

Vitralit® 1680 was especially designed for chip coating. It is based on epoxy resins. The product features excellent purity and low ionic concentration (Na +, K+, Cl- <5ppm).

Vitralit® 1680 offers the chip coating compounds' advantages that are typical for the 1st Generation plus improved adhesion as well as increased moisture and temperature resistance. Grit size distribution 12 µm.

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 | 6000 to 9000 |
| Flash point [°C] | PE-Norm P050 | > 93 |
| Density [g/cm³] | PE-Norm P003 | approx. 1.5 |

Curing

| | | |
|--|--------------|----------|
| UV(UV-A 60mW/cm² (Thickn.st. 0,5mm)): [sec.] | PE-Norm P002 | 30 |
| Full Strength [hours] | PE-Norm P032 | after 24 |
| Depth of Cure [mm] | PE-Norm P033 | 3 |

CURED PROPERTIES

| | | |
|------------------------------|--------------|------------|
| Temperature Resistance [°C] | PE-Norm P030 | -40 to 150 |
| Hardness [Shore D] | PE-Norm P052 | 70 to 80 |
| Shrinkage [Vol-%] | PE-Norm P031 | 1.2 |
| Water Absorption [mass-%] | PE-Norm P053 | < 0.2 |
| Tg [°C] (DSC) | PE-Norm P009 | 35 to 45 |
| CTE [ppm/K] | PE-Norm P017 | 45 |
| Dielectric Constant [10kHz] | PE-Norm P054 | 3.4 |
| Thermal conductivity [W/m·K] | ASTM 1530 | 0,8 |

Our data sheets have been compiled to the best of our knowledge. The information included in our data sheets is exclusive information for the tended user and describes characteristics, with no declaration of commitment. We recommend trials in order to confirm that our products satisfy the particular application requirements. For an additional technical consultation, please contact our RD department. In general, for guarantee claims, please refer to our standard terms and conditions.

**Adhesives
and more...**

Mechanical Data

| | |
|-------------------------|------------------------------|
| Elongation at Break [%] | [PE-Norm P060] approx. 8,13 |
| Tensile Stress [MPa] | [PE-Norm P060] approx. 17,75 |
| E-Modul [MPa] | [PE-Norm P056] 628 |

Vitralit UV- epoxy, filled, UV curing:

- storage at max. 5°C
- before using acclimate to room temperature in original packing unit
- applicable with syringe, quench bottle, dispenser, automatic dispenser...
- surfaces to be bonded should be free of dust, oil, fat or any other dirt
- curing wave- length from 315nm to 400nm

Curing time depends on:

- emission spectrum and intensity of emitter but min. 30mW/cm²
- distance from emitter to substrate
- emitter intensity aging
- layer thickness
- material influence like reflection, adsorption, UV permeability ...

Adhesives
and more...