

Technical Datasheet

Structalit® 5890



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® 5890 is a black thermal curable one-component glob-top compound with fast curing at low temperature and good thermal conductivity. Structalit® 5890 is characterized by good shock resistance.

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 100°C	55
Time at 120°C	12
Time at 150°C	4

The curing times given are guidelines. They refer to rheological measurements according to PE-Norm 067 . 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
Filler	quartz
Filler – weight [%]	50
Particle size D95 [µm]	21

Uncured material

Viscosity [mPas] (Brookfield LVT, 25°C, Sp 4, 0,6rpm) <i>PE-Norm 001</i>	300 000 - 400 000
Density [g/cm³] <i>PE-Norm 004</i>	1,5
Flash point [°C] <i>PE-Norm 050</i>	>100

Technical Datasheet

Structalit® 5890



Cured material

Hardness shore D <i>PE-Norm 006</i>	80 - 90
Temperature resistance [°C]	-40 - 180
Shrinkage [%] <i>PE-Norm 031</i>	<1
Water absorption [mass %] <i>PE-Norm 016</i>	<1

Glass transition temperature DSC [°C] <i>PE-Norm 009</i>	110 - 130
Coefficient of thermal expansion [ppm/K] below Tg <i>PE-Norm 017</i>	14
Coefficient of thermal expansion [ppm/K] above Tg <i>PE-Norm 017</i>	115

Thermal conductivity [W/m*K] <i>PE-Norm 062</i>	0,8
Dielectric constant [10kHz]	3
Dielectric strength [kV/mm]	18
Volume resistivity [Ohm*cm] <i>PE-Norm 040</i>	1,0E+16

Young's modulus E [MPa] <i>PE-Norm 056</i>	10 430
Tensile strength [MPa] <i>PE-Norm 014</i>	41
Elongation at break [%] <i>PE-Norm 014</i>	0,4
Lap shear strength (steel/steel) [MPa] <i>PE-Norm 013</i>	22

Transport/Storage/Shelf Life

Trading unit	Transport	Storage	Shelf-life*
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 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.

Disclaimer

The product is free of heavy metals, PFOS and Phthalates and is conform to the EU-Directive 2017/2102/EU "RoHS III".

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.

Technical Datasheet

Structalit® 5890



Contact

Panacol-Elosol GmbH
Daimlerstr. 8
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