

NANOMYTE® SuperCN Plus

NANOMYTE® SuperCN Plus is a superhydrophobic coating for a variety of surfaces, such as metal, plastic, glass, painted surfaces, and fabrics. Surfaces treated with SuperCN Plus force liquids to bead up and roll off, shedding water instantly and leaving the surface completely dry.

PHYSICAL CHARACTERISTICS

Product Form:	One-part liquid coating solution
Product Color:	Colorless
Viscosity (20 °C):	5 – 30 cP

TECHNICAL DATA

Contact Angle:	> 150° water droplet (fully cured coating)
Curing Temperature:	85°C (minimum recommended)
Cured Film Thickness:	5 – 20 µm (min / max recommended)
Coverage:	700 – 1,000 ft ² per gallon
Shelf Life:	1 year (storage below 40°C / 104°F)

SURFACE PREPARATION

Ensure surfaces to be coated are clean and dry – the surfaces should be water-break free before coating application. The coating can be applied with or without the use of a primer depending on the activation state of 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.

For spray application of the primer, an HVLP spray gun with a nozzle size of < 1.0 mm is recommended, and the pressure should be set at approximately 25 to 30 psi. A single pass of spraying is recommended for the primer. The primed parts should then be dried at 70 °C for 10 min before application of SuperCN.

COATING APPLICATION

It is recommended that coating be applied with an HVLP spray gun or an air brush in a well-ventilated spray booth. Shake the solution to mix well before coating application. For HVLP spray gun, a nozzle size of < 1.0 mm is recommended, and the pressure should be set at approximately 25 to 30 psi. Apply one or two uniform coats (no drying in between) to achieve a superhydrophobic surface. For best coating performance, the coating solution should be stored in a refrigerator/freezer. If refrigerated, warm the solution up to room temperature before application.

CURING

NANOMYTE® SuperCN Plus is thermally cured at an elevated temperature. Recommended curing conditions:

- **PMMA:** 2 hours at 85°C
- **Polycarbonate:** 1 hour at 120°C
- **Other:** 30 minutes at 150°C (for substrates that can withstand high temperatures)

Shorter cure times / reduced temperatures may also be used depending on surface properties and performance requirements; test samples for desired performance when deviating from recommendations.

STORAGE & HANDLING

Precautions for Safe Handling

Appropriate personal protective equipment should be used at all times. Avoid contact with skin and eyes. Avoid inhalation of vapor or mist. Provide good ventilation or extraction. Use explosion-proof equipment. Keep away from sources of ignition. No smoking. Take measures to prevent the build-up of electrostatic charge.

Conditions for Safe Storage

Storage class (TRGS 510): Flammable liquids; avoid storage above 40°C / 104°F and contamination with incompatible materials. Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Air sensitive. Forms explosive peroxides on prolonged storage. May form peroxides on contact with air. Dry residue is explosive. Test for peroxide formation periodically and before distillation.

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

NANOMYTE® SuperCN Plus**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.