

RoHS
Compliant



Description:

PPC179 is a general-purpose two-part epoxy with excellent adhesion to a wide variety of substrates. The standard colour is 'clear amber' and other colours are available on request. PPC179 is available in bulk, kits, twin cartridges and twin packs.

Features:

- Long pot life
- Non-toxic
- Excellent adhesion
- Impact resistant
- Good chemical resistance

Specifications:

Property	Mixed
	PPC179
Colour	Amber Black
Specific Gravity g/ml	1.1
Viscosity m.Pa.s @ 25°C	14010
Mix Ratio by Volume	1:1
Mix Ratio by Weight	1:1
Gel Time	90 Minutes (150g @ 25°C)
Weight	500g
Dispensing Method	Twin Pack

Cure Schedule	Working Life	Light Handling	Full Cure	Post Cure
Temperature	(minutes *)	(hours *)	(hours *)	(**)
10°C	70	48	96	5 days @ 25°C
20°C	60	16	32	8 hours @ 60°C
30°C	30	8	16	4 hours @ 80°C

*2mm cross sectional area

**For maximum properties

Cure time will depend on cross sectional area, ambient conditions and mixing method. The above are typical values and will vary depending on the cured mass and application. Hotter temperatures may be used for faster cure but will result in higher post cure shrinkage and higher cure exotherm. Experimentation and testing is suggested to avoid side effects. For maximum properties, a post cure may be required.

Typical Properties:

Shore D Hardness	65 - 75	
Operating Temperature *	-40°C to +120°C	Application and geometry dependant
Compressive Strength	64 MN/m ²	
Surface Resistivity	16.94 Log10ohm	
Dielectric strength	17 kV/mm	
Tensile strength	20 MPa	

Lap shear adhesion	Aluminium to Aluminium	7.6 MPa	ABS to ABS (1)	5.5 MPa
	Copper to Copper	6.1 Mpa	Nylon 6 to Nylon	6 2.5 MPa
	Stainless Steel	9.0 MPa	Acrylic to Acrylic	2.3 MPa

(1) Substrate failure

Cartridge Mixing:

It is essential for best results that the cartridge is 'balanced' before use to ensure correct mixing. Loading the cartridge into the gun before attaching the mixer element and pumping the gun to push a small amount of the contents forward will achieve this. Wipe the excess from the cartridge tip and add the static mixer. The cartridge is now ready for use.

Twinpacks:

Twinpacks are pre-weighed resin and hardener components contained in a tough flexible film, separated by a removable clip and rail. Once the clip and rail is removed the resin and hardener can be thoroughly mixed within the bag and is then ready for use. Mixing will normally take ~ 3 minutes depending on the operator and viscosity of the material. Twinpacks are ideal for small to medium production runs, prototyping and on-site or field use. The twinpack weight/volume may also be tailored to a specific size on request.

Bulk Material:

PX681 is an un-filled system and is unlikely to separate or sediment
In bulk or kit form gentle mixing with a paddle or spatula will homogenise the material before use
In bulk or kit form evacuation may be necessary for best results.

Kits:

In kit form, resin and hardener are provided in separate containers to the correct ratio
In most cases, pour the hardener into the larger resin container and use it as a mixing vessel
Stir well using an appropriate mixer until homogeneous

Note:

Incomplete mixing will be characterised by variable/partial cure (even after extended time periods)

Cleaning:

All equipment contaminated with mixed material should be cleaned before the material has hardened. TS130 is suitable nonflammable cleaning agent, although other solvents may be found suitable. TS130 will also remove cured material provided it is allowed to soak for a number of hours.

Storage and Shelf Life:

Material stored in the original unopened containers under cool dry condition between 10 and 25°C will have a shelf life of at least two years.

Once used the containers must be kept sealed to prevent effects from water, air or contaminants.

Health and Safety:

Epoxy resin systems may cause sensitisation by skin contact or inhalation may be corrosive, harmful or toxic. It is therefore strongly recommended that skin and eye contact is avoided by the using of appropriate personal protective equipment such as gloves, safety glasses or goggles and overalls.

Wash any contamination from the skin immediately and thoroughly and do not eat, smoke or drink in the working vicinity.

Undernormal working conditions a good source of ventilation is adequate, however if the material is heated then local exhaust ventilation (LEV) may be required especially for curing ovens.

Part Number Table

Description	Part Number
Encapsulant, Epoxy, Semirigid, Kit, 500g	PPC179

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