

SPECIFICATIONS

EXOWELD exothermic welding material for POWER, GROUNDING and CATHODIC CONNECTIONS

1. GENERAL

These specifications cover the EXOWELD exothermic welding system for use in making electrical connections of copper to copper, copper to steel or copper to cast iron.

The EXOWELD exothermic welding metal system shall include weld metal, molds, and accessories.

2. STANDARDS

The EXOWELD furnished under these specifications shall meet the applicable requirements of IEEE standards.

3. EXOWELD connections shall be suitable for exposure to the elements or direct burial without degradation over the lifetime of the grounding system.

4. MATERIAL

Molds shall be made from graphite material withstanding high temperatures and shall be designed to provide an average life of not less than 50 separate exothermic welds.

Starting material (where used) shall consist of aluminum and copper and iron oxides. It shall not contain any caustic, toxic, or explosive substance.

Weld metal used for grounding connections shall contain copper oxide, aluminum, and not less than 3 percent tin as the wetting agent.

Weld metal used for cathodic connections and for rail application shall not contain tin.

5. QUALITY CONTROL

Weld metal shall be controlled at the factory and subjected to routine and rigid quality control inspection procedures in accordance to ISO 9001. The batch control numbers shall be packaged with the product prior to shipment from the factory.

Instructions shall clearly indicate that using a mold from one manufacturer with a different manufacturers welding mixture can provide an unacceptable finished product which may not meet the standards of either manufacturer.

6. MARKING

Graphite molds shall bear a permanent marking indicating the name of the manufacturer, the mold model, the type and size of welding mixture compatible with the welding process, and the size of the cable or bus connection.

Instructions detailing general safety information, connection preparation and welding procedures shall be provided.

Weld metal packages shall be identified as to the part number (size).

7. PACKAGING AND SHIPPING

Containers for weld metal shall be moisture resistant and shall be packaged to prevent damage or spillage during shipping.

Weld metal and starting material (if used) shall be premeasured and packaged together in a non-absorbing container. The starting material shall be at the bottom of the container.

Factory trained personnel shall respond to field calls within 24 hours, and provide training for construction forces on the proper techniques for making exothermic welding connections.