



## Photo-curing Adhesive for Glass and Plastics Bonding

### Product Description

GN278 is a photo-curing which exhibits good defoaming, and suited for general screen printing. This resin has good adhesion strength after the environmental test experiments. Additionally, this product can cure rapidly under the visible light and is suitable for bonding glass and plastics.

### Features

1. This resin has excellent toughness, good shock resistance and thermal shock resistance.
2. This product has good transparent properties, weather and age resistance. It exhibits good yellowing resistance after curing by light.
3. This resin is well suited for glass and plastic bonding.
4. This product complies to the 2011/ 65/EU RoHS regulations.

### Typical Uncured Properties

Appearance	GN278
Color	Liquid
Viscosity 25°C, S14 100rpm, cps	Colorless
Specific Gravity	2,500~4,100
Refractive Index $n_D$	1.042
Solvent Content, %	1.4713
Heavy Metal Content, %	0

### Typical Curing Properties

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

### 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. 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.
3. Please standardize the UV lamp intensity and illumination. Over-exposure will not affect the product quality; however, under-exposure will severely change the resin properties. When under-exposure, the resin may have lower reaction rate and may not pass the environmental test experiments.
4. This product may cause skin irritation to sensitive personnel.

### Typical Cured Properties

Glass Transition Temp., (MDSC), °C	-14
Durometer Hardness, Shore D	58
Water Absorption Ratio (25°C /24hr), %	4.46
Elongation, %	21
Working Temperature Range, °C	-40~100

### Mechanical Test



Specimen Material: Glass/PMMA  
Size: Length 76.2mm X Width 25.4mm X Thickness 2mm  
Test area is ~1 cm<sup>2</sup>

Item	Specimen cm <sup>2</sup>	Maximum Strength kgf	Bonding Strength kgf/cm <sup>2</sup>	Description of Material Failure
GN278	0.87	33.87	38.87	Acrylic Failure
GN278	0.91	30.09	33.00	Cohesive Failure
GN278	0.82	27.30	33.23	Cohesive Failure
GN278	0.82	25.06	30.38	Cohesive Failure
Average Value	0.85	29.08	33.87	

### Storage and Shelf Life

This product should avoid any direct light exposure. Replace the lid immediately after use to prevent possible light exposure. Shelf life of this product is one year 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.