# Safety Data Sheet (SDS)

## Section 1: Product and Company Identification

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|---|---|
| *Product Identifier:* | **Powerweld E71T-GS Gasless Flux-Cored Wire** |
| *Product Use:* | Carbon steel electrode for flux-cored welding without an external shield gas |
| *Item Code:* | FC__ |
| *Supplier Name:* | Powerweld Inc. |
| *Supplier Address:* | 2501 Beech Street<br>Valparaiso, IN 46383 |
| *Supplier Web Address:* | www.powerweldinc.com |
| *Supplier Phone:* | 219-462-8700<br>1-800-826-9073 |
| *Emergency Phone:* | CHEMTREC (24 hour) 1-800-424-9300 |
| *Prepared By:* | Powerweld Inc. |
| *Preparation Date:* | 1 January 2026 |
| *AWS Specification:* | A5.20 |

## Section 2: Hazard Identification

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| *Classification:* | Acute toxicity (oral) | Category 4 |
| | Aquatic acute | Category 1 |
| *Symbols:* | Not applicable | |
| *Signal Word:* | WARNING! | |
| *Hazard Statements*: | H302 Harmful if swallowed. | |
| *Precautionary Statements:* | P264 Wash thoroughly after handling. | |
| | P270 Do not eat, drink or smoke when using this product. | |
| | P273 Avoid release to the environment. | |
| | P301 IF SWALLOWED: call a poison center or doctor/physician if you feel unwell. Rinse mouth. | |
| | P391 Collect spillage. | |
| | P501 Dispose of contents/container in accordance with local/regional/national regulations. | |

*Other Hazards:* This product consists of odourless, metallic luster carbon steel sheath rod/wire with a flux core. There are no immediate health hazards associated with these products. These products are not reactive. If involved in a fire, these products may generate irritating fumes and a variety of metal oxides. Finely divided dusts of these products may result in explosive air/dust mixtures. Emergency responders must wear personal protective equipment suitable for the situation to which they are responding.

## Section 3: Composition/Information on Hazardous Ingredients

| HAZARDOUS INGREDIENTS | CAS NUMBER | APPROXIMATE CONCENTRATION (%) |
|---|---|---|
| Iron (Fe) | 7439-89-6 | 86.0 – 94.0 |
| Manganese (Mn) | 7439-96-5 | 1.0 – 4.0 |
| Barium Carbonate ($BaCO_3$) | 513-77-9 | 1.0 – 4.0 |
| Calcium Fluoride ($CaF_2$) | 7789-75-5 | 1.0 – 4.0 |

## 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; however, if ingested, DO NOT induce vomiting. Call physician immediately. Never give anything by mouth to an unconscious person. Risk of product entering the lungs on vomiting after ingestion.

*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.

*Additional Information:* No first aid measures should be required for unused electrodes; first aid measures are relevant only during welding operations. See symptoms listed above.

*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; welding arc and sparks can ignite combustibles.

*Means of Extinction:* If fire occurs, use extinguishing agents appropriate for surrounding materials (carbon dioxide, dry chemical, water spray, etc.).

*Auto-ignition Temperature:* Not applicable

*Hazardous Combustion Products:* This product may decompose and produce iron fumes, iron and a variety of metal compounds and metal oxides. The hot material can present a significant thermal hazard to firefighters.

*Explosion Data Sensitivity to Mechanical Impact:* Not applicable

*Explosion Data Sensitivity to Static Discharge:* Not applicable

*Special Equipment:* Wear full fire-fighting turn-out gear (full Bunker gear) and respiratory protection (SCBA).

*Precautions for Fire Fighters:* Do not breathe fumes or vapours from decomposition.

## Section 6: Accidental Release Measures

*Protective Equipment:* Not applicable to product as shipped. See section 8 for recommended equipment while welding.

*Emergency Procedures:* Not applicable to product as shipped.

*Leak or Spill Procedure:* Avoid dispersal and contact of spilled material and runoff with soil, waterways, drains and sewers. Collect material in properly labeled containers in accordance with local, regional and national regulations.

## Section 7: Handling and Storage

*Handling Procedures and Equipment:* Product as shipped requires no special attention for handling. However, welding may produce fumes and gases that are hazardous to health. Avoid breathing these fumes and gases. Use adequate ventilation. Avoid contact with skin, eyes and clothing. Do not eat, drink and smoke in work areas.

*Storage Requirements:* Store in a cool, dry and well-ventilated place. Keep away from incompatible materials, as well as heat and open flame.

*Incompatibilities:* Strong acids, bases and oxidizing agents.

## Section 8: Exposure Controls/Personal Protection

*Exposure Limits:*

| INGREDIENTS | CANADA TWA VALUE (MG/M$^3$) | OSHA PEL (MG/M$^3$) | ACGIH TLV (MG/M$^3$) |
|---|---|---|---|
| Iron (Fe) | 5(fume) | 10(fume) | 5(fume) |
| Manganese (Mn) | 0.2 | 0.02, 0.2(fume) | 0.2(resp), 0.1(fume) |
| Barium compounds, as Ba | 0.5 | 0.5 | 0.5 |
| Calcium Fluoride, as F | 2.5 | 2.5 | 2.5 |

*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 thoroughly after use.

## Section 9: Physical and Chemical Properties

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| *Physical State:* | Solid |
| *Odour and Appearance:* | Odourless metal rod or wire |
| *Odour Threshold (ppm):* | Not applicable |
| *pH:* | Not available |
| *Melting Point:* | 1535°C / 2795°F |
| *Freezing Point:* | Not available |
| *Boiling Point:* | 3000°C / 5432°F (at 24 mm Hg) |
| *Flashpoint:* | Not available |
| *Upper Flammable Limit (% by volume):* | Not available |
| *Lower Flammable Limit (% by volume):* | Not available |

## Section 10: Stability and Reactivity

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| *Chemical Stability:* | This product is stable under normal conditions; may produce dangerous gases or fumes when in use. |
| *Possible Hazardous Reactions:* | None known |
| *Conditions to Avoid:* | Avoid contact with incompatible materials and uncontrolled exposure to extreme temperatures. |
| *Materials to Avoid (Incompatibilities):* | Strong acids, bases and oxidizing agents. |
| *Conditions of Reactivity:* | None under normal conditions. |
| *Hazardous Decomposition By-Products*: | Metal oxide fumes and gases are produced during welding. |
| *Hazardous Polymerization:* | Does not occur. |

## Section 11: Toxicological Information

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| *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 |

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| *Toxicological Data:* | Not available |

## Section 12: Ecological Information

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| *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.*

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| *Safe Handling:* | Gloves can be worn when 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 local, regional and national legislation. |

## Section 14: Transportation Information

This material is not considered as a dangerous good per transportation regulations in the United States and Canada.

## Section 15: Regulatory Information

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| *California Proposition 65:* | These products contain chemicals known to the State of California to cause cancer, birth defects or other reproductive harm. |
| *United States Toxic Substances Control Act (TSCA):* | Iron, Manganese, Barium Fluoride (as Barium compounds) |
| *Canada WHMIS Classification:* | Iron, Manganese |
| *Canada Domestic Substances List:* | Manganese |

## Section 16: Other Information

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| *Preparation Date:* | 5 January 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.*