

PRODUCT DESCRIPTION

ELITE-T8021 is a toughened UV light curable adhesive use for strong bonding of plastic and metal substrates. Product is curable by Illumination of UV light with sufficient intensity. Cured resin is provide better balance between shear and peel strength.

FEATURE

- High strength plastic bonder
- Excellent adhesion on Polycarbonate, PMMA & Glass
- Toughened

APPLICATION

High strength plastic bonding,
FPC bonding.

Assembly and reinforce of electronic parts

DIRECTION OF USE

1. Dispense adhesive directly on one surface of parts,
2. Assembly the mating parts, make sure adhesive contact with parts.
3. Illumination by UV light till cure.

Light source is recommended medium pressure mercury UV lamp with intensity 100mW/cm² (min. 50mW/cm²). Resin Cure on mean peak light Wavelength 375nm, light source contains wavelength 220~250nm will helpful for surface dry, Cure speed depended on the intensity of UV Source,thickness of adhesive layer, thickness of material and depth of cure.

PHYSICAL PROPERTIES

Appearance	Clear Yellow Liquid
Chemical base	Urethane Acrylic
Specific Gravity [g/cm ³]	1.085 at 25°C
Flash Point [°C] (TCC)	>95
Viscosity [cps] at 25°C	600cps (Range 450~750)

CURE CONDITIONS

Data test based on glass to steel bonding using 100

Mw/cm² medium pressure mercury UV light source:

Cure time:(0.02mm thickness)	10-20sec.
Depth of cure [mm]	>5.0mm
Dry surface	Full
Wavelength range for cure	255 & 375nm

CURED PERFORMANCE

Illumination by medium pressure mercury lamp, UV Light intensity 100mW/cm² in wavelength 375nm, controlled gap < 0.005" (0.012 mm)

Elongation at tear [%] (ASTM D412-61T)	65%
Shore hardness	55D
Shear Strength [psi] (ASTM D-4501)	3150
Temperature range for use	-45 to +145 °C
Coefficient of thermal expansion (ASTM D696)	82x10 ⁻⁶
Thermal conductivity [W/mK]	0.2
Water absorption (ASTM D570)	0.7%
Surface resistance [&] (ASTM D149)	1.4x10 ⁸
Volume resistivity [W.cm]	6.09x10 ¹⁴
Dielectric strength [kV/m] (ASTM D257)	19

Material Adhesion Reference

Polycarbonate	E
Polyimide	E
ABS	E
PMMA	E
Glass	G
Stainless steel	G
Aluminum	E
PET	G
Copper	E
PVC	E

E = Excellent ; G = Good; X : not recommended

PERFORMANCE OF CURED RESIN

Cure Condition: 40 seconds, medium pressure mercury lamp (UV Light intensity 100mW/cm² in wavelength 375nm).
Joint parts material: Abraded Steel to glass (IPA wiped)
controlled gap < 0.005" (0.012 mm)

TENSILE SHEAR STRENGTH TEST

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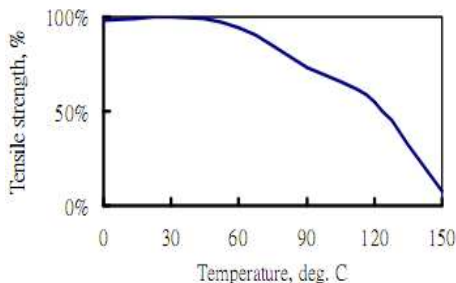
Illumination 60sec. Light Intensity: 100mW/cm², Test on 24 hours after bonding of specified material.

Join part material	value
PC to PC (IPA wiped)	*860
PC to PVC (IPA wiped)	*1280
PC to Polysulfone (IPA wiped)	1075
PC to ABS (IPA wiped)	*950
Polyimide to ABS (IPA wiped)	1150
PMMA to PMMA (IPA wiped)	*1230
PMMA to aluminum	1480
PC to aluminum	1750

* : Material Broken

ENVIRONMENTAL TEST - Hot Strength

% of tensile shear strength in specified temperature (ASTM D1002)



ENVIRONMENTAL TOLERANCE

Percent of Original Strength Retained
(Polycarbonate-Polycarbonate)

ENVIRONMENT	RETAINED % PSI	CONDITION
Dry Heat	100	95°C, 2 weeks
Wet Heat	100	45°C, 95% RH, 1 week
Boiling Water	100	2 hours
Water Immersion	100	25°C., 1 week
90% Isopropanol Immersion	90	25°C, 24 Hours

STORAGE

T8021 is Light sensitive product..Should be stored in dry cool and dark area. Keep away from heat and light source to obtain maximum shelf life. Do not expose on sunlight directly. Improper storage may result in slow curing and possible thicken of adhesive.

Shelf Life : 12 months @ ambient temperature (5~28°C).

HEALTH AND SAFETY

IRRITANT: Product is for "Industrial use" which

Contains acrylic oligomer, monomers and Photoinitiator. May cause sensitization dermatitis (skin rash) to allergic persons, avoid to contact with skin and eyes. In case of contact with the skin, wash immediately with plenty of water for at least 15 minutes, for eyes, get medical attention.

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See Safety Data Sheet for full details

The data herein are furnished for information only and are believed and reliable. We cannot assume liability or responsibility for results obtained in the use of its products by persons whose methods are outside or beyond our control ..It is the users responsibility to determine the suitability of any of the products and methods of use or preparation prior to use mentioned in out literature and acbpt such precautions as may be advisable for the protection of personnel and property in the handing and use of any of our products.