PRODUCT DESCRIPTION

NANOMYTE® SR-100RT is a transparent coating designed to provide abrasion and mar resistance to plastic surfaces. The hard, dense, and smooth coating is a nanostructured composite consisting of organic and inorganic phases. The coating resists scratching and chipping. SR-100RT is a single component product that is easily applied by dip, spray, or brush techniques. The coating can be cured at room temperature.

TECHNICAL DATA

Color:	Clear liquid (colorless to slight yellow)
Abrasion Resistance:	Δ Haze < 4.5% (200 cycles); Δ Haze < 8% (500 cycles) - ASTM D1044 Taber abrasion test, polycarbonate substrate, CS-10F wheels, 500g load
Curing Temperature:	20° – 150 °C
Cured Film Thickness:	4 – 10 µm
Coverage:	800 – 1200 ft^2 / gallon
Solids Content:	18 – 20 %
Carrier Type:	Solvent borne
VOCs:	Less than 100 g/L

AVAILABLE QUANTITIES

NANOMYTE® SR-100RT is a single component coating, sold in liter or gallon quantities, as well as in bulk volume.

SURFACE PREPARATION

Ensure surfaces to be coated are clean, dry, and in sound condition. Before applying SR-100RT, remove all oil, grease, dust, dirt and other foreign material by using an appropriate cleaner. To ensure that the surface is completely free of oil and grease, use a lint-free white cloth with a solvent such as alcohol or acetone, and wipe the surface. If the cloth remains white, the surface is clean; if the cloth turns dark, continue cleaning until it remains white. The SR-100RT coating can be applied with or without the use of a primer depending on the substrate. NEI supplies a primer product, NANOMYTE® SR-Primer, which works well with a range of plastics. The primer may be applied by dipping, flowing, spinning, rolling or spraying.

COATING APPLICATION

It is recommended that coating application be performed in a clean environment to minimize surface defects. The coating can be applied by immersion, spraying, rolling, or brushing. Only one coat is required to cover the substrate. Under ambient conditions (25°C / 77°F, 50% RH), a single coat is 4 – 10 µm (0.15 - 0.4 mil) thick.

Spraying:
When surface preparation is complete, begin application using a high volume, low pressure (HVLP) spray gun with a 1.0 size tip and the pressure set at approximately 25 to 30 psi. On a separate piece of cardboard, first spray a test pattern to achieve a 6" to 8" elongated pattern approximately 1½" wide in the middle and fluid enough to cover but not puddle. If there is high wind, this will affect the quality of the finish as blowing wind can disrupt the spray pattern from the HVLP gun. It can also contribute to contamination of the finish with blowing dust. Once the spray pattern is achieved on the test cardboard, spray one coat in a cross-pattern; left to right, then up and down. Desired wet film thickness (WFT) is approximately 2.0 to 2.5 mils (spraying undiluted solution).

Rolling:
Make certain the surface is clean as per preparation instructions. Using an ultra-smooth, high-density foam roller, pour SR-500EC into a roller pan and completely saturate the roller. Apply in a cross-pattern; left to right, then up and down as quickly as possible as the coating dries fast. Avoid down pressure on the roller to achieve a better looking finish.

Brushing:
Make certain the surface is clean as per preparation instructions. Select the appropriate brush width based on the surface area being coated. Apply SR-500EC in a cross-pattern; up and down, then left and right. To obtain the best results, do not overwork the coating as it dries fairly quickly. Do not bear down with the brush. Use light strokes using the tip of the brush to smooth out the coating.

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CURING

Ambient Curing: Under ambient conditions (25°C / 77°F, 50% RH) a single coat will be dry to the touch in 1 hour and completely cured in 24 hours.

Accelerated Curing: Alternatively, the coating can be applied to the surface, dried in ambient air for 10 minutes, and then heated to at least 105 °C for 1 hour. An oven, blow dryer or heat gun may be used (maximum temperature is 150 °C). After heating, coated parts should be allowed to cool before handling.

CLEAN UP

Clean tools and flush equipment immediately after application is completed with acetone thoroughly before product dries. Once coating is dry, the tools cannot be cleaned with acetone or any other solvent.

STORAGE & HANDLING

Precautions for Safe Handling:

Appropriate personal protective equipment should be used at all times. Provide good ventilation or extraction. Avoid prolonged or repeated breathing of vapor. Avoid contact with eyes, skin and clothing. Keep away from heat, sparks, flames and other sources of ignition. Wash hands thoroughly after handling.

Conditions for Safe Storage (including any incompatibilities):

Avoid storage over 100° F and contamination with incompatible materials. Keep containers tightly closed in a cool, well ventilated place. Protect from moisture. Residual vapors might explode on ignition. Do not apply heat, cut, drill, and grind or weld on or near this container.

Refer to SDS for complete information on the safe handling of this product.

ADDITIONAL INFORMATION

NEI Corporation believes that the information in this technical data sheet is an accurate description of the typical use of the product. However, NEI disclaims any liability for incidental or consequential damages, which may result from the use of their products that are beyond its control. Employers should use this information only as a supplement to other information gathered by them and should make independent judgment of suitability of this information to ensure proper use and protect the health and safety of employees. Therefore, it is the user's responsibility to thoroughly test the product in their particular application to determine its performance, efficacy, and safety. Nothing contained herein is to be considered as permission or a recommendation to infringe any patent or any other intellectual right.

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