# SQ-720007 Self-healing PU Varnish

# Description

**SQ-720007** two-component specially modified PU self-healing fluid, mainly used for self-healing varnish on TPU and PVC. It can be applied by spraying, roller coating, etc. After the coating is formed into a film, it has good adhesion to the substrate and can protect the surface of the coated material for a long time. The coating process is simple and the production efficiency is high. The coating has good optical properties, does not produce rainbow streaks, has high cross-linking density, low curing shrinkage, and has extremely high weather resistance and self-healing properties. It can be used to make invisible car covers for cars and self-healing coatings for high-end electronic products.

#### Technical data

Test items	Test Data
Appearance	Transparent liquid
Viscosity (25°C, CPS)	8.0-9.5
Active ingredients(%)	35±2
Density (g/cm <sup>3</sup> , 25°C)	0.90±0.05
Hardness (1Kg force load)	HB-1H
Coating thickness (µm)	18-25
Boiling performance (surface spray paint, no primer 100°C/60min)	Adhesion 5B, no change in coating
Flexibility	100% stretch without bursting
Curing conditions (constant temperature baking)	Bake at 120 °C for 3-4 minutes, and bake at 40 °C for 48 hours
Dilution ratio	Self-healing fluid: curing agent = 5:1
QUV resistance	More than 1500h
Repairability	Instant repair at room temperature
Anti-graffiti (Zebra oil-based pen)	Generally
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Note: The above performance parameters can be customized according to customer requirements

## Performance

It has good resistance to nail and copper brush scratches and self-healing properties of microscratches.

It has good wetting properties on the substrate. After film formation, the coating is smooth and flat, with high gloss, smooth feel and good fingerprint resistance.

It has good resistance to high and low temperatures, high humidity, chemical solvents, moisture

## **Applications**

Invisible car coatings for cars, self-healing coatings for high-end electronic products, and self-healing coatings for motorcycles.

#### **Construction technology**

1. The commonly used coating methods for PU repair fluid are spray coating and roller coating. Please avoid exposure to sunlight;

2. The product does not require any pre-treatment (including dilution). It is recommended to shake before coating to make the liquid evenly distributed;

3. When performing roll coating, refer to the equipment manufacturer's instructions for specific processes;

4. After the roller coating is completed, bake it in a 120°C drying tunnel for 3-4 minutes to make the surface dry and level;

5. After heating, the base material is rolled up. If conditions permit, the time can be extended appropriately, which will help improve the hardness of the film layer;

6. After curing, bake the substrate or leave it naturally for two days before testing its performance;

7. After roller coating, please clean the equipment thoroughly with organic solvent.

#### **Construction process**

Unwind  $\rightarrow$  Glue on specially treated release film  $\rightarrow$  Mold rolling  $\rightarrow$  UV curing  $\rightarrow$  Demold  $\rightarrow$ Rewind  $\rightarrow$  Printing ink, etc.  $\rightarrow$  Cutting  $\rightarrow$  Forming  $\rightarrow$  Injection molding  $\rightarrow$  Peel off the surface polyester film  $\rightarrow$  Spray hardened layer

#### Precautions

1. This product has been diluted to a solid content and viscosity suitable for roller coating, and does not need to be diluted before use. If customers need high solid content and dilutable products, our company can provide corresponding high solid content products and corresponding diluents according to the customer's specific requirements;

2. This product contains flammable components, please pay attention to fire prevention during transportation, storage and use.

#### Storage

To prevent the product from polymerization and gelling, please keep it sealed and away from heat and light. Recommended storage temperature is not higher than 30°C. Unused products must be sealed and stored in a timely manner and cannot be stored in the open. Safe storage time is 6 months at room temperature(25°C) and under ventilation. 1KG/5KG/25KG/barrel

# Tips: SQ-720007 has good repairability, good aging resistance and good transparency.

Note: Technical data represents typical values only. In view of the differences in formulas, production process, conditions, all the above statements must be adjusted according to the actual situation, our company does not make any promises. Our company reserves the right to reform its products without prior notice of any changes.