

TECHNICAL DATA SHEET - PLASTICS RECOGNITION BY TEST WELDING

There are three main types of plastics. Thermoplastics, Thermosets, and Elastomers. Of the 3 main plastics, only the Thermoplastic group can be welded. With the application of heat and pressure, thermoplastics can be moulded, formed, or welded. There are many different types of Thermoplastics, each having different properties and characteristics, and each having a specific welding temperature.

PLASTIC IDENTIFICATION CODES

<u>Code</u>	<u>Plastic</u>	<u>Welding Temperature deg. C</u>
ABS	Acrylonitrile Butadiene Styrene	350
ABS/PC	Acrylonitrile Butadiene Styrene/Polycarbonate	350
PA	Polyamide	400
PBT	Polybutylene Terephthalate	350
PC	Polycarbonate	350
PE hard	Polyethylene, hard	300
PE soft	Polyethylene, soft	270
PP	Polypropylene	300
PP/EPDM	Polypropylene/EPDM	300
PUR	Polyurethane thermoplastic	300/350
PVC hard	Polyvinyl Chloride	300
PVC soft	Polyvinyl Chloride	350

IDENTIFICATION BY TEST WELDING

If all other information is unavailable a test weld can be tried on the back of the component using a rod from the Techspan Rod Test Kit.

1. Fit the most appropriate welding nozzle to the Techspan plastic welder.
2. Set the welding temperature on the rotary control according to the rod material to be used in the test.
3. Scrape the surface in the area of the test to remove any contamination.
4. Feed the welding rod through the nozzle and into contact with the surface of the component.
5. Following the technique described in the operator instructions weld 50mm of the test rod to the surface of the component.
6. Remove the welding tool from the rod and then cut the rod approximately 50mm from the component surface.
7. Allow the weld to cool and then try to pull the weld rod from the surface of the component. If it can be pulled from the component repeat the test with a different rod. If it stays firmly in place the component plastic has been positively identified.



Refer to the Techspan Welding Rod Catalogue for the full range of welding rods.



The Plastics Fix text book includes flame tests for plastics identification.



Plastic Welding Instructional video (CD-ROM) is available from Techspan.

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PLASTIC WELDING SYSTEMS

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