust may form explosive mixtures with air.

Protective Equipment:

Self-contained breathing apparatus (SCBA)

Section 6: Accidental Release Measures

- Avoid dust formation
- Collect mechanically
- Use non-sparking tools

Section 7: Handling and Storage

- Handle with adequate ventilation

- Store in dry area away from ignition sources
- Ground containers to prevent static discharge

Section 8: Exposure Controls/Personal Protection

OSHA PEL (example):

- Iron oxide fume: 10 mg/m³
- Manganese: 5 mg/m³ ceiling

PPE:

- Welding helmet with proper filter
- Respiratory protection as required
- Heat-resistant gloves

Section 9: Physical and Chemical Properties

- Appearance: Solid wire or rod
- Odor: Odorless
- Melting Point: ~1,370°C (2,500°F)
- Solubility: Insoluble in water

Section 10: Stability and Reactivity

- Stable under normal conditions
- Avoid strong acids and oxidizers

Section 11: Toxicological Information

- Welding fumes may cause metal fume fever
- Prolonged exposure may cause lung and nervous system damage
- Welding fumes classified as carcinogenic

Section 12: Ecological Information

- Not expected to be environmentally hazardous in solid form

Section 13: Disposal Considerations

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

Section 14: Transport Information

Not regulated as hazardous for transport.

Section 15: Regulatory Information

- OSHA HCS 29 CFR 1910.1200 – Compliant
- California Proposition 65: Welding fumes contain chemicals known to cause cancer

Section 16: Other Information

Prepared for: Inweld Corporation

Revision Date: 1/5/2026

Disclaimer: Information is believed accurate but not guaranteed.