



## Photo-curing Adhesive for Plastics Bonding

### Product Description

FK8611 is photo-curing adhesive designed for plastics bonding ,such as ABS, HIPS, PS, PC, PVC, and Acrylic. This resin has good surface dryness, and is used for plastics brushing. This product can fast cure under ultraviolet light and have good adhesion strength. This resin has better adhesion strength than the original substrates.

### Features

1. This resin has fast curing properties and high adhesion strength.
2. This product is well suited for plastics bonding.
3. This resin has good fluidity and good handling properties.
4. This product complies to the 2011/65/Eu RoHS regulations.

### Typical Uncured Properties

	FK8611
Composition	UV adhesive
Appearance	Liquid
Color	Colorless
Viscosity* 25°C, S14 100rpm, cps	3,300~4,600
Viscosity* 25°C, S14 10rpm, cps	7,500~10,500
Thixotropic Index	> 1.5
Refractive Index nD@25.2°C	1.4791
Specific Gravity@25°C	1.056
Solvent Content, %	0

\*This value is for reference. Please refer to COA for the actual value.

### 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>	1,500~2,000

\*The minimum light energy is for reference.

### Direction of Use

1. It should be applied to a clean surface which is free of dirt, grease or mold release. In many cases, a simple solvent wipe is sufficient.
2. For maximum bonding strength apply adhesive evenly to both surfaces to be jointed.
3. Cure time on the really part will depend upon fators such as part geometry, materials to be bonded, bondline thickness and efficiency of the UV light. Cure schedule should be confirmed with actual production parts and equipment.
4. Please standardize the UV lamp intensity and illumination. Over exposure will not affect the resin properties, but the resin properties will be changed if there is not enough exposure. The resin may have lower reaction rate and may not pass the environmental test experiments.
5. This product may cause skin irritation to sensitive personnel.

### Typical Cured Properties

Durometer Hardness ASTM D2240-03, Shore D	61
Specitic Gravity @ 25°C	1.13
Water Absorption Ratio (25°C/24hr), %	3.39
Shear Strength PVC vs. PVC, kgf/cm <sup>2</sup>	199
Shear Strength PVC vs. Al, kgf/cm <sup>2</sup>	27
Shear Strength PVC vs. glass, kgf/cm <sup>2</sup>	49
Elongation, %	231
Modulus of Elasticity, N/mm <sup>2</sup>	11
Breaking Value, N/mm <sup>2</sup>	10
Refractive Index nD@25.3°C	1.5023
Volume Resistivity, @500V, ohm-cm	2.04*10 <sup>14</sup>
Surface Resistivity, @500V, ohm	1.83*10 <sup>15</sup>
Dielectric Constant/ Dielectric loss@ 100Hz	4.28/0.35
Dielectric Constant/ Dielectric loss@ 1K Hz	3.87/0.22
Dielectric Constant/ Dielectric loss@ 100K Hz	3.46/0.16

### Chemical resistance/Solvent resistance

Aging under the following conditions, and then testing at 22 °C

	°C	Retention rate of initial strength%		
		2 h	24 h	170 h
Environment				
Boiling water	100	70	-----	-----
Water	49	-----	-----	60
Ethanol, isopropanol	22	-----	95	-----
Heat/Humid	38	-----	-----	75

### Heat aging

Aging under the following conditions and then testing at 22 °C

Shear strength, ISO 4587,% initial strength:

Polycarbonate :

71°C aging 170 hr	100
71°C aging 340 hr	100
93°C aging 170 hr	100
93°C aging 340 hr	100
121°C aging 170 hr	100
121°C aging 340 hr	100

### Storage and Shelf Life

This product should be kept without any possibility of light exposure. Replace the lid immediately after use. This product has six months minimum shelf life when stored in dark place below 14~34°C in original, unopened 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 Safety Data Sheet.