

DESCRIPTION:

Tacusil™ U10045 is a photo-curing adhesive designed for the bonding of ABS, HIPS, PS, PC, PVC, Acrylate, and more. When applied as thin films, this resin is highly transparent. This product can cure rapidly under the visible light. Additionally, this resin exhibits good water-resistance; therefore, it is suited for applications of water vats, UV-cut acrylate, PC or electronic devices bonding with water-resistance request. The adhesion strength of this product is stronger than that of the original materials, which makes it an excellent option of photo-curing adhesive.

FEATURES:

- This resin has toughness, shock resistance, and thermal shock resistance.
- This product exhibits excellent surface dryness and transparency after curing.
- This resin offers high adhesion strength.
- This product complies to the 2011/65/EU RoHS regulations.

TYPICAL PROPERTIES: All properties given are at 23 °C unless otherwise noted.

<i>Property:</i>	<i>Value:</i>	<i>Unit:</i>
Color /Appearance	Colorless Liquid	
Viscosity 25 °C (S21, 10 rpm)	880~1320	cps
Specific Gravity@25°C	1.042	
Refractive Index n ^D	1.4724	
Hardness	38	Shore D
Recommended Wavelength	310~365	nm
Minimum Light Intensity,	>50	mW/cm ²
Minimum Light Energy,	1500~3000	mJ/cm ²
Glass Transition Temp.	-12	°C
Water Absorption Ratio 24hr@25 °C	1.63	%
Elongation	79	%
Working Temperature Range	-40~110	°C

TACUSIL™ MAKES NO EXPRESS OR IMPLIED WARRANTIES OR MERCHANTABILITY, FITNESS OR OTHERWISE with respect to its products. In addition, while the information contained herein is believed to be reliable, no warranty is expressed or implied regarding the accuracy of the data or the results to be obtained from the use thereof. All recommendations or suggestions for use are made without guarantee inasmuch as conditions of use are beyond our control. The properties given are typical values and are not intended for use in preparing specifications. Users should make their own test to determine the suitability of this product for their own purposes.

Direction of Use

- Clean the contact surface until it is free of dirt, grease or mold release. Generally, a simple solvent wipe is sufficiently.
- For maximum bonding strength, please apply the adhesive evenly onto both surfaces that wish to be jointed.
- 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.
- This product may cause skin irritation to sensitive personnel.

Mechanical Test


Specimen Substrate: Acrylic / Acrylic Size: Length 76.2mm X Width 25.4mm X Thickness 2mm

Test area is ~1 cm²



Item	Test Area of Specimen cm ²	Maximum Strength kgf	Bonding Strength kgf/cm ²	Description of Material Failure
U10045	0.70	38.22	54.83	Cohesive Failure
U10045	0.67	49.10	73.62	Cohesive Failure
U10045	0.63	63.06	99.40	Cohesive Failure
U10045	0.90	54.89	60.99	Cohesive Failure
Average	0.73	51.32	72.21	Cohesive Failure

Environment Test Result:

Specimen Substrate	Acrylic / Acrylic 
Environmental Test Experiment Condition	60°C, RH 95%
Environmental Test Experiment Time	Test lasts for 2 years, PASS
Test Result	Acrylic is crack without cohesive failure and water leakage

TACUSIL™ MAKES NO EXPRESS OR IMPLIED WARRANTIES OR MERCHANTABILITY, FITNESS OR OTHERWISE with respect to its products. In addition, while the information contained herein is believed to be reliable, no warranty is expressed or implied regarding the accuracy of the data or the results to be obtained from the use thereof. All recommendations or suggestions for use are made without guarantee inasmuch as conditions of use are beyond our control. The properties given are typical values and are not intended for use in preparing specifications. Users should make their own test to determine the suitability of this product for their own purposes.



DATA SHEET U10045

STORAGE & SHELF-LIFE:

This product should avoid any light exposure. Replace the lid immediately after use to prevent possible exposure. This product has an eight-month 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 U20050 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. U20050 is of moderate acute toxicity by swallowing. If swallowed, induce vomiting at once and 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.

TACUSIL™ MAKES NO EXPRESS OR IMPLIED WARRANTIES OR MERCHANTABILITY, FITNESS OR OTHERWISE with respect to its products. In addition, while the information contained herein is believed to be reliable, no warranty is expressed or implied regarding the accuracy of the data or the results to be obtained from the use thereof. All recommendations or suggestions for use are made without guarantee inasmuch as conditions of use are beyond our control. The properties given are typical values and are not intended for use in preparing specifications. Users should make their own test to determine the suitability of this product for their own purposes.