Technical Datasheet
Vitralit® 6125

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® 6125 is a UV-curing acrylate adhesive which is distinguished by its versatility. As a special feature Vitralit® 6125 has a thermal initiator and a chemical activator, which allows subsequent curing of shadow areas.

Suitability on various substrates

PMMA	*	chrome	✓	glass	✓	FR4	o
PC	*	copper	✓	steel	✓	PA	o
brass	✓	PBTP	o	Al	✓	ceramic	✓
wood	o	PVC	*	PC	*		

✓excellent o suitable * pretreatment necessary/recommended

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). For rapid and high quality crosslinking we recommend the UV devices manufactured by Dr. Hoenle AG, which complement our adhesive technology.

Bluepoint LED/LED-spot		
Wavelength [nm]	365	405
Suitability	++	-

+ application-related ++ well-suited +++ ideal - not suitable

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.

UV-curing		
Intensity [mW/cm²]	Layer thickness [mm]	Time [sec]
60	1	15

Thermal curing	[min]
Time at 120°C	40

Chemical curing	[min]
Activated	25

Technical Data

Resin	acrylate
Appearance	translucent

Uncured material

Viscosity [mPas] (Brookfield LVT, 25°C, Sp 4, 30rpm) *PE-Norm 001*	4 000 - 6 000
Density [g/cm³] *PE-Norm 004*	1,1
Flash point [°C] *PE-Norm 050*	>97

Cured material

Hardness shore D *PE-Norm 006*	70 - 80
Temperature resistance [°C] *PE-Norm 065*	-40 - 150
Shrinkage [%] *PE-Norm 031*	2,3
Water absorption [mass %] *PE-Norm 016*	<2,8

Glass transition temperature DSC [°C] *PE-Norm 009*	40 - 60
Coefficient of linear expansion [ppm/K] below Tg *PE-Norm 017*	60,0

Thermal conductivity [W/m*K] *PE-Norm 062*	0,2
Dielectric constant [10kHz]	6,2
Dielectric strength [kV/mm]	18,7

Young's modulus E [MPa] *PE-Norm 056*	1 000
Elongation at break [%] *PE-Norm 014*	5
Lap shear strength (glass/steel) [MPa] *PE-Norm 013*	>15
Lap shear strength (glass/Al) [MPa] *PE-Norm 013*	>14

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.

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.

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Note

The product is free of heavy metals, PFOS and Phthalates and is conform to the EU-Directive 2011/65/EU "RoHS II" .

Our data sheets have been compiled to the best of our knowledge. The enclosed information describes characteristic properties, with no declaration of commitment. We recommend trials in order to confirm that our products satisfy the particular application requirements. For any additional technical support, please contact our application engineering department. For warranty claims, please refer to our standard terms and conditions.