TECHNICAL DATASHEET
STRUCTALIT® 5604

PRODUCT DESCRIPTION

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

- SMD adhesive
- Bonding of electronic components
- Fast curing
- Resistant to soldering temperatures up to 270°C (mx. 5 minutes)

CURING PROPERIES

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

Temperatures	Time
100°C	50 min
120°C	17 min
150°C	4 min

It is recommended not to cure more than 0.4 g Structalit® 5604 at one time.

The curing times given are guidelines. They refer to rheological measurements according to Test instruction P067. The heating times of the parts to be joined are not taken into account. 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	Red

Uncured Material	
Viscosity [mPas] (Kinexus Rheometer, 25 °C, 10s^{-1}) *Test instruction P064*	25,000 – 40,000
Thixotropic index [1/10] *Test instruction P064*	6 – 7
Density [g/cm^3] *Test instruction P004*	1.1 – 1.25
Working life [days] *@ room temperature*	7

Cured Material	
Hardness shore D *Test instruction P006*	75 – 90
Typical operating temperature [°C]	-40 – 180
Linear shrinkage [%] *Test instruction P031*	<2
Water absorption [wt%] *Test instruction P016*	<1

Glass transition temperature - DSC [°C] *Test instruction P009*	115 – 135
Coefficient of thermal expansion [ppm/K] below Tg *Test instruction P017*	30 – 60
Coefficient of thermal expansion [ppm/K] above Tg *Test instruction P017*	170 – 300

Dielectric constant [10kHz] *IEC 62631-2-1*	2 – 5
Volume resistivity [Ohm*cm] *Test instruction P040*	1 x 10^{12} – 5 x 10^{12}

Storagemodulus – DMA [MPa] *150°C, 20min* *Test instruction P022*	400 – 600

TRANSPORT/STORAGE/SHELF LIFE

Package type	Transport	Storage	Shelf life*
Syringe/Cartridge	0°C – 10°C	0°C – 10°C	At delivery min. 3 months max. 6 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 Hoenle, 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. Hoenle 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!

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.

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