

UV5145

Photo-light & UV Curing Adhesive

UV5145 is a one-component, UV-curable, acrylic adhesive. This product is specially designed for bonding, fixing and covering protection of electronic components; the product has the characteristics of medium viscosity, fast curing speed, and good weather resistance.

UNCURED PROPERTIES

Properties	Reference
Chemical composition	Polyurethane acrylic resin
Physical state	liquid
Appearance	Colorless transparent viscous liquid
Viscosity (25°C, spindle viscometer 4#30 mPa·s)	9000-12000
Specific gravity Kg/L	1.08
Solvent content%	0
Heavy metal content PPM	0

CURING PROPERTIES

UV5145 will cure under sufficient UV irradiation conditions. The curing speed and depth depend on the light intensity, spectral distribution of the light source, irradiation time and the light transmittance of the adhered material. The following data are measured under UV radiation conditions of 395nm wavelength LED surface light source and output power 500mw/cm²:

Properties	Reference
Tack free time (1mm)	10-15 S
Deep curing time (1mm)	5-10 s
Full cure energy (1mm)	6000 mj/cm ²

*Recommended Curing Equipment: FUV-100 UV Oven Curing & CUV-350 UV Conveyor Curing

CURED PROPERTIES

The following data are measured under the conditions of 395nm wavelength LED surface light source and ultraviolet radiation with cumulative energy of 6000mj/cm²:

Properties	test method	Reference
Hardness	Shore D	45-50
Operating temperature range	-40~130°C	Customers conduct self-test with workpieces
Shear strength	-PI/GLASS	≥80N/cm ²
Peel strength	PI/GLASS	≥20N/cm ²

ELECTRICAL PROPERTIES

Properties	test method	Reference
Dielectric constant (100MHz)	GB/T 1409-2006	3.08
Dielectric loss (1MHz)	GB/T 1409-2006	0.03
Dielectric strength (KV/mm)	GB/T 1408.1-2016	26.7
Surface resistivity (Ω)	GB/T 31838.3-2019	1.49×10 ¹⁶
Volume resistivity (Ω.cm)	GB/T 31838.2-2019	4.64×10 ¹⁴

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WEATHER RESISTANCE TEST

The following data are measured under the conditions of 395nm wavelength LED surface light source and ultraviolet radiation with cumulative energy of 6000mj/cm²:

Base material	Test Conditions	Bonding strength retention rate (%)
PI/Glass	85°C85%RH (200H)	92
PI/Glass	85°C85%RH (500 hours)	83
PI/Glass	-40°C~85°C (200H)	85
PI/Glass	-40°C~85°C (500H)	78

STORAGE CONDITIONS

Please store in a cool and dark place. Please close the bottle cap after opening it. Do not pour the unused glue back into the original bottle. The optimal storage temperature is 8-28°C. Too high or too low will affect the performance of the glue. The shelf life is 8 months.

The data contained in this bulletin is provided only as a guide for evaluation/consideration. These material characteristics are typical properties that are based on a limited number of samples tested in the laboratory. We cannot assume responsibility for results obtained by others over whose methods we have no control. It is the user's responsibility to determine suitability for the user's purpose of any product or method. We recommend that each prospective user test his proposed application before repetitive use, using this data as a guide.