

Technical Datasheet

Vitralit® UD 8540



° Preliminary Datasheet. The technical statements are only guidelines and can be changed at any time.

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® UD 8540 is a one-component, solvent-free, UV-curing acrylic adhesive. It has a dual curing component which reacts via atmospheric moisture. Thus also possible shadow zones within the Display-frame can be cured. Vitralit® UD 8540 can be used for the lamination of glass / glass and glass / PMMA displays. Vitralit® UD 8540 is very soft after curing. The Shore hardness is in the Shore 00 range. This allows particularly good interception of thermal stresses between different substrates without causing delamination. The product is silicone free and RoHS compliant.

Curing Properties

UV-A	VIS	Thermal curing	Humidity 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 Cube 2000, 320-450nm)		
Intensity [mW/cm ²]	Layer thickness [mm]	Time [sec]
120	0,5	90

VIS-curing (Hoenle LED Spot 100, 405nm)		
Intensity [mW/cm ²]	Layer thickness [mm]	Time [sec]
100	0,5	90

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

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Uncured material

Viscosity [mPas] (Kinexus Rheometer, 25 °C, 10s ⁻¹) <i>PE-Norm 064</i>	1 800 - 2 500
Density [g/cm ³] <i>PE-Norm 004</i>	1,1
Flash point [°C] <i>PE-Norm 050</i>	>100
Refractive index [nD20] <i>PE-Norm 018</i>	1,4565

Cured material

Temperature resistance [°C]	-40 - 130
Glass transition temperature DSC [°C] <i>PE-Norm 009</i>	-40 - -20

Transport/Storage/Shelf Life

Trading unit	Transport	Storage	Shelf-life*
Cartridge	0°C - 10°C	0°C - 10°C	at delivery max. 3 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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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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