Vitralit® 7222

Product Description

Vitralit® 7222 is a low viscosity, transparent UV curing epoxy adhesive with good water and chemical resistance.

Vitralit® 7222 provides good bonding on a wide range of materials including metals, plastics and glass.

Vitralit® 7222 has been tested and met the specifications of USP Class VI. The product is compatible to common sterilization processes and well suited for use in the assembly of disposable medical devices.

Curing Properties

Vitralit® 7222 can be cured by exposure of UV light (320 nm - 390 nm). Increased cure properties are developed after 24 hours. For rapid and high quality bonding we recommend the UV devices (hand lamps, bluepoint 4) manufactured by Dr. Hönle AG, which complement our adhesive technology. Curing with LED devices is not recommended.

Vitralit® 7222 can be cured in 5 - 15 seconds using UVA light with intensity of 60 mW/cm². To obtain full cure at least one substrate must be transparent to UV light. The curing speed will depend upon the light intensity, light source, the exposure time, and the light transmittance of the substrate.

Technical Data

Base	epoxy
Curing	one part, UV light
Appearance	transparent, amber

Uncured Material

Viscosity [mPas]	200 - 500
Density [g/cm³] PE-Norm 004	1.12
Flash Point [°C]	> 100
Refractive Index n_D^{20} PE-Norm 018	1.50

Cured Material

Glass Transition Temperature DSC [°C] PE-Norm 009	50 - 56
Hardness Shore D PE-Norm 006	77 - 82
Young' s Modulus [MPa] PE-Norm 056	1,300
Coefficient of Linear Expansion below T_g PE-Norm 017	52

Coefficient of Linear Expansion above T_g PE-Norm 017	278
Water Absorption [%] PE-Norm 016	0.5
Recommended Service Temperature [°C]	-40 - 60
Short Time Temperature Resistance [°C]	150

Recommended Substrates

PMMA	●	PP	△
PC	●	ABS	●
PVC	✓	SAN	●
PET-A	●	Glas/glass	✓
PET-G	●	Stahl/steel	✓
PUR	●	Al	✓
PS	●	V2A	✓

✓ very good ● application related △ surface pretreatment required

Environmental Resistance

The table below shows the tensile shear strength of glass-steel- bonding after alcohol and water exposure expressed as % from the initial value.

% of initial strength	
24 h Isopropanol, 21 °C	**7 days water, 21 °C**
100	100

Sterilization

Vitralit® 7222 shows good bond strength retention after sterilization. Generally the resistance depends on the substrate material, the curing parameters and the process of sterilization. It remains the user´s obligation to determine the effect of sterilization on the specific procduct.

Storage and Shelf life

The product can be stored for 6 month at 7 °C to 25 °C in unopened containers. Store under dry and dark conditions only.

Packaging Unit

Standard Packaging Units of 100 g, 500 g and 1 kg are available.

Instructions for Use

Surface Preparation

The surfaces to be bonded should be clean and free from oil and grease. Lightly soiled surfaces can be cleaned with our cleaner IP®. Substrates with low surface energy (such as polyethylene and polypropylene) need to be pretreated.

Application

Our products are supplied ready for use. They can be applied manually from the cartriges or automatically with air-operated dosing devices (catridge/piston combination). Depending on the amount of adhesive to be used, different valves are availabe. If help is required, please consult our application department.

For reliable and fast bonding the substrate temperature should be at room temperature.

Virtralit® products cure with UV and visible light. Therefore exposure of light should be kept to a minium during handling. We recommend using opaque feedlines and nozzles.

For safety information refer to our safety data sheet.

Note

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 an additional technical consultation, please contact our R&D department. In general, for warranty claims, please refer to our standard terms and conditions.