



P-Bond composite adhesive

Adhesive, permanently tough and elastic composite adhesive

- for semi-structural bonding of different materials
- excellent adhesion on various substrates
- Resists permanently changing mechanical and thermal loads
- rapid and uniform curing in a wide temperature range
- Free from silicones, organic solvents, isocyanates and halogens

General properties

P-Bond is a tough, elastic, gap-bridging 2-component adhesive that is suitable for both thin film and thick film bonding. The product is based on a composite system consisting of epoxy resins and special silyl-terminated polymers, which have proven their worth in high-performance adhesives in Japan for several years. A matrix of these polymers gives the system its special flexibility and toughness, while the epoxy component contributes decisively to its high adhesive strength.

P-Bond retains its elasticity and adhesive strength over a wide range of temperatures. This property profile is an great advantage in comparison to conventional adhesive systems such as epoxy and polyurethane adhesives.

P-Bond composite adhesive is particularly recommended for applications that require a strong, yet permanently elastic adhesive bond. In view of the strength of the bonding, P Bond is at a level between the very firm and brittle epoxy and other elastic and less firm adhesives (see Technical Specifications).

Processing

The surfaces to be bonded should be dry, clean and free of grease and oil.

The two adhesive components should be mixed directly before use. Mix in a clean vessel until the batch has a uniform color. The ideal mixing ratio of the components is A: B = 2: 1

Since both components differ only insignificantly in their density, you can use both volume ratio or weight ratio. Minor deviations in the mixing ratio have no influence on the quality of the bond.

After mixing, P-Bond should be applied on one side of the surface. The parts should be glued together within 90 minutes at about 20°C and fixed if necessary. Pressing is not required. Other ambient temperatures can lead to a different duration of processability.

The consumption of adhesive depends on the thickness of the application and on the structure of the particular substrate. In the case of surface bonds of smooth, even surfaces, the requirement is about 0.75 to 1.00 liters per m², when applied with a fine to medium toothed spatula.



Technical characteristics

Consistency	pasty
Color	grey
Odor	weak amine-like
Density	1.18 +/- 0.05 g/ml
Non-volatile part	99%
Mixing ratio Component A (white) Component B (black)	2 parts 1 part
Shore A – hardness after complete curing	> 50
Processing temperature	+5°C to +30°C
Pot life at ambient temperature	1.5h
Tensile shear strength Breaking elongation (on anodized aluminium after curing)	> 5.0 N/mm ² 10 – 20%
Curing 50% of final strength, tack-free stable completely cured	after 24h at ambient temperature after 48h at ambient temperature after 48h at 40°C after 24h at 60°C after 90min at 100°C
Temperature resistance	-40 °C to +125 °C (short term also higher)
Shelf life, frost-free up to 30°C	12 month

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This information is based on our present knowledge. It does not however, constitute a guarantee for any specific product properties and shall not establish a legally valid contractual relationship.