

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
Zirconium (Zr)	7440-67-7	≤ 0.15

ER70S-3

Component CAS No. Weight %

Iron	7439-89-6	Balance
Manganese	7439-96-5	0.90 – 1.40
Silicon	7440-21-3	0.45 – 0.75
Carbon	7440-44-0	≤ 0.15

ER70S-4

Component CAS No. Weight %

Iron	7439-89-6	Balance
Manganese	7439-96-5	1.00 – 1.50
Silicon	7440-21-3	0.65 – 1.00
Carbon	7440-44-0	≤ 0.15

ER70S-6

Component CAS No. Weight %

Iron	7439-89-6	Balance
Manganese	7439-96-5	1.40 – 1.85
Silicon	7440-21-3	0.80 – 1.15
Carbon	7440-44-0	≤ 0.15

ER70S-7

Component CAS No. Weight %

Iron	7439-89-6	Balance
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Component CAS No. Weight %

Manganese 7439-96-5 1.00 – 1.80

Silicon 7440-21-3 0.60 – 1.00

Carbon 7440-44-0 \leq 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 \leq 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

Carbon 7440-44-0 \leq 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
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Section 7 – Handling and Storage

- Handle with adequate ventilation
 - Store in dry area away from ignition sources
 - Ground containers to prevent static discharge
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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
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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
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Section 10 – Stability and Reactivity

- Stable under normal conditions
 - Avoid strong acids and oxidizers
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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
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Section 12 – Ecological Information

- Not expected to be environmentally hazardous in solid form
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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
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Section 16 – Other Information

Prepared for: Inweld Corporation

Revision Date: 1/5/2026

Disclaimer: Information is believed accurate but not guaranteed.