

Permabond®

Two-Part Epoxies

ISO 9001:2015 Certified
"Our Science ... Your Success"

Permabond 2-part epoxy adhesives are suitable for bonding a wide variety of materials. Available with a range of different cure speeds, Permabond epoxies have been developed to offer a high standard of performance for demanding bonding applications.

Substrates

Permabond 2-part epoxy adhesives will bond most engineering materials. They form excellent structural bonds to a wide variety of materials including metals, composites, wood and some plastics.

Durability

Their excellent chemical and water resistance makes them suitable for harsh environmental conditions. These epoxies are an excellent choice for high-strength structural bonding.

Applications

Epoxies are widely used in the marine, automotive, aerospace, appliance, general assembly and construction industries. Applications are diverse and include bonding aerospace structures, motor housings and mounting brackets, tools and kitchen counter tops amongst many others.

The high strength and durability achieved using these adhesives provides designers with greater design freedom in their selection of substrate materials.

Process

1:1 and 2:1 mix epoxies can be easily dispensed with a static mixing nozzle -no measuring or hand mixing is needed. Heat cure is not needed as the adhesives will cure at room temperature. Heat can be used to accelerate the speed of cure quoted on the chart over-leaf.

Joint Design

Joint design possibilities are greatly improved by the high shear and peel strength of joints bonded with these adhesives and by the increased stress distribution that they offer.

Benefits

- High peel strength increases design versatility.
- Easy mix ratio of most Permabond 2-component epoxies reduces equipment costs.
- Durability increases material choices.
- Rapid cure increases production rates.
- Room temperature cure reduces equipment & energy costs.
- Solvent free formulation improves workplace safety.
- Low odour improves workplace environment.



Product Data

Permabond Two-Part Epoxy Adhesives Comparison Chart

This table represents a selection of the complete range of Permabond two-part epoxy adhesives. For more detailed technical information and product Material Safety Data Sheets, visit www.permabond.com. To discuss your specific application requirements, call the Permabond Helpline and our technical advisors will recommend the best adhesive for you.

Grade	Description	Appearance (mixed)	Viscosity (mixed) (mPa.s)	Max. Gap Fill (mm)	Pot life	Handling Time	Shear Strength (MPa)	Service Temperature (°C)
ET500	Very fast curing, clear, non-yellowing.	Clear, transparent	13,000-24,000	2.0	3-4 mins	5-8 mins	12-18	-40 to +80
ET502	High viscosity version of ET500.	Clear, transparent	45,000-90,000	4.0	3-5 mins	5-10 mins	8-12	-40 to +100
ET5011	Slower curing version of ET500.	Clear, transparent	40,000-80,000	2.0	10-25 mins	25-30 mins	6-12	-40 to +100
ET505	Tough, structural multipurpose adhesive for bonding a wide variety of materials.	Amber	12,000-27,000	2.0	1-2 hours	3-5 hours	18-21	-40 to +80
ET510	Rapid curing and flexible for excellent impact and peel resistance.	Amber	22,000-39,000	2.0	10-20 mins	20-40 mins	8-12	-40 to +80
ET514	Toughened structural epoxy. Faster curing version of ET538.	Grey	Thixo paste	2.0	30-50 mins	60-120 mins	18-20	-40 to +80
ET515	Clear and flexible with excellent peel and impact resistance.	Clear, transparent	12,000-22,000	2.0	10-20 mins	20-30 mins	8-12	-55 to +100
ET536	Toughened, thixotropic, excellent gap fill and flow control.	Grey	Thixo paste	5.0	50-80 mins	90-120 mins	15-24	-40 to +80
ET538	Toughened, thixotropic, excellent gap fill and flow control. Long pot life for large assemblies.	Grey	Thixo paste	5.0	120-150 mins	3-5 hours	18-20	-40 to +100
ET5145	Controlled flow FDA compliant epoxy for food and beverage applications	Off-white	Thixo paste	2.0	50-80 mins	3-5 hours	19-21	-40 to +80
ET5147	High temperature resistant FDA compliant epoxy for food and beverage applications	Off-white	Thixo paste	2.0	40-60 mins	3-5 hours	18-20	-40 to +120
ET5401	Toughened, thixotropic, excellent gap fill and flow control, improved temperature resistance.	Grey	Thixo paste	5.0	10-12 mins	60-90 mins	20-30*	-40 to +140°C (continuous) +180°C (peak)
ET5411	High temperature resistant, low viscosity.	Grey	Light thixo paste	2.0	16 hours	Heat cure required	18-22	-40 to +230°C (continuous) +300°C (peak)
ET5428	Composite bonding grade with rapid cure speed. Colour matched for bonding GRP or Carbon Fibre.	Available in cream or charcoal black	Thixo paste	5.0	10-20 mins	30-45 mins	18-22	-40 to +120
ET5429	Composite bonding grade with longer pot life.	Charcoal black	Thixo paste	5.0	2-4 hours	6-10 hours	18-22	-40 to +120
MT382	Modified epoxy hybrid, low modulus, self-levelling. Ideal for bonding composites or potting applications.	Charcoal black	13,000-30,000	0.5	20-50 mins	105-120 mins	4-7	-40 to +120
MT3821	High viscosity version of MT382	Charcoal black	Thixo paste	5.0	10-20 mins	60-90 mins	4-7	-40 to +120
MT3826	Thermally conductive grade, ideal for electronic applications	Cream	Thixo paste	5.0	<25 mins	2-3 hours	3-5	-40 to +120

*Heat cure required to achieve maximum strength performance

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