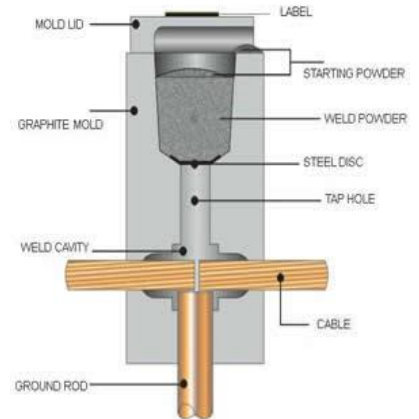


PRODUCT DESCRIPTION

Connections are often the weak point of ground circuits, especially those exposed to high currents and corrosion. For these connection problems, different solutions have been investigated, the most optimal being exothermic welds.

Exothermic welding is a chemical process that allows the molecular bonding of metals in a lasting way. It is applied to metal joints and it is widely used in sectors such as railways and in electrical system applications, such as for earth connections.

TECNOLOGIA TOTAL supplies all the components necessary to perform exothermic welding individually, these being the **welding mold**, the **ignition gun**, and the **exothermic welding cartridge**. By welding, the molecular bonding of two or more metal conductors is achieved through a chemical reaction. This molecular bond improves mechanical, electrical, and corrosion properties over any mechanical bond. Exothermic welds are the best way to make permanent, reliable, high-conductivity connections in any installation that requires grounding.



APPLICATION PROCESS

The welding application process is a method of making molecular bonds between copper / copper, copper / normal or galvanized steel, copper / copper clad steel, copper / bronze / brass / stainless steel, and steel / steel without the need for a power source or external heat.

The principle is to combine welding material with an ignition agent in a suitable graphite mold. Reduction of copper oxide by aluminum generates copper slag and molten aluminum oxide at extremely high temperatures.

SAFETY PRECAUTIONS




Incorrect use of the product or improper preparation of conductors, molds or surroundings can result in aggressive reactions. Adequate protection is recommended to avoid contact with hot material. If work is carried out in confined places, a metal dust and fume respirator must be used.

ENVIRONMENTAL PRECAUTIONS

Precautions must be taken to prevent hot material from coming into contact with fuel in the vicinity.

PRODUCT PRESENTATION

The following table shows the required products for exothermic welding.

PRODUCT	DESCRIPTION	PRESENTATION	REFERENCE
Welding cartridge	<p>The cartridge contains a mixture of copper and aluminum oxide, which are stored in plastic containers. In addition they bring a metal disc for each weld pack.</p> <p>This material reacts to produce heat with molten metals at temperatures above 1370 ° C and small amounts of fumes.</p> <p>This material is not sensitive to vibrations or impacts and is not subject to any form of spontaneous combustion.</p>	20 units box	
Mold	<p>The exothermic reaction is carried out in a specially designed mold made of graphite.</p> <p>The molds are machined from a block of refractory material (graphite). Its duration under normal conditions of use is 50-100 welds. A metal cap protects from projections at ignition.</p>	Unit	
Ignition gun	It is used for igniting the ignition powder.	Unit	

TECHNICAL SERVICE

For any technical questions regarding the use of our products, let us support you by contacting our commercial technical department. Contact us, we have NACE certified professionals in industrial coatings ready to support you.

WARRANTY AND LIMITATION OF LIABILITY

TECNOLOGIA TOTAL will not be in any case responsible for damages of any nature that could be derived from an inadequate use of the product. Before using the product, the user must determine if the product is suitable for its intended use, taking all risks and liability that could be derived from its use.

If it's proved that a product is faulty due to manufacturing or its material at the time of sale, or that it does not fulfill during its warranty period the indicated properties in this technical sheet, the only responsibility of TECNOLOGIA TOTAL will consist of replacing the buyer with the quantity of product that is found to be defective. TECNOLOGIA TOTAL does not take any responsibility for any additional cost such as manufacturing cost, withdrawal or re-application of the products. If TECNOLOGIA TOTAL offers a warranty to their clients, express or implicit, or a compensation that differs from the established in this section, this stipulation can not be altered unless a signed agreement by the parties.

