

2-part epoxy adhesives

2part Epoxy Adhesives are structural adhesives with high mechanical resistance and durability, designed for bonding metals, composites (CFRP, GFRP, etc.), marble, stones and some plastics. They cure by accurately mixing the two components (resin and hardener), usually at room temperature and can be used to fill large gaps. 2k epoxy adhesives can replace mechanical fasteners, help to lighten structures, maximize the distribution of loads and the absorption of impact and vibrations.

BENEFITS:

- ▶ Provide the highest mechanical resistance on metals and composites.
- ▶ Fill large gaps.
- ▶ Low shrinkage while curing (avoid residual stress on the joint).
- ▶ Good resistance to chemicals and humidity.
- ▶ Can bond a huge variety of substrates.
- ▶ Heat speeds up and finishes the curing process.
- ▶ Viscosity, color, flexibility, curing time, chemical and high temperature resistance can be customized to match application requirements.



SUBSTRATES:

- ▶ Metals
- ▶ Plastics (ABS, PC...)
- ▶ Composites (CFRP-GFRP)
- ▶ Ceramic
- ▶ Marble
- ▶ Stones



2-part hybrid epoxy adhesives

The 2k modified epoxy resin adhesives are designed for applications of sealing and flexible bonding. They cure by mixing the 2 parts and thanks to moisture. Good resistance to high temperature.

BENEFITS:

- ▶ Excellent properties when used as a filler.
- ▶ Paintable.
- ▶ Ideal for flexible and elastic bonding.
- ▶ Isocyanate (NCO) free.
- ▶ Good compression strength.

SUBSTRATES:

- ▶ Metals
- ▶ PC
- ▶ ABS
- ▶ PVC
- ▶ PMMA
- ▶ Composites



DIRECTIONS FOR USE

- ▶ It is recommended to apply the adhesive on clean and dried surfaces. Clean the parts with Loxeal Cleaner 10 or other suitable solvent.
- ▶ Surface treatments, suitable to the substrate, such as mechanical treatment (abrasion or sandblasting) or chemical treatment on metals improve the bonding durability and its mechanical strength.
- ▶ Resin and hardener have to be mechanically mixed before the application. Mix the 2 parts in order to get a homogeneous color, paying attention to the mixing ratio, by weight or volume, given on the technical data sheet.
- ▶ Avoid to mix big quantities of product because the heat produced by chemical reaction may be dangerous and cause loss of product.
- ▶ For automatic mixing, set the static mixer on the dual cartridge and apply the product, completely discarding the first 3/4 cm of the extruded product.
- ▶ Assemble the parts immediately after product application and keep them mechanically fixed until cure is completed. Do not provide any mechanical stress until full polymerization is achieved.
- ▶ Excess of product can be removed with acetone or any other solvent compatible with the substrates. Application tools and dosing systems shall be cleaned before the product is hardened.
- ▶ Cured product can be removed mechanically only.

HOW TO CALCULATE THE VOLUME OF ADHESIVE REQUIRED

ADHESIVE VOLUME (ml) = Bonding line thickness (cm)
x Surface to bond (cm²)

Example:

1ml covers 100 cm² surface with 0.1mm high adhesive layer

1l covers 1 m² surface with 1mm high adhesive layer

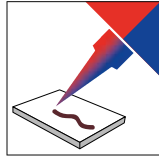
Theoretical quantity of adhesive (in weight) (g) = density (g/ml) x volume (ml)

Usage estimator for packaging

		50 ml	200 ml	400 ml
Bead diameter	1,2 mm	40 m	140 m	280 m
	2 mm	13 m	52 m	104 m
	3 mm	6 m	24 m	48 m
	6 mm	1,5 m	6 m	12 m

The listed values are intended as indicative only.





