

# Polytec UV 2133

## Properties

Polytec UV 2133 is a 100% solid, single component, high viscosity, thixotropic, high  $T_g$ , UV-/Visible light curing adhesive.

Polytec UV 2133 has a good adhesion to glass, metals and most plastics and starts to cure at low intensity.

The product has a high  $T_g$  and a low CTE so it is suitable for applications where a precisely positioning of devices is required.

Polytec UV 2133 is resistance to heat and it shows a very good stability to environmental attacks. The product has withstood successful 1 000 hours in the environmental chamber with the temperature and relative humidity set to 85°C at 85%.



## Processing

- Polytec UV adhesives are single-component products which cure rapidly under exposure to UV or visible light. They should not be exposed to light before application.
- Polytec UV adhesives come ready to use and can be applied directly from the respective packaging.
- Been refrigerated products should be brought to room temperature prior to processing.
- The curing time depends on a number of factors such as type and intensity of the light source, working distance for UV lamp, adhesive layer thickness and UV transmittance of the substrate.
- Air oxygen may inhibit the curing of the material at the surface. Surfaces associated with air during the hardening should be cured with higher intensity or by using an inert gas (e.g. nitrogen ) to obtain a dry surface. Please take notice of respective minimum curing temperature and time.
- Substrates should be free of dirt, grease, oil or any flux residues.
- For Safety information please refer to the respective Material Safety Data Sheet.

# Polytec UV 2133

## UV light curing acrylate adhesive

### Technical Data

# Polytec UV 2133

Properties in uncured state	Method	Unit	Technical Data
Chemical basis	-	-	Acrylate / Methacrylate
No. of components	-	-	1
Storage Stability at 10°C	TM 701	Months	6
Consistency	TM 101	-	Highly viscous
Density Mix	TM 201.2	g/cm <sup>3</sup>	1.78
Viscosity Mix 100 s <sup>-1</sup> at 23°C	TM 202	mPa·s	35 000

Properties in cured* state	Method	Unit	Technical Data
Color	TM 101	-	Grey
Hardness (Shore D after UV-curing)	DIN EN ISO 868	-	80
Temperature resistance continuous	TM 302	°C	-40 / +150
Temperature resistance short term	TM 302	°C	-
Degradation Temperature	TM 302	°C	-
Glass Transition Temperature (T <sub>g</sub> )	TM 501	°C	+112
Coefficient of thermal expansion (<T <sub>g</sub> )	ISO 11359-2	ppm	35
Coefficient of thermal expansion (>T <sub>g</sub> )	ISO 11359-2	ppm	140
Elasticity modulus	TM 605	N/mm <sup>2</sup>	-
Tensile Strength	DIN 53455	N/mm <sup>2</sup>	15
Lap shear strength (Glas/Steel)	DIN 53283	N/mm <sup>2</sup>	>15
Elongation at break	TM 605	%	-
Water absorption 24 h, 23°C	TM 301	%	0.5
Refractive Index	-	-	1.7

\*The above data has been determined with samples cured by UV-light. Please notice, by varying the curing temperature these properties can be influenced to some extend.

# Polytec UV 2133

Curing*	Method	Unit	Technical Data
Emission spectrum		nm	320 – 500
Maximum		nm	320 - 420
Curing time at 0.05 mm thickness		s	ca. 40

\*Curing temperatures refer to the UV-light intensity in the respective bond line. When choosing the respective curing conditions, the thickness and the substrates permeability towards UV-light has to be considered.

## Standard pack sizes:

30cc\* / 30g, 20oz\*\*\*/500g

## Customized Packaging

\*: EFD-Cartridges, \*\*: Bottles, \*\*\*: Semco-Cartridges

### Please note:

The above listed information are typical data based on tests and are believed to be accurate. Polytec PT makes no warranties (expressed or implied) as to their accuracy. The above listed data do not constitute specifications. The processing (in particular the cure conditions) of the material, the process control and the variety of different applications at various customers are not under Polytec PT's control. Therefore Polytec PT will not be liable for concrete results in any specific application or in any connection with the use of this product. In particular the cure conditions do have a major effect on the properties of the cured material. Therefore it is highly recommended to keep the cure schedule – once established - under tight control. With the release of this data sheet all former data sheets will be null and void.

Subject to alteration.

Polytec PT GmbH  
Polymere Technologien  
Ettlinger Straße 30  
76307 Karlsbad  
Germany  
Tel. +49 (0) 7243 604-4000  
Fax +49 (0) 7243 604-4200  
info@polytec-pt.de  
<http://www.polytec-pt.de>

Polytec France S.A.S.  
TECHNOSUD II  
Bâtiment A  
99, Rue Pierre Semard  
92320 Châtillon - France  
Phone. +33 (0)1 49 65 69 00  
Fax +33 (0)1 57 19 59 60  
info@polytec.fr  
<http://www.polytec-pt.com>

Polytec South-East Asia Pte Ltd  
Blk 4010 Ang Mo Kio Ave 10  
#06-06 Techplace I  
Singapore 569626  
Tel. +65 6451 0886  
Fax +65 6451 0822  
info@polytec-sea.com  
<http://www.polytec-pt.com>