



PTUV-721-2

Photo-curing Adhesive for Glass and Plastics Bonding

Product Description

PTUV-721-2 is a photo-curing adhesive designed for the glass and plastics bonding. This resin can cure rapidly under the visible light (436nm) and offers good toughness after curing. Besides, this product exhibits great elongation to solve the problem of temperature difference when bonding. Additionally, this resin passed the environmental test experiment when bonding to glass, acrylate, PC, or ABS.

Features

1. This resin has high viscosity, excellent toughness, shock resistance, and thermal shock resistance.
2. This product exhibits great elongation, perfect flexibility, and high adhesion strength when bonding to glass or plastics..
3. This product complies to the 2011/65/EU RoHS regulations.

Typical Uncured Properties

Appearance	PTUV-721-2
Color	Viscous liquid
Viscosity 25°C, S14 50rpm, cps	Colorless
Specific Gravity	4,900~7,500
Refractive Index n_D	1.039
Solvent Content, %	1.5019
Heavy Metal Content, %	0

Typical Curing Properties

Recommended Wavelength, nm	310~365
Minimum Light Intensity, mW/cm ²	> 50
Minimum Light Energy, mJ/cm ²	1,000~2,000

*Avoid the resin exposure to light.

Direction of Use

1. Clean the contact surface until it is free of dirt, grease or mold release. Generally, a simple solvent wipe is sufficient.
2. For maximum bonding strength, please apply the adhesive evenly onto both surfaces that wish to be jointed.
3. Real curing time depends on various factors, such as part geometry, materials to be bonded, bondline thickness and efficiency of the UV light. Confirm the real curing time and conditions with actual production parts and equipment.
4. This product may cause skin irritation to sensitive personnel.

Typical Cured Properties

Glass Transition Temp.(MDSC), °C	-5
Durometer Hardness, Shore D	65
Water Absorption Ratio (25°C /24hr), %	3.31
Elongation, %	281
Working Temperature Range, °C	-40~100

Mechanical Test



Specimen Material: Glass (Red) / PMMA (Black)
Size: Length 76.2mm X Width 25.4mm X Thickness 2mm (Black)
Test area is~1 cm²

Item	Specimen cm ²	Maximum Strength kgf	Bonding Strength kgf/cm ²	Description of Material Failure
PTUV-721-2	0.78	20.83	26.56	Cohesive Failure
PTUV-721-2	0.81	18.79	23.33	Cohesive Failure
PTUV-721-2	0.96	23.52	24.60	Cohesive Failure
PTUV-721-2	0.79	26.81	33.92	Cohesive Failure
Average Value	0.83	22.49	27.10	



Environmental Test Experiment Result:

Bonding Substrates: Glass vs. Acrylic
Environmental Test Experiment Condition: 80°C oven
Environmental Test Experiment Time: 4 weeks, pass
Environmental Test Experiment Result: No cohesive failure

Storage and Shelf Life

This product should avoid any direct light exposure. Replace the lid immediately after use to prevent possible light exposure. This product has one-year minimum shelf life when stored under shades, room temperature (14~34°C), and in sealed containers.

Caution

Some findings indicate a lack of potential for carcinogenicity with the compositions of this product by long term recurrent application to the skin. However, contact with skin is likely to produce mild transient reddening. It is important to remove adhesive from skin with soap and water thoroughly. DO NOT use solvents for cleaning hands. This product is of moderate acute toxicity by swallowing. If swallowed, call a physician. Avoid contact with eyes. In case of contact, flush with water for at least 15 minutes and get medical attention immediately. For specific information on this product, consult the Material Safety Data Sheet.

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.