TECHNICAL DATASHEET

Vitralit® 1600 LV

Vitralit 1600 LV is a cationic UV-curable epoxy that can also be cured thermally at low temperatures. It was especially developed for application in electronics and electrotechnics having a high Tg, very good acid resistence and a low water absorption. Vitralit 1600 LV has a lower viscosity than Vitralit 1600 and is therefore especially applicable for some problems in dosing.

Vitralit 1600 LV is also outstanding for its special purity and the low ionic concentration (Na+ < 5 ppm, K+ <5 ppm, Cl- <5 ppm). Before treatment the product must be homogenized.

This is a dual curing product, which means in deep layers or shadowed areas it can be cured by thermal heating.

shelf life:
in closed original packing unit at 5°C without UV- irradiation -- 6 months --

Technical Data

Color	grey
Resin	epoxy
Filler	approx. 52% quartz

UNCURED PROPERTIES

Viscosity (Brookfield LVT/25°C) [mPa*s]	PE-Norm P001	5000 to 6000
Flash point [°C]	PE-Norm P050	> 100
Density [g/cm³]	PE-Norm P051	approx. 1.43

Curing

UV(UV-A 60mW/cm²/ 0,5mm): [sec.]	PE-Norm P002	30
Thermical Curing 105°C :[Min]	PE-Norm P035	30
Full Strength [hours]	PE-Norm P032	after 24

CURED PROPERTIES

Temperature Resistance [°C]	PE-Norm P030	-40 to 180
Hardness Shore D	PE-Norm P052	83 to 93
Shrinkage [Vol-%]	PE-Norm P031	1.4
Water Absorption [Gew-%]	PE-Norm P053	< 0,25
TG DSC [°C]	PE-Norm P009	> 150
Thermal Expansion [ppm/K]	PE-Norm P017	40
Dielectric Constant [10kHz]	PE-Norm P054	3.4
Thermal conductivity [W/mK]	ASTM 1530	0,8

Adhesives and more...

Otherwise the guidelines for application, storage etc. in our general Data Sheet Vitralit® are valid.

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Mechanical Data

Elongation at Break [%]	[PE-Norm P060]	approx. 1
Tensile Stress [MPa]	[PE-Norm P060]	approx. 37
E-Modul [MPa]	[PE-Norm P056]	8000

Instructions of use of filled Vitralit UV epoxy:

- store at max. 5 °C
- warm up to room temperature before usage
- dispensable, filled systems are use at machines from e.g. Mühlbauer, Schiller, Esec or Ruhlamat
- surface must be clean and dry and free from fat and parting agents
- for curing UV- light at wavelength from 315 - 400 nm is needed.

The curing time depends on:

* emission spectrum and energy of emitter, min 30mW/cm²
* distance to substrate
* ageing of emitter
* layer thickness
* material influence like reflection, adsorption and UV- diaphaneity

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