

## 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 Content (%)	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 μm
Boiling Performance (surface spray paint, no primer 100°C/60min)	Adhesion 5B, no change in coating
Flexibility	Withstands 100% elongation without
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	Over 1500h
Repairability	Instant repair at room temperature
Anti-graffiti (Zebra oil-based pen)	Generally

Note: The above performance parameters can be customized according to customer requirements

### Product Features

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

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 resistance, and UV resistance. The product performance remains stable in harsh environments.

### Applications

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

## Application Process

1. PU repair fluid is typically applied by spraying or roll coating. Avoid exposure to direct sunlight.
2. The product does not require any pretreatment (including dilution). Shake well before application to ensure uniformity.
3. For roll coating, follow the process guidelines provided by the equipment manufacturer.
4. After roll coating, pass the substrate through a 120 °C oven for 3–4 minutes to allow the surface to partially dry and level.
5. After heating, rewind the substrate. If conditions allow, the heating time can be extended slightly to enhance the hardness of the coating.
6. After curing, either heat or allow the substrate to rest at room temperature for two days before testing its performance.
7. After roll coating, thoroughly clean all equipment with an organic solvent.

## Process Flow

Unwinding → Coating onto specially treated release film → Mold/roller pressing → UV curing → Demolding → Rewinding → Ink printing → Slitting → Forming → Injection molding → Peeling off surface polyester film → Spraying hard coat

## Precautions

1. This product has been pre-diluted to a solids content and viscosity suitable for curtain coating and does not require further dilution. If higher-solids, dilutable versions are needed, we can supply customized high-solids formulations along with the corresponding diluents according to customer requirements.
2. This product contains flammable components. Please exercise appropriate fire-prevention measures during transportation, storage, and use.

## Storage Conditions

To prevent premature polymerization due to the high reactivity of this product, keep it tightly sealed and store away from heat sources and direct sunlight. It is recommended to maintain storage temperature below 30 °C. Unused product should be promptly resealed and must not be left open. Under ventilated conditions at 25 °C, the product has a safe storage period of 6 months. Available packaging: 1 kg / 5kg / 25 kg per drum

**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.