

UV5140

Photo-light & UV Curing Adhesive

UV5140 is a one-component, UV-curable, acrylic adhesive. This product is specially designed for bonding and fixing on optical lenses; 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 (cologne)
Viscosity (25°C, spindle viscometer 4#30 mPa·s)	8000-10000
Specific gravity Kg/L	1.08
Solvent content%	0
Heavy metal content PPM	0

Properties	Test method	Reference
Hardness	Shore D	80-85
Operating temperature range	-40~130°C	Customers conduct self-test with workpieces
Shear strength	PC/PVC	≥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

CURING PROPERTIES

UV5140 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 the condition of ultraviolet radiation of 20mw/cm² produced by a high-pressure mercury lamp:

Properties	Reference
Surface drying time (1mm)	3-5 seconds
Deep curing time (1mm)	15-20 seconds
Full cure energy (1mm)	600 mj/cm ²

*Recommended Curing Equipment: CUV-1800M Mercury UV Curing System

UNCURED PROPERTIES

The following data are measured after curing with a high-pressure mercury lamp source with a cumulative energy of 600mj/cm²:

WEATHER RESISTANCE TEST

The following data are measured after curing with a high-pressure mercury lamp source with a cumulative energy of 600mj/cm².

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Base material	Test Conditions	Bonding strength retention rate (%)
PC/GLASS	65°C 90% RH (72H)	80
PVC/GLASS	65°C 90% RH (72H)	95
Stainless steel/PVC	65°C 90% RH (72H)	82
Stainless steel/GLASS	65°C 90% RH (72H)	92

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.