Safety Data Sheet (SDS)

Section 1: Product and Company Identification

Product Identifier:	**Powerweld E71T-1 Welding Wire**
Product Use:	**Flux cored carbon steel welding wire for gas shielded FCAW welding**
Item Code:	PW71_
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:	Spatter and melting metal can cause burn injuries and start fires. Arc rays can injure eyes and burn skin. Electric shock can kill. Welding arc and sparks can ignite combustibles and flammable materials. Overexposure to welding fumes and gases can be hazardous.

Section 3: Composition/Information on Hazardous Ingredients

HAZARDOUS INGREDIENTS	CAS NUMBER	APPROXIMATE CONCENTRATION (%)
Iron (Fe)	7439-89-6	~95
Carbon (C)	7440-44-0	0.05
Silicon (Si)	7440-21-3	0.38
Manganese (Mn)	7439-96-5	1.295
Sulfur (S)	7704-34-9	0.008
Potassium (P)	7440-09-7	0.03
Chromium (Cr)	7440-47-3	0.20
Nickel (Ni)	7440-02-0	0.50
Molybdenum (Mo)	7439-98-7	0.30
Vanadium (V)	7440-62-2	0.08
Copper (Cu)	7440-50-8	0.35

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.
Symptoms:	Treat symptomatically; symptoms may be delayed. Show this SDS to the attending physician.

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:	Not flammable; emits toxic fumes when heated
Means of Extinction:	Use extinguishing method most appropriate for surrounding fire (water spray, alcohol-resistant foam, dry chemical or carbon dioxide); do not use water on molten metal. Large fires may be flooded with water from a distance.
Auto-ignition Temperature:	Not available
Explosion Data Sensitivity to Mechanical Impact:	Not available
Explosion Data Sensitivity to Static Discharge:	Not available
Special Equipment:	See below
Precautions for Fire Fighters:	In the event of fire, wear self-contained breathing apparatus and full protective gear.

Section 6: Accidental Release Measures

Protective Equipment:	See Section 8
Emergency Procedures:	This product is in rod form and has no hazards as shipped.

Leak or Spill Procedure: If spilled, the product may be picked up 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: Avoid contact with eyes. Avoid breathing dust. Avoid prolonged or repeated contact with skin. Keep container closed. Use only with adequate ventilation. Wash thoroughly after handling. Avoid contact of spilled material and runoff with soil and surface waterways.

Storage Requirements: Store in a cool, dry and low humid location. Keep away from heat and open flame.

Incompatibilities: Strong acids and bases, antioxidants and halogens.

Section 8: Exposure Controls/Personal Protection

Exposure Limits:

HAZARDOUS INGREDIENTS	CAS NUMBER	OSHA PEL (mg/m^3)	ACGIH TLV (mg/m^3)
Iron (Fe) [as oxide fume)	7439-89-6	10	5(resp)
Carbon (C)	7440-44-0	10, 2(resp)	15, 5(resp)
Silicon (Si)	7440-21-3	15(dust), 5(resp)	-
Manganese (Mn) [as fume]	7439-96-5	5	0.2(resp), 0.1(inhal)
Sulfur (S)	7704-34-9	-	-
Potassium (P) [as oxide fume]	1312-76-1	10, 5(resp)	15(dust), 5(resp)
Chromium (Cr)	7440-47-3	1	0.5
Nickel (Ni)	7440-02-0	1	1.5(inhal)
Molybdenum (Mo)	7439-98-7	15(dust), 5	10(inhal), 3(resp)
Vanadium (V) [as oxide fume]	7440-62-2	0.05(dust)	0.5(dust)
Copper (Cu)	7440-50-8	1(dust), 0.1(fume)	1(dust), 0.2(fume)

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: Respiratory: Use NIOSH approved respirator if exposure limits are exceeded or where dust exposures are excessive. Consider the potential for exposure to components of the coatings or base material being ground in selecting proper respiratory protection. Refer to OSHA's specific standards for where appropriate. Selection of respiratory protection depends on the contaminant type, form and concentration. Select and use respirators in accordance with OSHA 1910.134 and good industrial hygiene practice.

Hands: Cloth or leather gloves are recommended.

Eyes: Wear helmet or face shield with filter lens of appropriate shade number. See *ANSI/ASC Z49.1 Section 4.2*. Provide protective screens and flash goggles, if necessary, to shield others.

Skin: Approved protection (ie./ welders gloves, apron, sleeves, jacket, etc.) should be worn to prevent injury from sparks and contamination of clothing.

