Technical Datasheet

Structalit® 5721

Product Description

Modified epoxy | 1 K | solvent-free | heat-curing

- Glob top
- Fill for “Frame and Fill”
- Electrics
- Electronics
- Very good flowability
- High glass transition temperature
- No bleeding
- Very low ionic content (<10ppm)
- Suitable for semiconductors

Curing Properties

This adhesive must be cured with heat. Typical curing temperatures are listed in the table below.

Temperatures	Time
30min at 120°C and following 45min at 150°C	
Alternative 150°C	1h

The heat cure times are only provided as a guideline. They are derived from curing a 2g adhesive sample without affixed substrates in a laboratory environment. Actual cure times can vary based on part size, configuration, adhesive volume, temperature control, and the time required for the component substrates to attain oven temperature.

The final bond strength of the adhesive is achieved no sooner than 24 h after the bonded components are removed from the oven.

Technical Data

Resin	Epoxy
Appearance	Black
Filler	Quartz
Filler - weight [%]	50
Particle size D95 [µm]	40

Technical Datasheet

Structalit® 5721

Uncured Material	
Viscosity [mPas] (Kinexus Rheometer, 25 °C, $5s^{-1}$) *PE-Norm 064*	15,000 – 20,000
Thixotropic index [1/10] *PE-Norm 064*	1.2 – 1.4
Density [g/cm³] *PE-Norm 004*	1.4 – 1.6
Flash point [°C] *PE-Norm 050*	>100
Working life [days] *@ room temperature*	3

Cured Material	
Hardness shore D *PE-Norm 006*	70 – 90
Temperature resistance [°C] *PE-Norm 059*	-40 – 200
Shrinkage [%] *PE-Norm 031*	<1
Water absorption [%] *PE-Norm 016*	<1

Glass transition temperature - DSC [°C] *PE-Norm 009*	150 – 180
Coefficient of thermal expansion [ppm/K] below Tg *PE-Norm 017*	<40
Coefficient of thermal expansion [ppm/K] above Tg *PE-Norm 017*	100 – 150

Thermal conductivity [W/m*K] *PE-Norm 062*	0.2 – 0.4
Thermal conductivity [W/m*K] *PE-Norm 054*	0.5 – 1.0
Dielectric constant [10kHz] *IEC 62631-2-1*	1 – 3
Dielectric strength [kV/mm] *DIN EN 60243*	18 – 22

Young´s modulus – Tensile test [MPa] *150°C, 60min* *PE-Norm 056*	700 - 850
Tensile strength [MPa] *150°C, 60min* *PE-Norm 014*	24 – 30
Elongation at break [%] *150°C, 60min* *PE-Norm 014*	<1

Technical Datasheet

Structalit® 5721

Transport/Storage/Shelf Life

Package type	Transport	Storage	Shelf life*
Syringe/Cartridge	-20°C	-20°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, mold release, or other contaminants in order to obtain an optimal and reproducible bond. For cleaning we recommend the cleaner IP® from Panacol, or a solution of Isopropyl Alcohol at 90% or higher concentration. 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 by using compatible dispensing systems and automation. Many commercially available valve and controller options are available to ensure accurate and consistent adhesive dispensing. For assistance with dispensing and curing questions, please contact our Applications Engineering department. To obtain best results, the adhesive and substrates to be bonded may not be cold and should be allowed to warm to room temperature prior to processing. For safety information refer to our Material Safety Data Sheet (MSDS).

Storage

Store uncured product in its original, closed container in a dry location. Any material removed from the original container must not be returned to the container as it could be contaminated. Panacol cannot assume responsibility for products that were improperly stored, contaminated, or repackaged into other containers.

Handling and Clean-up

For safe handling information, consult this product's Material Safety Data Sheet (MSDS) prior to use. Uncured material may be wiped away from surfaces with organic solvents. Do not use solvents to remove material from eyes or skin!

Technical Datasheet

Structalit® 5721

Disclaimer

The product is free of heavy metals, PFOS and Phthalates and is conform to the current EU-Directive RoHS.

THE VALUES NOTED IN THIS TECHNICAL DATA SHEET ARE TYPICAL PROPERTIES AND ARE NOT MEANT TO BE USED AS PRODUCT SPECIFICATIONS.

The information contained in this data sheet is believed to be accurate and is provided for information only. Panacol makes no representation or warranties of any kind concerning this information. It is the user's responsibility to determine the suitability of this product for any intended use. Panacol does not assume responsibility for test or performance results obtained by the user. The user assumes all risk and liability connected with the use of this product.

The user should adopt such precautions and use guidelines as may be advisable for the protection of property and persons against any hazards that may be involved in this product's handling or use. Panacol specifically disclaims any liability for consequential or incidental damages of any kind arising from the handling or use of this product. The information contained in this Technical Data Sheet offers no assurance that the product use, application, or process will not infringe on existing patents or licenses of others. Nothing in this Technical Data Sheet transfers or grants license for the use of any patents, trade secrets, intellectual property, or confidential information that is the property of Panacol.

Except as otherwise noted, all trademarks in this document (identified as ®) are the property of Panacol.

Contact

Panacol-Elosol GmbH
Stierstädter Straße 4
61449 Steinbach
Germany
Phone: +49 6171 6202-0
Mail: info@panacol.de
www.panacol.com

Panacol-USA, Inc.
142 Industrial Lane
Torrington CT 06790
USA
Phone: +1 860-738-7449
Mail: info@panacol-usa.com
www.panacol-usa.com

Panacol-Korea Co., Ltd.
#707, Kranz Techno,
388 Dunchon-daero
Junwon-gu, Seongnam
Gyeonggi-do, 13403 KOREA
Phone: +82 31 749 1701
Mail: info@panacol-korea.com
www.panacol-korea.com

Eleco Panacol – EFD
125, av Louis Roche
Z.A. des Basses Noëls
92238 Gennevilliers Cdx FRANCE
Tél.: +33 (0)1 47 92 41 80
Mail: eleco@eleco-panacol.fr
www.eleco-panacol.fr