

Gemini[®] Hydrophobic Oleophobic Hardcoat

AnO-168

[Introduction]

AnO-168 is a permanent hydrophobic and oleophobic hardcoating, it is solvent based one-part self-drying type, non-toxic and eco friendly. Combining interface compact adhesion, it has high transparency and 7H hardness, damp and heat resistance, acid and alkali resistance, super abrasion durability, it brings water and oil repellency to various substrates, keeping it brightly transparent and abrasion resistant.

[Typical Properties]

Properties	Units	AnO-168
Solid	Wt%	40
Appearance	/	Transparent liquid
Density	g/cm ³	0.85
Solvent	/	Organic solvent
Baking Temperature / Time	/	Self-drying 24 hrs

[Performance]

Test Item	Test Method	AnO-168
Water/Oil contact angle	10~20 μ L Water / 10~20 μ L Hexadecane	120° / 80°
Film color/ Thickness	Observation / μ m	Transparent/ 5~20
Hardness/ Adhesion	Pencil hardness tester / Cross-Cut Tester	6~7H / Grade 0
Weatherability	Rapid aging,UV&rain chamber 600hrs (varying in different geolocations)	5~10 years
Light Transmittance	Light transmittance tester, 380nm~780nm	> 92%
Abrasion Durability	non-woven fabric, load 500g/cm ² ,stroke 8cm,speed 40 rpm, 10000cycle	Good
Solvent Resistance	99.5% alcohol whipping, load 500g/cm ² , 100cycle	Good
Acid / Alkali Resistance	30%HCl、 30%NaOH drip on the substrate, standing time 24hrs	Good
High Temp/High Humidity	85°C \times 85%RH \times 200hrs	Good
Thermal Shock	-40°C \times 1hr \rightleftharpoons 85°C \times 1hr, 50cycle	Good
Salt Water Spray Test	5% NaCl, temperature 35°C, test time 1000 hrs	Good
Impact Resistance	300N/cm ² front impact and back impact	Good
Heat Resistance	1100°C \times 30mins \rightleftharpoons 25°C \times 15mins, 72cycle	Good

[Applications]

Used in machinery parts, medical equipment, furniture, solar panels, building construction / decoration materials, electrical appliance and electronic equipment shells, bathroom and swimming pool facilities, kitchen utensils / sinks, bathroom ware, outdoor marine and scenic facilities etc.

[Applicable substrates]

plastic, metal, glass, ceramic, FRP, brick, wood, cement, stone etc.

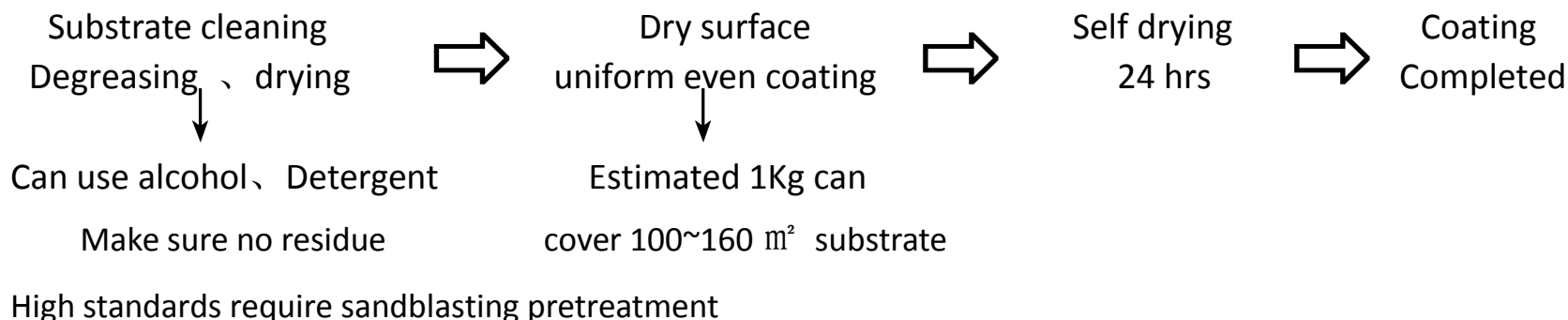
[Processing Method]

The original solution can apply directly, or dilute 1~2 times with Butyl Acetate to adapt to different processing methods and various applications.

Spraying, whipping, rolling, dipping, flowing. Suggest spraying and whipping, make sure the coating is uniform and even. The temperature of the surface to be coated should be $-5^{\circ}\text{C}\sim 35^{\circ}\text{C}$. Keep containers at room temperature prior to use. All surfaces need to be dry and free from wax, grease, and polishes for good adhesion.

Please clean the tools or spray gun with Butyl Acetate before and after processing to avoid cross contamination. Dipping and flowing please select suitable automatic device. The spray gun is set to low pressure and low volume. One-time spraying can achieve certain effect, overlapping spraying can be done as needed. Self drying time is 24 hrs. Surface drying time is 3 hrs or accelerate it by heating 80°C 30mins, then can move or transport, make it longer in winter.

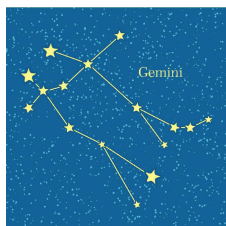
Allow the treated surface to dry for over 24 hrs before exposing to water /rain. The 24 hrs self dried coating must continue to dry for over 7 days to reach maximum durability, so suggest testing after 7 days. The heat accelerated surface drying by heating 80°C 30mins must follow by a further heating 250°C 2hrs to be fully cured, this heated coating must continue to dry for over 3 days to reach maximum durability, so suggest testing after 3 days. For best long- term performance avoid imposing excessive mechanical friction or other surface treatments.



[Attention]

- During processing, avoid direct contact with the skin, using gloves and safety glass in the test. If skin contacts with products, immediately wipe with a dry cloth and then wash skin with soap and water, If eyes contact with products, immediately flush eyes with plenty of water for at least 5 minutes, and call a physician.
- Keep the container sealed and store between 5~35 °C, well ventilated locations, shelf life is 1 year. After open must tight seal again from air, it is moisture sensitive.

[Packaging/Transport] 10Kg plastic jug. Classified as dangerous in the meaning of transport regulations



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