Safety Data Sheet (SDS)

Section 1: Product and Company Identification

Product Identifier:	**Powerweld ER70S-2, ER70S-3, ER70S-6 Welding Wire and Rod**
Product Use:	GMAW (Gas Metal Arc Welding) and GTAW (Gas Tungsten Arc Welding)
Item Code:	S2__ / S3__ / S6__
Supplier Name:	Powerweld Inc.
Supplier Address:	2501 Beech Street Valparaiso, IN 46383
Supplier Web Address:	www.powerweldinc.com
Supplier Phone:	219-462-8700 1-800-826-9073
Emergency Phone:	CHEMTREC (24 hour) 1-800-424-9300
Prepared By:	Powerweld Inc.
Preparation Date:	1 January 2026

Section 2: Hazard Identification

Classification:	Not classified
Symbols:	Not applicable
Signal Word:	Not applicable
Hazard Statements:	Not applicable
Precautionary Statements:	Not applicable
Other Hazards:	Arc rays can injure eyes and burn skin. Welding arc and sparks can ignite combustibles and flammable materials. Overexposure to welding fumes and gases can be hazardous. The welding fumes produced from this welding electrode may contain the following: Carbon Dioxide, Carbon Monoxide, Nitrogen Dioxide, Ozone, Manganese, Nickel.

Section 3: Composition/Information on Hazardous Ingredients

HAZARDOUS INGREDIENTS	CAS NUMBER	APPROXIMATE CONCENTRATION (%)
Iron (Fe)	7439-89-6	96 (Balance)
Carbon (C)	7440-44-0	< 0.5
Manganese (Mn)	7439-96-5	1.0 – 2.0
Silicon (Si)	7440-21-3	0.5 – 1.2
Copper (Cu)	7440-50-8	< 0.5
Phosphorus (P)	7723-14-0	< 0.025
Sulfur (S)	7704-34-9	< 0.035
Chromium (Cr)	7440-47-3	< 0.150
Nickel (Ni)	7440-02-0	< 0.150
Molybdenum (Mo)	7439-98-7	< 0.150
Vanadium (V)	7440-62-2	< 0.030

PLEASE NOTE: Hazard only appears as fume

Section 4: First-aid Measures

Inhalation:	Inhalation may be the most common cause of overexposure due to the welding fumes. Large amounts of welding fumes will cause irritation of the nose, eyes and skin. Move from the area that has any fumes to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration and transport to nearest medical facility for additional treatment.
Ingestion:	Not an expected route of exposure. Rinse month completely and drink a cup of water if conscious; obtain medical assistance when needed.
Eye Contact:	If arc flash or burns occur, obtain medical assistance. Large exposure to welding fumes may cause irritation to the eyes. Immediately flush upper and lower eyelids with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Rest eyes for 30 minutes. If redness, burning, blurred vision or swelling persists, visit nearest medical facility for additional treatment.
Skin Contact:	Large exposure to welding fumes may cause irritation to skin. If burns occur, flush with clean cool water for 15 minutes; obtain medical assistance when needed.

NOTE: In all severe cases, contact physician immediately. Local telephone operators can provide number of regional poison control centre.

Section 5: Fire-fighting Measures

Flammable:	No
Means of Extinction:	Not applicable
Auto-ignition Temperature:	Data not available
Hazardous Combustion Products:	Data not available
Explosion Data Sensitivity to Mechanical Impact:	Data not available
Explosion Data Sensitivity to Static Discharge:	Data not available
Special Equipment:	Not applicable
Precautions for Fire Fighters:	This product as shipped is non-flammable; however, fine chips and dust may increase the explosion rating under certain heat and other ignition hazards. Hydrogen gas and irritating fumes may form when involved in a fire or if decomposing is caused from water, alcohol or sodium hydroxides. Do not use water with any molten metals and use self-contained safety clothing/equipment in case of fires.

Section 6: Accidental Release Measures

Protective Equipment:	Gloves may be worn while handling material.
Emergency Procedures:	This product is in rod and wire form and has no hazards as shipped.

Leak or Spill Procedure: If spilled, the product may be picked up (wearing gloves) and placed back into the container. If metals become molten, contain with sand and allow to return back into a solid for recycle as scrap.

Section 7: Handling and Storage

Handling Procedures and Equipment: Proper protective gloves can be worn while handling product. During all operations, do not eat or drink while handling and ensure proper ventilation while welding, brazing or processing.

Storage Requirements: Store in a cool, dry and low humid location.

