

## Silane Terminated Polyurethane (STPU)

### Product Description

FS0552 is STPU for plastics, metals and glass bonding. This product is cured by the moisture in the air. The curing system of this product is alkoxy. It is not stinky and has fast curing properties. This resin is different from the traditional PU which contains isocyanate. This product has better adhesion strength than silicone type products. It is well suited for electronic devices casting and bonding.

### Features

1. This product is used for various substrates bonding.
2. This resin has flexible properties and fracture energy.
3. This product has stable properties in a wide range of temperature.
4. This product does not volatilize low molecular weight siloxane compounds. It will not pollute the electronic devices.
5. This resin is one component product without mixing. It is easy to use.
6. This product has stable properties and is able to storage in the room temperature.
7. This resin will fast cure in the air. It can have surface dryness in a short time.
8. This product complies to the 2011/65/EU RoHS regulations.

### Typical Uncured Properties

Composition	FS0552
Appearance	Polyether resin
Color	Liquid
Viscosity*25°C, S14 50rpm, cps	Light yellow
Solvent Content, %	9,000~14,000
	0

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

### Typical Curing Properties

Surface Dry Time, 25°C, min	10
Thorough Cured Time, 25°C, days	7

### 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. Pour or brush this product onto the substrates, it does not recommend to stir to avoid interfusing the air. This product will be cured with the air. The curing properties depend on its thickness, curing temperature and relative humidity.
3. The bottom of the resin might not be cured in thicker application, such as casting, because the bottom of the resin contacts with moisture rarely. It is recommended to prolong the curing time in order to let the moisture spread from the surface to the bottom. It can also cast the resin two times. Cast the resin to the half height at the first time. When the

surface is tacky, cast the resin for the second time.

4. Use this product as soon as possible after opening the original packages. When not using, please replace the lid tightly and store in a cool and dry place.
5. Cure time on the really part will depend upon factors such as part geometry, materials to be bonded, bondline thickness and humidity. Cure schedule should be confirmed with actual production parts and equipment.

### Typical Cured Properties

Hardness (Durometer) ASTM D2240-03, Shore A	24±3
Shear Strength, PC vs. PC, kgf/cm <sup>2</sup>	7
Shear Strength, ABS vs. ABS, kgf/cm <sup>2</sup>	6
Shear Strength, PMMA vs. PMMA, kgf/cm <sup>2</sup>	12
Shear Strength, PET vs. PET, kgf/cm <sup>2</sup>	6
Shear Strength, PVC vs. PVC, kgf/cm <sup>2</sup>	15
Shear Strength, Cu vs. Cu, kgf/cm <sup>2</sup>	17
Shear Strength, SUS vs. SUS, kgf/cm <sup>2</sup>	12
Shear Strength, Glass vs. Glass, kgf/cm <sup>2</sup>	44
Shear Strength, Al vs. Al, kgf/cm <sup>2</sup>	17

### Storage and Shelf Life

This product should be kept without any possibility of moisture exposure. Replace the lid immediately after use. Shelf life of this product is six months 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 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 or 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.