Technical Datasheet
Vitralit® FIPG 60101

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® FIPG 60101 is a UV/visible light/LED curable Form-In-Place gasket material which adheres to a variety of substrates including metal, ceramic, glass and many plastics. Vitralit® FIPG 60101 is a gel viscosity material that is formulated to be dispensed and cured (hardened) exactly where a gasket is required. The thixotropy of Vitralit® FIPG 60101 permits fast dispense cycles and facilitates excellent profile retention. The cured product is extremely flexible and demonstrates outstanding elongation and memory. Once fully cured, Vitralit® FIPG 60101 is moisture resistant, tack-free, and possesses a compression set that is less than 25%.

Curing Properties

UV-A	VIS	Thermal curing	Activator curing
✓	✓	-	-

✓suitable - not suitable

The product cures within seconds with radiation in the UV-A - range (320 nm - 390 nm) and visible range (405 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 Bluepoint 4 Spot, 320-450nm)		
Intensity [mW/cm²]	Layer thickness [mm]	Time [sec]
2 500	2	4 - 5

VIS-curing (Hoenle Bluepoint LED Spot, 405nm)		
Intensity [mW/cm²]	Layer thickness [mm]	Time [sec]
2 000	2	5 - 6

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	transparent, yellow

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Uncured material

Viscosity [mPas] (Kinexus Rheometer, 25°C, $5s^{-1}$) *PE-Norm 064*	30 000 - 60 000
Viscosity [mPas] (Kinexus Rheometer, 25°C, $50s^{-1}$) *PE-Norm 064*	5 000 - 15 000
Density [g/cm³] *PE-Norm 004*	1,1 - 1,2
Flash point [°C] *PE-Norm 050*	>93

Cured material

Hardness shore A *PE-Norm 006*	30 - 40
Temperature resistance [°C]	-40 - 140
Water absorption [mass %] *PE-Norm 016*	>2

Tensile strength [MPa] *PE-Norm 014*	0,2
Elongation at break [%] *PE-Norm 014*	109

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. 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.

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Vitralit® FIPG 60101

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 to 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".

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