GU-070021 Potting Adhesive

Description：

GU-070021 is a polyurethane two-component high-performance polyurethane potting adhesive, which can be cured at room temperature or heated. After curing, it has high mechanical strength and can be used for insulating potting and casting of automotive electronic devices and sensors. It has stable electrical and mechanical properties between -40~85^{o}C.

Characteristic：

- Good adhesion to a variety of substrates
- Low mixing viscosity and fast curing speed
- flame classification UL94 HB

Typical Application：

- Power battery automotive electronics
- Telecom base stations
- Computer and peripheral products

Typical Feature：

Properties	Typical value		Test method
Before mix	Part A	Part B	
Color	White	Brown	Visual
Viscosity (mPa*s)	6,000	50	ASTM D2196
Mix ratio by weight	5:1		/
Mix Viscosity (mPa*s)	2,000		ASTM D2196
After curing			
Color	Beige		Visual
Density (g/cc)	1.48		ASTM D792
Hardness (Shore D)	50		ASTM D2240
Dielectric Strength (KV/mm)	>12		ASTM D149
Volume Resistivity（Ω*cm）	>10^{11}		ASTM D257
Tack Free Time@25^{o}C (min)	4		GT/13477.5
Cure Time@25^{o}C (h)	24		ASTM D2240
Flame Classification	HB		UL-94

Properties	Typical value	Test method
Tensile Strength (MPa)	6	GB/T 528
Elongation (%)	>40	GB/T 528
Lap Shear (MPa, Al/PPGF30)	≥2.5	GB/T 7124

Application：

(1) Pretreatment: remove dust and rust from the casted device. If the surface is oily, wipe it with a solvent, and then ventilate and dry the casted device. At low temperatures, the viscosity will become higher. The material can be preheated to 25°C ~45°C for easy use. Plasma pretreatment (and primer) is strongly recommended to improve the bonding effect, especially to PPGF30.

(2) Mixing: Weigh A and B materials in proportion. Vertical stirring rod when stirring. Stir in the same direction clockwise (or counterclockwise) for 2 to 3 minutes to minimize the air agitation. Note that the bottom and edges of the container should also be stirred evenly, otherwise there will be partial uncuring.

(3) Defoaming: For the potting surface to be smooth and free of bubbles, the mixture should be vacuumed (≤-0.1mpa) to remove bubbles. The dynamic deaeration of vacuum while stirring is more conducive to the removal of air bubbles. Using mechanical metering mixed potting, steps 2 and 3 can be omitted

(4) Pouring: Pouring the mixture into the device. If the device has a complex structure and large volume, it should be poured in stages. Pouring bubbles can be blown with a hot air gun, etc., which can eliminate surface bubbles.

(5) Curing: curing at 25°C for 24 hours. If you want to shorten the curing time, you can appropriately increase the curing environment temperature. The environmental humidity should be controlled at <70%.

Storage：

- Shelf life：6 months
- Relative temperature：10°C~30°C
- Relative humidity：RH＜70%

Package：

- 5 Gallon (mixing ratio A:B = 5:1 based on weight kg)
- 55 Gallon (mixing ratio A:B = 5:1 based on weight kg)

The technical data in this data sheet only represent typical values, not the test values of each batch of products. If you need the technical specification of the final product, please contact the relevant technical personnel.