GLUDITEC
Glue & Dispensing Technology

Technical Data Sheet

UV5144

Photo-light & UV Curing Adhesive

UV5144 is a one-component, UV-curable, acrylic adhesive. This product is specially designed for bonding and fixing plastic electroacoustic components; the product has the characteristics of fluorescent effect, medium viscosity, fast curing speed, high bonding strength, and good weather resistance.

TYPICAL APPLICATION

Suitable for fast bonding of most metal, plastic or elastomer materials.

UNCURED PROPERTIES

Properties	Reference
Chemical composition	Polyurethane acrylic resin
Physical state	Liquid
Appearance	Red (fluorescent)
Viscosity mPa·s	30000-34000
Specific gravity Kg/L	1.08
Solvent content%	0
Heavy metal contentPPM	0

CURING PROPERTIES

UV5144 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 that a 395nm wavelength LED surface light source generates 400mw/cm^2 ultraviolet radiation:

Properties	Reference
Fixed time (S)	10S
Tack free time (1mm)	5S
Deep curing time (1mm)	10S
Full cure energy (1mm)	5000 mj/cm^2

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

CURED PROPERTIES

The following data are measured after curing with a 395nm wavelength LED surface light source with a cumulative energy of 5000mj/cm^2:

Properties	Test method	Reference
Hardness	Shore D	20-25
Elongation %		180
Water absorption %		3.3
Operating temperature range	-40～130℃	Customer self-test

ELECTRICAL PROPERTIES

Properties	Test method	Reference
Dielectric constant (1MHz)	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}

WEATHER RESISTANCE TEST

The following data are measured after curing with a 395nm wavelength LED surface light source with a cumulative energy of 5000mj/cm^2:

Base material	Test Conditions	Bonding strength retention rate (%)
PC/GLASS	65℃ 90% RH (72H)	82
PVC/GLASS	65℃ 90% RH (72H)	78
Stainless steel/PVC	65℃ 90% RH (72H)	82
Stainless steel/GLASS	65℃ 90% RH (72H)	92

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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.

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