

The Apliweld® product has been developed by Aplicaciones Tecnológicas S.A. for exothermic copper weldings. It includes all the necessary equipment to carry out the process.

The Apliweld® welding's theory is based on the reduction of copper oxide by metallic aluminium.

The reaction is very exothermic, releasing a large amount of energy in the form of heat, reaching temperatures of more than 1000°C. These conditions allow the welding of the materials by means of the resulting product of the main reaction. Therefore, the reaction is chemically aluminothermic, but it is well-known as exothermic welding in relation to other welding processes.

It is produced through a starting reactant which provides enough energy to activate the welding reaction. This takes place quickly and safely inside a graphite mould. The mould is designed specifically for a certain union depending on the elements to be welded and the joint type required.

There are many advantages of using exothermic welding.

The most important one being that the process produces a molecular joint and not just a mechanical one in between the conductors.

In this way, Apliweld® guarantees all types of common joints, not only copper cable unions but also to weld tapes, brass metallic pieces, stainless steel, steel ground rods covered with copper, etc...

Due to its characteristics:

- **Apliweld®** has a superior electrical conductivity to the conductors themselves.
- **Apliweld®** does not corrode, oxidise or degrade with time and is resistant to galvanic coupling.
- **Apliweld®** is able to withstand repeated electrical discharges.
- **Apliweld®** never increases its resistance.
- **Apliweld®** has greater mechanical and squeezing resistance than the conductors themselves.

Apliweld® offers a permanent welding and a low resistance connection, particularly important in achieving a longwearing and trustworthy result when carrying out any earthing system.



Example of Apliweld Welding
for cable to ground rod

