SQ-720002 Anti-fouling Hardening UV Varnish

Description

SQ-720002 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, excellent wear resistance, and good anti-graffiti performance. It can be used to make texture decoration and shell molding for mobile phones, laptops, home appliances and other products. Good chemical resistance, high transparency, steel wool resistance 50-200 times.

Technical Data

Appearance	Transparent liquid
Viscosity (Iwata – 2 cups)	8.5 - 9.5 S
UV Content (%)	35 ± 2 %
Density (g/cm³, 25ºC)	0.90 ± 0.05

Coating Performanc

Test Items	Test Data
Hardness (1Kg force load)	2H—5H
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)	35 mm
Curing Energy (mercury lamp, mj/cm²)	600 - 1,000
QUV Resistance	Over 300h
Anti-friction Performance (1 kg load, abrasion tester, 1×1 cm abrasive head, 0000# steel wool)	100 times, no wear marks
Anti-graffiti (Zebra oil-based pen)	Oleophobic lines, easy to wipe off
Water Contact Angle	100 - 105°

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

Product Features

The product is designed for hard-coating applications on PC, PET, PMMA, and PC/PMMA composite sheets and films.
It provides excellent anti-graffiti performance against oily markers, easy-clean properties, and outstanding abrasion and scratch resistance.
The coating exhibits excellent substrate wetting and forms a low-surface-energy film after curing, delivering a smooth and silky tactile feel.
It also offers reliable performance under harsh environmental conditions, including high/low temperatures, high humidity, chemical solvents, moisture exposure, and UV radiation, ensuring long-term stability and durability.

Applications

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

Application Process

1. The UV-curable abrasion-resistant hard coating is typically applied by spray coating, curtain coating, or roll coating. Avoid exposing the product to direct sunlight during operation.
2. The product requires no pre-treatment or dilution. For curtain coating, gently agitate the material before use to ensure uniformity.
3. During curtain coating, the coating nozzle should dispense the liquid horizontally from left to right along the same level. Follow the equipment manufacturer's recommended operating parameters.
4. After coating, keep the sheet in a vertical position for approximately 2 minutes to allow solvent evaporation and leveling. Then transfer it into a 60–70 °C heating tunnel and maintain vertical heating for 5 minutes.
5. After pre-heating, move the substrate into the UV-curing zone for standard curing.
The curing time should be adjusted according to the lamp's energy output; extending the curing time when possible will further enhance the film's hardness. (Typical test condition: UV lamp power 2000 W, lamp length 30 cm.)
6. After curing, allow the material to cool to room temperature, after which performance testing can be conducted.
7. After coating, thoroughly clean all equipment with an appropriate organic solvent.

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-720002 Anti-fouling and hardening liquid, good resistance to yellowing, good transparency, hardness 2-5H, water drop angle 100-105°.