Technical Datasheet
Structalit® 8202

° Preliminary Datasheet. The technical statements are only guidelines and can be changed at any time.

Product Description

Panacol Structalit® adhesives are solvent free single or two-component adhesives. They are mostly based on epoxy resin and can be cured at room temperature or by exposure of heat. Structalit® products are designed for bonding, casting and protecting components in electronic and automotive industry.

Structalit® 8202 is a classical underfill material designed for chip stack packages and BGA. It is one part black colored epoxy and cures rapidly under the influence of heat. Special feature of this product is the low viscosity, good capillarity, low coefficient of thermal expansion and the high glass transition-level. It is designed to cure quickly at moderate temperatures to minimize stress to other components. Due to its good compatibility with most Pb-free solders, the cured material can provide excellent mechanical properties to protect solder joints during thermal cycling. The underfiller can also be cured in the reflow process. Curing temperature and time could be optimized by customers in their own processes. This product is in full compliance with RoHS and halogen free (electronic grade).

Curing Properties

The product is a one-component adhesive and cures under exposure to heat. Possible curing temperatures are listed in the table below.

Thermal curing	[min]
Time at 130°C*	10

* object temperature

The curing times given are guidelines. They refer to the curing of 2 g of adhesive. The heating up of the joining members are not taken into account.

The final strength of the adhesive is reached at the earliest after 24 h.

Technical Data

Resin	epoxy
Appearance	black

Uncured material

Viscosity [mPas] (Kinexus Rheometer, 25°C, 60s^{-1}) *PE-Norm 064*	330
Pot life @ 25 °C [days] *25 % viscosity increase*	3
Flash point [°C] *PE-Norm 050*	>100

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Cured material

Hardness shore D *PE-Norm 006*	74
Temperature resistance [°C] *PE-Norm 065*	-40 - 200
Water absorption [mass %] *PE-Norm 016*	0,6

Glass transition temperature DSC [°C] *PE-Norm 009*	93,0
Coefficient of thermal expansion [ppm/K] below Tg *PE-Norm 017*	14,9
Coefficient of thermal expansion [ppm/K] above Tg *PE-Norm 017*	166,6

Young's modulus E [MPa] *measured by DMA*	1 150

Transport/Storage/Shelf Life

Trading unit	Transport	Storage	Shelf-life*
Cartridge	0°C - 10°C	-20°C - 0°C	at delivery max. 3 months
Other packages			

Store in original, unopened containers!

Instructions for Use

Surface preparation

The surfaces to be bonded should be free of dust, oil, grease or other dirt in order to obtain an optimal and reproducible bond.

For cleaning we recommend the cleaner IP® Panacol. Substrates with low surface energy (e.g. polyethylene, polypropylene) must be pretreated in order to achieve sufficient adhesion.

Application

Our products are supplied ready to use. Depending on packaging they can be applied by hand directly from the container or semi or fully automatically. With automated application from the cartridge the adhesive is conveyed by a compressed air-operated displacement plunger via a valve in the needle. When metering low viscosity materials from bottles the adhesive is transported by a diaphragm valve. If help is required, please contact our application engineering department.

Adhesive and substrate may not be cold and must be warmed up to room temperature prior to processing.

For safety information refer to our safety data sheet.

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Note

The product is free of heavy metals, PFOS and Phthalates and is conform to the EU-Directive 2011/65/EU "RoHS II" .

Our data sheets have been compiled to the best of our knowledge. The enclosed information describes characteristic properties, with no declaration of commitment. We recommend trials in order to confirm that our products satisfy the particular application requirements. For any additional technical support, please contact our application engineering department. For warranty claims, please refer to our standard terms and conditions.