Incompatibilities: None known

Section 8: Exposure Controls/Personal Protection

Exposure Limits:

INGREDIENTS	CANADA TWA VALUE (MG/M^3)	EXPOSURE LIMITS (MG/M^3)	
		OSHA PEL	ACGIH TLV
Iron (Fe)		10(fume)	5(fume)
Carbon (C)		3.5	
Manganese (Mn)	0.2	0.02, 0.2(fume)	0.2(resp), 0.1(fume)
Silicon (Si)	10.0	10(dust), 5(resp)	15(dust), 5(resp)
Copper (Cu)	0.2(fume), 1(dust)	0.1(fume)	0.2(fume), 1(dust)
Phosphorus (P)		0.1	0.1
Sulfur (S)			
Chromium (Cr)	0.5	0.5	0.5
Nickel (Ni)		0.5	0.1
Molybdenum (Mo)	0.5	10(dust), 3(resp)	10, 3(resp)
Vanadium (V)			0.5

Engineering Controls: Ensure proper ventilation and respiratory protection is used when welding, brazing or processing. Respiratory protection is recommended and information may be found regarding the OSHA STANDARDS (29 CRF 1910.134), as well as CSA Standards Z94.4, along with many other safety standards.

Personal Protective Equipment: Use proper welding helmet or safety shield, as well as FR clothing and leather welding gloves, as required for job duties. An approved respirator is recommended. Do not eat or drink while using these products and wash hands after use.

Section 9: Physical and Chemical Properties

Physical State: Solid

Odour and Appearance: Odourless metallic welding wire or rod

Odour Threshold (ppm): No data available

pH: Not applicable

Melting Point: >1000°C (1800°F)

Freezing Point: No data available

Boiling Point:	No data available
Flashpoint:	Not applicable
Upper Flammable Limit (% by volume):	No data available
Lower Flammable Limit (% by volume):	No data available

Section 10: Stability and Reactivity

Chemical Stability:	Stable
Possible Hazardous Reactions:	During welding, brazing and processing: fumes, dust and gas decomposition may form.
Conditions to Avoid:	Avoid extreme temperatures
Materials to Avoid (Incompatibilities):	Strong acids; strong bases; strong oxidizers; metal oxides; alcohols; hydrocarbons; halogens
Conditions of Reactivity:	Contact with chemical substances such as strong acids or bases may lead to formation of gas.
Hazardous Decomposition By-Products:	Based on composition of product, reasonable to assume Carbon Oxides, Nitrogen Oxides, and Ozone (O_3); fumes may contain Iron (Fe), Oxygen (O), Manganese (Mn), Zirconium (Zr), Silicon (Si), Aluminum (Al) and Copper (Cu).
Hazardous Polymerization:	Does not occur

Section 11: Toxicological Information

Skin Contact:	Arc rays can burn skin; skin cancer has been reported.
Skin Absorption:	Not applicable
Eye Contact:	Arc rays can injure eyes.
Inhalation:	Inhalation is the most likely route of exposure; refer to "Effects of Acute Exposure" and "Effects of Chronic Exposure" below.
Ingestion:	Unlikely due to form of product.
Effects of Acute Exposure:	Overexposure or inhalation of large amounts of welding fumes may cause symptoms such as metal fume fever, dizziness, nausea, dryness and irritation of your nose, throat or eyes as well as lung disease.
Effects of Chronic Exposure:	Overexposure or prolonged inhalation of large amounts of welding fumes with chromium compounds may cause cancer. Other overexposure or prolonged inhalation of large amounts of welding fumes symptoms may include damage to the central nervous system, respiratory system, skin and could affect organs such as pancreas and liver.
Irritancy of Product:	Not available
Sensitization to Product:	Not available
Carcinogenicity:	Not available
Reproductive Effects:	Not available
Respiratory Sensitization:	Not available
Toxicological Data:	Acute oral (Rat) – Manganese (ATE): 9 000 000 mg/kg; Silicon (ATE): 3160 mg/kg; Carbon (LD50): > 10 000 mg/kg

Section 12: Ecological Information

Aquatic and Terrestrial Toxicity:	Not available
Persistence and Degradability:	Not available
Bioaccumulative Potential:	Not available
Soil Mobility:	Not available

Section 13: Disposal Considerations

NOTE: Always dispose of waste in accordance with local, provincial and federal regulations.

Safe Handling:	Gloves can be worn while handling discarded or unwanted product
Methods of Disposal:	Recycle when possible. Do not allow to enter drains, sewers or watercourses. Discard any unwanted product, residues, containers, or liners in a suitable disposal container in an environmentally acceptable manner, as required by relevant legislation.

Section 14: Transportation Information

This material is not considered as a dangerous good per transportation regulations.

Section 15: Regulatory Information

United States Toxic Substances Control Act (TSCA):	Copper, Manganese, Silicon, Carbon
Canada WHMIS Classification:	Class D, Division 2, Subdivision A
Canadian Environmental Protection Act (CEPA):	All constituents of these products are listed on the Domestic Substance List

Section 16: Other Information

Preparation Date:	18 September 2015
Date of Last Revision:	1 January 2026

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