Technical Datasheet
Vitralit® 4285

Product Description

Panacol Vitralit® adhesives are one-component, solvent-free radiation-curing adhesives. The advantages are very short curing times, good adhesion to a variety of substrates, and easy handling. Vitralit® products are used in electronics, medical applications, optics and for fixing parts in general.

Vitralit® 4285 ideally combines the advantages of UV curable adhesives and anaerobic material thanks to the possibility to use it in combination curing. Vitralit® 4285 is used whenever shaded areas make pure UV curing impossible and an anaerobic post-curing allows the achievement of function-appropriate results, the curing time of pure anaerobic products is too long and UV curing makes a fixation within seconds necessary and possible.

Curing Properties

UV-A	VIS	Thermal curing	Anaerobic curing
✓	-	-	✓

✓suitable - not suitable

The product cures within seconds with radiation in the UV-A - range (320 nm - 390 nm). For rapid and high quality crosslinking we recommend the UV devices manufactured by Dr. Hoenle AG, which complement our adhesive technology.

UV-curing (Hoenle Discharge lamp, 320-450nm)		
Intensity [mW/cm²]	Layer thickness [mm]	Time [sec]
60	1	10

Anaerobe curing	12 min

To obtain full cure at least one substrate must be transparent to the recommended wavelength. The curing speed will depend on the intensity of light, light source, the exposure time, and the light transmittance of the substrate. Increased mechanical properties are achieved after 12 hours.

Technical Data

Resin	acrylate
Appearance	green

Uncured material

Viscosity [mPas] (Brookfield LVT, 25°C, Sp 3, 12rpm) *PE-Norm 001*	3 000 - 5 000
Density [g/cm³] *PE-Norm 004*	1,09
Flash point [°C] *PE-Norm 050*	>96
Refractive index [nD20] *PE-Norm 018*	1,4995

Technical Datasheet
Vitralit® 4285

Cured material

Hardness shore D *PE-Norm 006*	80 - 85
Temperature resistance [°C]	-40 - 150
Shrinkage [%] *PE-Norm 031*	<4
Water absorption [mass %] *PE-Norm 016*	<5

Glass transition temperature DSC [°C] *PE-Norm 009*	50 - 60
Coefficient of thermal expansion [ppm/K] below Tg *PE-Norm 017*	50 - 90
Coefficient of thermal expansion [ppm/K] above Tg *PE-Norm 017*	230 - 310

Thermal conductivity [W/m*K] *PE-Norm 062*	0,2
Dielectric constant [10kHz]	4
Dielectric strength [kV/mm]	28

Young's modulus E [MPa] *PE-Norm 056*	2 682
Tensile strength [MPa] *PE-Norm 014*	10
Elongation at break [%] *PE-Norm 014*	0,3

Transport/Storage/Shelf Life

Trading unit	Transport	Storage	Shelf-life*
Cartridge	at room temperature max. 25°C	at room temperature max. 25°C	at delivery min. 6 months max. 12 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.

Technical Datasheet
Vitralit® 4285

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.

After application, bonding of the parts should be done quickly. Vitralit® adhesives cure slowly in daylight. Therefore, we recommend expose the material to as little light as possible and the use of opaque hose lines and dispensing needles.

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.

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