Electronics adhesives

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 efficiently secure SM components prior to mechanized soldering process.

- High "green" strength
- Good thermal conductivity
- Good electrical resistivity

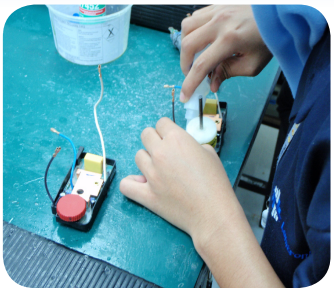
Adhesive used: Permabond ES578

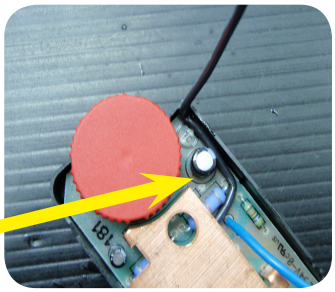
Application: Wire Tacking

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

- Thixotropic gel

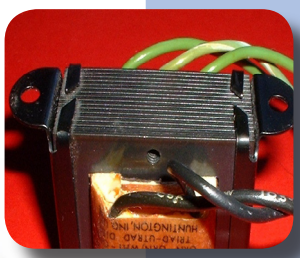
Adhesive used: Permabond 2011





Wire tacked in place on PCB of a power tool to ease component assembly process.

Application: Transformer sealing



Low viscosity adhesive is applied to the top of the transformer stack. It wicks down to seal between the laminates and prevents buzzing / rattling in use.

- Low-odour / non-blooming
- Low, penetrative viscosity for wicking down into the transformer stack.

Adhesive used: Permabond 940

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.

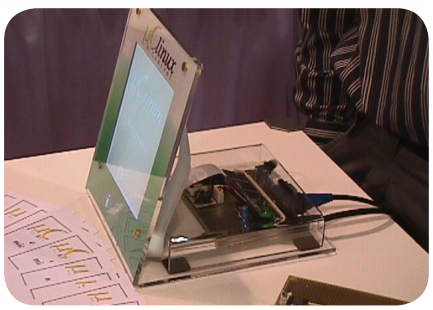
Adhesive used: Permabond A126 or HL126 and A905 or ASC10 activator

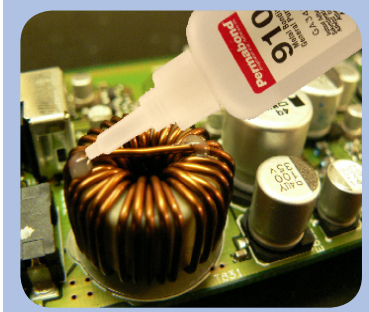
Application: LCD bonding

Bonding LCD screens

- Good aesthetic appearance
- High strength, good adhesion to substrates.

Adhesive used: Permabond UV630





Application: Bonding torroids

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

- Improved durability
- Improved resistance against high levels of vibration

Adhesive used: Permabond 910

Application: Headset bonding

Bonding plastic components together

- Non-bloom formulation required to maintain good aesthetic appearance

Adhesive used: Permabond 947 & CSA-NF

Permabond® Engineering Adhesives

Product selector

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.

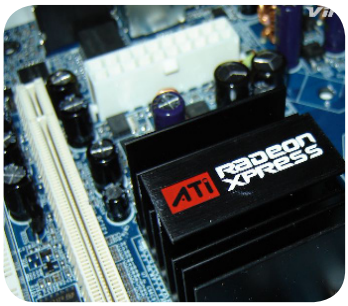
Potting & Encapsulation

	ET515	UV681	UV683
Chemistry	2-part epoxy	UV-curable	UV-curable
Features	Highly flexible	Very low viscosity for conformal coating	Ideal for encapsulating components, doming
Colour	Colourless / slightly amber	Clear, colourless	Clear, colourless
Viscosity @ 25°C	19,000 - 20,000 mPa.s *(cP)*	80-100 mPa.s *(cP)*	1000-1500 mPa.s *(cP)*
Maximum gap fill	2mm *(0.08")*	0.1 mm *(0.004")*	0.5 mm *(0.02")*
Handling time	15-25 minutes	<4 seconds	<4 seconds
Shear strength	8-12 MPa *(1200-1700 psi)*	10-11 MPa *(1500-1600 psi)*	10-11 MPa *(1500-1600 psi)*

More information available on individual product technical datasheets.

SMD Mounting, Wire Tacking & Assembly of Plastic Components

	947	920	2011	ES578
Chemistry	Cyanoacrylate	Cyanoacrylate	Cyanoacrylate	Heat cure epoxy
Application	Wire tacking, low odour, low bloom	High-temperature resistant adhesive ideal for bonding surface mount devices	Non-drip gel, ideal for bonding plastic components / casing (such as bluetooth headsets)	SMD Mounting - high green strength. Component rigidising.
Fixture time	<15 seconds	<20 seconds	<10 seconds	20 mins @150°C or <3 mins by induction
Colour	Clear, colourless	Clear, colourless	Clear, colourless	Black
Viscosity @ 25°C	1000-1500 mPa.s *(cP)*	70-90 mPa.s *(cP)*	Gel	Paste
Maximum gap fill	0.5mm *(0.02")*	0.15mm *(0.006")*	0.5mm *(0.02")*	3mm *(0.12")*
Temperature resistance	80°C *(180°F)*	250°C *(480°F)*	80 °C *(180°F)*	180°C *(350°F)*
Shear strength	16-20 MPa *(2300-2900 psi)*	19-23 MPa *(2800-3300 psi)*	20-24 MPa *(2900-3500 psi)*	27-41 MPa *(3900-5900 psi)*



Heat Sink Bonding

	ES550	ES578	737
Chemistry	Heat cure epoxy	Heat cure epoxy	Cyanoacrylate
Cure	20 mins @150°C or <3 mins by induction	20 mins @150°C or <3 mins by induction	<30 sec at room temperature
Colour	Grey / metallic	Black	Black
Viscosity @ 25°C	Paste	Paste	3000 mPa.s
Maximum gap fill	3 mm *(0.12")*	0.5 mm *(0.02")*	0.5 mm *(0.02")*
Thermal conductivity	0.55 W/m.K	1.3 W/m.K	0.2 W/m.K
Shear strength	27-41 MPa *(3900-5900 psi)*	27-41 MPa *(3900-5900 psi)*	19-23 MPa *(2800-3300 psi)*

Permabond® Engineering Adhesives

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Permabond's sales engineers are available to assess your production line and find the best possible turnkey adhesive solution that will result in production efficiencies.

The experienced team of Permabond chemists is on hand to help you with custom formulations and fulfilling your technical data requests.

Permabond Worldwide

Wherever your manufacturing or R&D site may be located, Permabond representatives can be called upon to assist you. We have an extensive network of trained distributors worldwide.

Permabond Engineering Adhesives

MKT_Electronics_rev2