Safety Data Sheet (SDS)

Section 1: Product and Company Identification

Product Identifier:	**Aluminum Electrode**
Product Use:	Coated aluminum electrode for maintenance welding of aluminum and aluminum alloys
Item Code:	190 (E4043CTD)
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
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 (%)
Potassium Chloride	7447-40-7	10 – 20
Sodium Chloride	7647-14-5	10 – 20
Aluminum Fluoride	7784-18-1	1 – 11
Lithium Cryolite	13821-20-0	10 – 20
Potassium Cryolite	13775-52-2	1 – 11
Aluminum (Al)	7429-90-5	45 – 55
Silicon (Si)	7440-21-3	0 – 10

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:	Not flammable; emits toxic fumes when heated.
Means of Extinction:	Use extinguishing method most appropriate for surrounding fire.
Auto-ignition Temperature:	Not available
Hazardous Combustion Products:	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. Do not get on skin or clothing. 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: None known

Section 8: Exposure Controls/Personal Protection

Exposure Limits:

HAZARDOUS INGREDIENTS	CAS NUMBER	OSHA PEL (mg/m^3)	ACGIH TLV (mg/m^3)
Potassium Chloride	7447-40-7	-	-
Sodium Chloride	7647-14-5	-	-
Aluminum Fluoride	7784-18-1	2.5 (as F)	2.5 (as F)
Lithium Cryolite	13821-20-0	2.5 (as F)	2.5 (as F)
Potassium Cryolite	13775-52-2	2.5 (as F)	2.5 (as F)
Aluminum (Al)	7429-90-5	15	10
Silicon (Si)	7440-21-3	5 (as SiO_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 clothing and gloves, as required for job duties. Do not eat or drink while using these products and wash hands thoroughly after use.

Section 9: Physical and Chemical Properties

Physical State: Solid

Odour and Appearance: Odourless white (flux coated) rod

pH: Not available

Melting Point: Not available

Freezing Point: Not available

Boiling Point: 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: Not available

Materials to Avoid (Incompatibilities): Not available

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 volume of the work area, the quality and the amount of ventilation, the position of the welder's 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. Gaseous reaction products may include carbon monoxide and carbon dioxide. Ozone and nitrogen oxides may be formed by the radiation from the arc. 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.
Hazardous Polymerization:	Will 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 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:	Not applicable
Toxicological Data:	Not available

Section 12: Ecological Information

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:	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

California Proposition 65:	This product contains or produces a chemical(s) known to the State of California to cause cancer.

Section 16: Other Information

Preparation Date:	3 May 2016
Date of Last Revision:	1 January 2026

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