

SQ-720001 Versatile Hardening UV Varnish

Description

SQ-720001 single-component UV hardening liquid is mainly used for hardening the surface of PC, PET, PMMA, PC/PMMA composite sheets or membranes. It can be applied by spraying, shower coating, roller coating and other methods. 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, extremely high hardness and excellent wear resistance. It can be used to make texture decoration and shell molding for mobile phones, laptops, home appliances and other products. High hardness, good chemical resistance, high transparency, steel wool resistance 30-80 times.

Technical Data

Appearance	Transparent liquid
Viscosity (Iwata – 2 cups)	8.5 - 9.5 S
UV Content (%)	35 ± 2 %
Density (g/cm ³ , 25°C)	0.90 ± 0.05

Coating Performance

Test Items	Test Data
Hardness (1Kg force load)	2H – 4H
Coating Thickness (μm)	5 - 15
Boiling Performance (surface spray paint, no primer 100°C/60min)	Adhesion 5B, no change in coating
Bending (cylindrical shaft diameter)	40 mm
Curing Energy (mercury lamp, mj/cm ²)	600 - 1,000
QUV Resistance	Over 200h
Anti-friction Performance (1 kg load, abrasion tester, 1×1 cm abrasive head, 0000# steel wool)	50 times, no wear marks
Anti-graffiti (Zebra oil-based pen)	General
Water Contact Angle	General

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

Product Features

Suitable for surface hardening of PC, PET, PMMA, and PC/PMMA composite sheets or films. Good substrate wetting; the cured coating is smooth and even, with high gloss, high hardness, and a smooth tactile feel.

Excellent wear and scratch resistance.

Outstanding resistance to high/low temperatures, high humidity, chemical solvents, moisture, and UV exposure; maintains stable performance under harsh conditions.

Applications

Textured decoration and housing formation for products such as mobile phones, laptops, and home appliances.

Application Process

1. The UV general-purpose wear-resistant hardening agent is typically applied by spraying, curtain coating, or roller coating. Avoid exposure to sunlight.
2. No pretreatment (including dilution) is required. Shake well before curtain coating to ensure uniform distribution of the liquid.
3. During curtain coating, the nozzle should move from left to right along the same horizontal line. Follow the equipment manufacturer's instructions for specific process details.
4. After coating, keep the panels running vertically for approximately 2 minutes to allow the surface to freely evaporate and level, then pass through a 60–70 °C oven while maintaining vertical orientation for 5 minutes.
5. After heating, proceed to the UV curing section for standard curing. Adjust curing time according to lamp energy; if conditions allow, extending the time can improve film hardness. (During testing, the UV curing lamp used was 2000 W with a 30 cm tube length.)
6. After curing, cool the panels to room temperature before performing performance tests.
7. After curtain coating, thoroughly clean all equipment with organic solvent.

Precautions

1. Ensure that the UV adhesive layer receives sufficient UV energy to achieve complete curing; inadequate irradiation may compromise the coating performance.
2. Do not pour leftover adhesive back into the original container. Store the remaining material in a sealed, light-proof condition at room temperature.

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-720001 is a general-purpose hardening agent with good yellowing resistance, high transparency, and a hardness of 2–4H.

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.