

Polytec UV 2195 N

Description

- one-component acrylate hybrid
- solvent-free
- UV/VIS curing

Product properties

- good adhesion to various substrates
- impact resistant
- temperature resistant
- dry surface after curing

Applications

- bonding, sealing, potting

Processing information

After application, the joining of the parts should be done quickly, as some products already cure with daylight. Any contact of the adhesive with base metals, contamination with amines or reducing agents (e.g. vitamin C) should be strictly avoided, as this may lead to undesired premature curing of the product (e.g. in the metering unit).

Surface preparation

The surfaces to be bonded should be free of dust, oil, grease or other contaminants in order to obtain an optimum and reproducible bond. For lightly soiled parts, wiping with isopropanol or ethanol is sufficient. Substrates that have a low surface energy (e.g. polyethylene, polypropylene, Teflon) must be physically pretreated (e.g. with atmospheric plasma or corona) to achieve sufficient adhesion.

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UV-light curing acrylate based adhesive

Technical Information

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Properties in the uncured state	Method	Unit	Technical data
Chemical base	-	-	acrylate hybrid
Color	-	-	slightly yellow, transparent
Number of components	-	-	1
Shelf life at max. 25°C	-	Month	6
Consistency	-	-	medium viscous
Density	-	g/cm ³	app. 0.98
Viscosity rheometer, cone/plate	400 s ⁻¹ at 23°C	mPa·s	app. 6,100

Properties in the cured state	Method	Unit	Technical data
Color	-	-	colorless, transparent
Shore-hardness	Shore D curing at 395nm*	-	78
Service temperature	-	°C	-40 / +80
Max. temperature short term	-	°C	app. +250
Glass transition temperature T _g	DMTA	°C	81
Storage modulus E' at 23°C	DMTA	MPa	980
Coefficient of thermal expansion CTE at 20°C	TMA	ppm/K	100
Lap shear strength PC/ABS FR4/FR4 PMMA/PMMA PMMA/aluminum	curing at 395nm*	N/mm ²	3.7 16.4 5.1 7.7
Compression shear strength Glass/glass Glass/aluminum Glass/stainless steel	curing at 395nm*	N/mm ²	21.4 19.3 16.8
Tensile strength	curing at 395nm*	N/mm ²	25.7
Elongation at break	curing at 395nm*	%	20.7
Water absorption 24 hrs. 23°C 80°C	gravimetric, curing at 395nm*	%	0.2 0.8
Outgassing 24 hrs. at 150°C	gravimetric, curing at 395nm*	%	-2.5

*For some products, the through-curing is limited in 3mm or by substrates, therefore the curing time for the determination of the measured value is adjusted individually.

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Curing*	Method	Unit	Technical data
Feasible UV-wavelength range		nm	365 - 405
Optimum wavelength range for curing		nm	395 - 405
Curing dose at 395nm in 1mm layer		mJ/cm ²	800
Curing time at 1,500 mW/cm ² @395nm in 1mm layer		sec	< 1

*High-power LED lamps are recommended for curing in order to introduce the optimum dose and wavelength with the highest possible energy yield and the lowest possible temperature load on the substrate.

Work and health protection

See safety data sheet.

For your attention:

The above data can only be general information. The properties and performance characteristics listed are typical values and do not form part of the product specification. Due to the processing and application conditions beyond our control and the large number of different materials, we recommend that you first carry out your own tests. Therefore, no liability for concrete application results can be derived from the information and notes in this data sheet. With the publication of this edition, all previous technical data sheets become invalid.

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