Section 9: Physical and Chemical Properties

Physical State:	Solid
Odour and Appearance:	Odourless metal wire
Odour Threshold (ppm):	Not available
pH:	Not available
Melting Point:	Not available
Freezing Point:	Not available
Boiling Point:	Not available
Flashpoint:	Not available
Upper Flammable Limit (% by volume):	Not available
Lower Flammable Limit (% by volume):	Not available

Section 10: Stability and Reactivity

Chemical Stability:	Stable under normal conditions
Possible Hazardous Reactions:	Not available
Conditions to Avoid:	None known
Materials to Avoid (Incompatibilities):	Acids and strong oxidizers
Conditions of Reactivity:	See above
Hazardous Decomposition By-Products:	Welding fumes and gases cannot be classified simply. The composition and quantity of both are dependent upon the metal being welded, the process, procedure and welding consumables used. Other conditions which also influence the composition and quantity of the fumes and gases to which workers may be exposed include: coating on the metal being welded (i.e. paint, painting, galvanizing), the number of welders, the size of the work area, the quality and the amount of ventilation, the position of the welders head with respect to the fume plume, as well as the presence of contaminants in the atmosphere (such as chlorinated hydrocarbon vapors from the cleaning and degreasing activities). When an electrode is consumed, the fume and gas decomposition products generated are different in percent and form from the ingredients listed in Section 3. Fume and gas decomposition, and not the ingredients in the electrode, are important. The concentration of a given fume or gas component may decrease or increase by many times the original concentration. Also, new compounds not in the electrodes may form. Decomposition products of normal operation include those originating from the volatilization, reaction or oxidation of the materials shown in Section 3, plus those from the base metal coating, etc., as noted above. Reasonable expected fume constituents of this product would include: Complex oxides of iron, manganese, silicon, chromium, nickel,

molybdenum, copper, carbon dioxide, carbon monoxide, ozone and nitrogen oxides. Present OSHA exposure limit for hexavalent chromium, nickel and or manganese may be reached before limit of 5 mg/m^3 of general welding fumes is reached.

Gaseous reaction products may include carbon monoxide and carbon dioxide, ozone and nitrogen oxides may be formed by the radiation from the arc in addition to shielding gas like argon and helium when employed. Determine the composition and quantity of fumes and gases to which workers are exposed by taking an air sample from inside the welder's helmet if worn or in the worker's breathing zone. Improve ventilation if exposures are not below limits.

See ANSI/AWS F1.1, F1.3 and F1.5, available from the American Welding Society, 550 N.W. LeJeune Road, Miami, FL 33126. See AWS publications: "Fumes & gases in the welding environment" & "Effects of welding on health"

Hazardous Polymerization:	Not applicable

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 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:	This product is not expected to cause skin sensitization.
Carcinogenicity:	Nickel and Chromium, and their compounds, are on the list of *International Agency for Research on Cancer* as Carcinogenic
Reproductive Effects:	Not available
Respiratory Sensitization:	Not available
Toxicological Data:	Not available

Section 12: Ecological Information

Aquatic and Terrestrial Toxicity:	Dust created from this product is harmful to the environment
Persistence and Degradability:	Information not available
Bio accumulative Potential:	Information not available
Soil Mobility:	Information 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:	For product elimination, consult recycling companies or appropriate local authority. This product is not considered hazardous waste if discarded. Residue from welding consumables and processes could degrade and accumulate in soils and groundwater.

Section 14: Transportation Information

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

Section 15: Regulatory Information

Canadian Controlled Products Regulations:	This product has been classified according to the hazard criteria of the CPR, Section 33, and this SDS contains all required information.
U.S. California Proposition 65:	This product contains a chemical(s) known to the State of California to cause cancer and/or birth defects or other reproductive harm.
California Proposition 65 Carcinogens & Reproductive Toxicity (CRT):	Hexavalent chromium compounds, Nickel
U.S. State Right to Know/ Hazardous Substance Lists (various):	The following components are listed on various U.S. State substance lists: Nickel, Chromium, Copper, Manganese, Molybdenum, Silicon, Hexavalent chromium

Section 16: Other Information

Preparation Date:	9 June 2016
Date of Last Revision:	1 January 2026

This SDS format is in accordance with GHS. Powerweld Inc. provides the information contained herein in good faith but makes no representation as to its comprehensiveness or accuracy. This document is intended only as a guide to the appropriate precautionary handling of the material by a properly trained person using this product. Product use and conditions of use are beyond the control of Powerweld. Warranty of materials is limited to test results of product performance as detailed in certificates of compliance. Interpretation of test results is the responsibility of end-user. No other warranties, expressed or implied, are made.