

Adhesives for Electronics

Application: Bonding SMDs



Soldering and fixing components to either side of a PCB can be very difficult - when you try to solder one side, the component drops off the other. Permabond adhesive can be used to secure components which may later need to go through a solder reflow process.

- High wet strength
- Good thermal conductivity
- Good electrical resistance

Adhesive used: Permabond E5578

Application: Bonding torroids

Adhesive is applied for bonding copper wire to the ferrite core of a torroid.

- Improved durability
- Improved resistance against high levels of vibration & temperature

Adhesive used: Permabond 920



Application: Headset bonding

Bonding plastic components together

- Non-bloom formulation required to maintain good aesthetic appearance



Adhesive used: Permabond 2011 & CSA-NF

Permabond offers a range of adhesive technologies suitable for bonding a wide variety of electronics applications such as potting & encapsulation, bonding components to PCBs, coatings, sealing transformers, relays, coil windings, bonding magnets and heatsinks and wire tacking. Permabond's range includes low odour, non-blooming and high temperature resistant cyanoacrylates as well as acrylic acid-free high strength structural adhesives.

Application: Sealing wiring harnesses

Sealing harness housing to prevent moisture ingress.

- Sealing tin plated brass to Nylon 6
- Requires low viscosity wicking action to form a complete seal around the incoming wires
- Adhesive needs to survive extremes of temperature.

Adhesive used: Permabond A905 activator and A126



Application: Wire Tacking

Permabond cyanoacrylates can be used for the instant tacking of wires inside electronic devices. Tacking wires keeps circuit boards neat and tidy and easier to handle in later stages of the assembly process. Excess adhesive can be cured instantly with Permabond CSA-NF (which minimises visible residue).



Wire on power tool PCB tacked in place to help ease of component assembly



Application: Coil Winding

Loudspeaker coil winding runs through epoxy "bath" and is subsequently coiled prior to the epoxy setting.

- Excellent optical clarity
- Low, penetrative viscosity for good coverage

Adhesive used: Permabond ET530



This is just a brief summary of some of our products, if you can't see the exact product you are looking for, or need more in depth technical information, Permabond's technical team would be more than happy to help.

Product	Typical Application	Description	Colour	Cure speed	Gap Fill (mm)	Shear Strength (MPa)	Temperature Range (°C)
ET515	Potting and encapsulation	2-Part epoxy, mix and cure at room temp. Flexible, rapid curing.	Clear / slightly amber	Pot life: 10-15 mins Handling time: 15-25 mins Full cure: 72 hours	2	Steel: 8-12	-40 to +80
ET530	Potting and encapsulation, coil winding	2-Part epoxy, mix and cure at room temp. Very low viscosity, slow-setting.	Colourless	Pot life: 45-60 mins Handling time: 4-5 hours Full cure: 72 hours	0.4	Zinc: 7-10	-40 to +80
UV681	Coating	Single component UV-cure coating adhesive. Low viscosity.	Colourless	Tack free time: 4 secs (33mW/cm ² UV lamp)	N/A	Tensile strength: 10-12	-55 to +120
UV683	Doming, glob topping	Single component UV-cure coating adhesive. Doming viscosity.	Colourless	Tack free time: 3.5 secs (33mW/cm ² UV lamp)	N/A	Tensile strength: 12-14	-55 to +120
910	SMD Bonding, wire tacking	Single component methyl cyanoacrylate .	Colourless	Steel: 10-15 secs Phenolic: 10-15 secs	0.15	Steel: 23-29	-55 to +90
820	SMD Bonding, wire tacking	High temperature cyanoacrylate can withstand solder reflow process.	Colourless	Steel: 10-15 secs Phenolic: 10-15 secs	0.15	Steel: 19-23	-55 to +200
920	SMD Bonding, torroid bonding	High temperature cyanoacrylate can withstand solder reflow process.	Colourless	Steel: 15-20 secs Phenolic: 10-15 secs NB Requires high temperature post cure	0.15	Steel: 19-23	-55 to +250
2011	Bonding plastic housing, wire tacking	Gel cyanoacrylate for easy, accurate application.	Colourless	Steel: 5-10 secs Phenolic: 5-10 secs	0.5	Steel: 20-24	-55 to +120
940 series	Bonding plastic housing, wire tacking, sealing laminates	Non-bloom low odour cyanoacrylates - wicking viscosity through to gel viscosity available.	Colourless	Steel: 10-15 secs Phenolic: 10-15 secs	0.08 to 0.5	Steel: 16-20	-55 to +80
CSA-NF	For curing cyanoacrylate on plastic housings, wire tacking etc.	Non-bloom cyanoacrylate activator for curing cyanoacrylate outside of the joint and for reduced cyanoacrylate cure time.	Colourless, will not leave a visible residue	N/A			
ES578	Bonding heat sinks	Single part heat cure epoxy with excellent thermal conductivity and high "wet strength".	Black	130°C: 60 mins 150°C: 30 mins	5	Steel: 27-41	-40 to +180
A126	Sealing wiring harnesses	Single component anaerobic sealant with wicking viscosity.	Green	Steel: 15 mins	0.05	Steel: 21	-55 to +150
A905		Activator for anaerobic adhesive.	Green	N/A			



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