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	GRADE	COLOR	VISCOSITY (+25°C Pa.s)	HANDLING TIME (+25°C) MINUTES	FUNCTIONAL CURING TIME (+25°C)	SHEAR STRENGTH (ISO 4587) (N/mm ²)	PEEL STRENGTH (ISO 4578) (N/25 mm)	DESCRIPTION
TWO-PART Viscosity = (A) Resin - (B) Hardener (*) Time detected on a 2 g total mass mixture Part A + Part B (**) With hot curing for 60 minutes at +80°C	31-10	AMBER	12-18 (A) 10-25 (B)	90 - 150 (*)	12 - 24 h	12 - 14	10 - 25	General purpose for structural bonding metals, ferrites, ceramic, marble, concrete, also together with glass, wood and some plastics (polyester, ABS, rigid PVC). Good resistance to water, oils and fuels.
	31-40	COLORLESS	12-18 (A) 15-30 (B)	10 - 20 (*)	30 - 40 min	10 - 12	4 - 20	Medium/fast cure. General purpose for structural bonding metals, ferrites, ceramic, marble, concrete, also together with glass, wood and some plastics (polyester, ABS, rigid PVC).
	31-42	COLORLESS	12-18 (A) 15-30 (B)	3 - 8 (*)	20 - 30 min	12 - 14	4 - 20	Fast cure. General purpose for structural bonding metals, ferrites, ceramic, marble, concrete, also together with glass, wood and some plastics (polyester, ABS, rigid PVC).
	32-43	TRANSLUCENT	30-55 THIXO (A) 50-80 THIXO (B)	5 - 10 (*)	10 - 20 min	10 - 14	-	Fast curing and flexible. Recommended for bonding metals, ferrites, ceramic, marble, concrete, also together with glass, wood and some plastics (polyester, ABS, rigid PVC). Good resistance to water, oils and fuels.
	35-44	COLORLESS	10-20 (A) 14-24 (B)	10 - 20 (*)	40 - 60 min	5 - 9	25 - 60	Flexible with good peel strength on metals. For structural bonding metals, ferrites, ceramic, marble, concrete, also together with glass, wood and some plastics (polyester, ABS, rigid PVC). Good resistance to water, oils and fuels.
	36-10	AMBER	14-28 (A) 10-25 (B)	90 - 150 (*)	12 - 24 h	12 - 18	25 - 40	Tough, general purpose. Provide excellent adhesion on metals, ferrites, composites, ceramic, marble, glass, concrete, wood and some plastics. Good resistance to water, oils and fuels.
	3636	GREY	50-100 THIXO (A) 100-200 THIXO (B)	50 - 80 (*)	72 - 96 h	15 - 25	60 - 80	Tough, high viscosity and thixotropy for controlled dosing. Allow repositioning for bonding big parts. Excellent adhesion on metals, ceramic, wood, foams and composites. Good shear and impact strength. Resistant to shocks and vibrations. Good resistance to water, oils and fuels.
	4401	GREY	60-120 THIXO (A) 50-100 THIXO (B)	10 - 15	24 - 36 h	20 - 30	150 - 300 (**)	High toughness, excellent shear, peel and impact strength and resistance to vibrations and high temperature (up to +120° C, with peaks at +140° C). High viscosity and thixotropy for controlled dosing. Excellent adhesion on metals, composites, ceramic, wood and some plastics. Good chemical resistance (to water, oils and solvents).
	4428	DARK GREY	60-150 THIXO (A) 100-200 THIXO (B)	10	24 - 36 h	18 - 22	150 - 200	Fast curing, high toughness. Excellent shear, peel and impact strength and resistance to vibrations, also at high temperature (up to +120° C). High viscosity and thixotropy for controlled dosing even on vertical surfaces. Designed to provide outstanding performances on composites, excellent also on metals, ceramic, wood and some plastics.
	4429	BLACK	50-80 THIXO (A) 50-80 THIXO (B)	150	24 - 36 h	18 - 22	200	High toughness. Excellent shear, peel and impact strength and resistance to vibrations, also at high temperature (up to +120° C). High viscosity and thixotropy for controlled dosing even on vertical surfaces. Allow repositioning for bonding big parts. Designed to provide outstanding performances on composites, excellent also on metals, ceramic, wood and some plastics.
	EB4406	WHITE	40-50 THIXO (A) 15-20 THIXO (B)	50	24 h	18 - 22	90	Fast full cure. Allow repositioning for bonding big parts, paintable and sandable. Excellent resistance to water and chemicals. Designed for bonding metals, ceramic, and some plastics. It ensures excellent resistance to temperature (up to +180° C), thermal shocks and thermal cycles.
	EB4451	GREY	5-15 THIXO (A) 8-25 THIXO (B)	150	36 - 48 h	18 - 22	-	Thermally conductive, excellent for applications that require resistance to high temperature (up to +200° C) and heat transmission in thermohydraulic or electronic industry. Suitable for potting and bonding on metals, composites, ceramic and some plastics. Highly resistant to hot and cold water, motor oil, water and glycol.
	EPOXSTIK	AMBER	PASTE	5 - 7	15 - 25 min	4 - 6	-	Plastic putty designed for fast or emergency maintenance and repair.
TWO-PART HYBRIDS	4807	GREY	15-25 THIXO (A) 0,7-2 THIXO (B)	10 - 20	72 h	4 - 10	60 - 80	Soft and flexible, excellent adhesion on metals, ceramic, composites and many plastics. Good resistance to high temperature (up to +120° C, with peaks at +150° C). Excellent for bonding and sealing metal boxed elements and composites in home appliances and automotive industry.
	4820	BLACK	20-50 0,2-0,3	25 - 50	72 h	4 - 7	-	Self-levelling, soft and flexible, excellent adhesion on metals, ceramic, composites and many plastics. Good resistance to high temperature (up to +120° C, with peaks at +150° C).
	4821	BLACK	THIXO PASTE	10 - 15	72 h	4 - 7	60 - 80	High viscosity and thixotropy for controlled dosing even on vertical surfaces. Soft and flexible, excellent adhesion on metals, ceramic, composites and many plastics. Good resistance to high temperature (up to +120° C, with peaks at +150° C).
	EH4836	IVORY	THIXO PASTE	20	72 h	1 - 2	-	Based on MS polymer, for sealing and bonding applications on polycarbonate, ABS, Nylon, other plastics and metals. It fills large gaps. Thermally conductive and self-extinguishing after cure, compliant to UL94 V-0 Flame Retardancy.