

Technical Data Sheet

Nano-Clear®

Nano-Clear® for Exterior Textured Plastics



PRODUCT DESCRIPTION

Nano-Clear® was designed for professional use only. Nano-Clear® is a permanent clear coating solution.

Introducing the world's first wipe-on nanocoating to exceed automotive OEM specifications. Nano-Clear is a one-component solvent borne clear coating that was designed to be air cured. Nano-Clear was specifically developed to enhance, restore and protect TPO or PU exterior textured plastics.

Nano-Clear permanently restore original color, gloss, surface hardness and extreme UV resistance back into "new" or "highly oxidized" TPO or PU textured plastics. Nano-Clear provides outstanding scratch, chemical and UV resistance and reduced surface cleaning.

Application potential includes; new or highly oxidized exterior automotive black textured plastics.

Nano-Clear® for Exterior Textured Plastics is "not" designed to be applied over ABS plastic, autobody metal panels, interior automotive plastics, polycarbonate (headlight lenses), ceramic or glass. Nano-Clear® should be tested for compatibility on small surface area first before applying on larger areas.

Nano-Clear® is a highly cross-linked polyurethane hybrid nanocoating system designed to be permanent.

COATING BENEFITS:

- 10 Year Performance Warranty.
- Restores original color, gloss, surface hardness and extreme UV resistance back into oxidized surfaces.
- High scratch resistance (4H pencil hardness over aluminum, 2H over plastic).
- Gasoline, acid rain, bird droppings, motor oil, bug spray, suntan lotion and solvent resistance.
- Extreme weathering resistance (100% gloss retention after 5 years).
- Self-cleaning properties including water, motor oil, dirt, ice and brake-dust repellency.
- Available in 1 gal, 5 gal containers and 55 gal drums for industrial use.



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Product	Nano-Clear® for Exterior Textured Plastics Specifically formulated to restore original color, gloss, hardness and UV resistance back into oxidized surfaces.													
Application	Ready-to-use solvent borne clear coat system													
	Paint system	Can be applied on highly oxidized or new exterior textured plastics <ul style="list-style-type: none"> • Wipe-On Application • HVLP spray 												
	Supply form	Ready to Use												
	Pot Life	No pot-life (to be kept in tightly closed containers when not in use).												
	Coverage / Gallon	1,000 square feet @ 25µ dry film thickness												
	Wipe-On Application Info: <i>Use outdoors or in ventilated area due to solvent odor.</i>	<p>Use at Temperature from 40°F to 80°F, with Relative Humidity from 30% to 85% (Lower temperatures and lower humidity conditions will slow-down the curing rate) (Higher temperatures and higher humidity conditions will speed-up the curing rate)</p> <ul style="list-style-type: none"> ✓ Clean plastic surface thoroughly with denatured alcohol or isopropyl alcohol, then dry. ✓ Coating will adhere to skin like Super-Glue. Chemical resistant rubber gloves are required. ✓ Nano-Clear on one section at a time using a <i>pre-folded "Suede Microfiber Cloth"</i>. Wear chemical resistant rubber gloves. ✓ Pour Nano-Clear liquid on the "folded" edge of the applicator until "saturated". ✓ Apply 1 "wet" coat using a front-to-back direction while being careful to avoid streaking. ✓ Pour additional Nano-Clear liquid on the folded edge of the applicator until "saturated". ✓ Gently re-apply the wet applicator over the wet surface within 2 minutes to ensure no areas are missed and to achieve an even-and streak-free finish. Remove excess material with suede microfiber applicator to avoid streaking and high spots. ✓ Important: Avoid recoating additional coats after 5 min. as an "anti-graffiti" effect and streaking will begin to develop. Nano-Clear produces an "anti-stick" surface once cured. ✓ Dust-free in 5 min. @ 50% R.H. Tack-free in 20 - 30 min. Handle in 3 hrs. Full cure 24 hrs. @ 50 % R.H. ✓ <i>Nano-Clear can be wiped-off of surface before cure (up to 20 minutes) by dissolving using acetone or paint thinner. Once cured, Nano-Clear will not be affected by solvents.</i> ✓ Allow a minimum of 4-6 hours cure time before use in rain or snow. Water droplets will form a "hallow-effect" on surface if not fully cured. 												
	Spraying viscosity	<table border="1"> <tr> <td>Viscosity</td> <td>@ 20°C</td> </tr> <tr> <td>Ford Cup # 4</td> <td>10 – 12</td> </tr> </table> <p>* Relative humidity ~ 30 to 85%</p>	Viscosity	@ 20°C	Ford Cup # 4	10 – 12								
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Ford Cup # 4	10 – 12													
	HVLP spray gun, air pressure and nozzle size	1.2 – 1.5 mm (0.051-0.059 in) 1.5 – 2.0 bar (29 psi) delivery pressure												
	Number of spray coats	1 - 2 wet coats <ul style="list-style-type: none"> • Allow 1 to 2 minutes between coats to allow for solvent evaporation • Clean the spray gun immediately after use with acetone, MEK or butyl acetate • Avoid recoating additional coats after 5 min. as an "anti-graffiti" effect will occur • Recommended dry film thickness (after drying) – 20 to 30µ 												
	Spray flash off	1 to 3 minutes between first coat and second coat (@ 72°F / 50% R.H.)												
	Drying	<p>Air dry conditions (recommended for energy saving purposes)</p> <table border="1"> <tr> <td>Climate conditions</td> <td>@ 72°F / 50% R.H.</td> <td>@ 85°F / 50% R.H.</td> </tr> <tr> <td>Dust-free time</td> <td>~ 5 to 10 minutes</td> <td>~ 3 to 5 minutes</td> </tr> <tr> <td>Tack-free time</td> <td>~ 20 to 30 minutes</td> <td>~ 15 to 20 minutes</td> </tr> <tr> <td>Handling time</td> <td>~ 3 hours</td> <td>~ 3 hours</td> </tr> </table>	Climate conditions	@ 72°F / 50% R.H.	@ 85°F / 50% R.H.	Dust-free time	~ 5 to 10 minutes	~ 3 to 5 minutes	Tack-free time	~ 20 to 30 minutes	~ 15 to 20 minutes	Handling time	~ 3 hours	~ 3 hours
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 	Dirt or wax removal	<ul style="list-style-type: none"> • Clean and thoroughly with soap and water, then dry surface. • Clean again using denatured alcohol or isopropyl alcohol solvents to remove wax or other surface contaminants. • Remove any remaining residue using Detailing Cloth. 												
	Product Storage	<ul style="list-style-type: none"> • Container must be closed immediately after use to avoid moisture contamination. • Product shelf-life ~ 12 months when stored unopened at 72°F 												



Nano-Clear® Coating Q&A

Question:

What is the best application approach for Nano-Clear for Exterior Textured Plastics?

Answer:

Pour Nano-Clear liquid on the folded edge of a Suede Micro-fiber Applicator until saturated to wet the surface adequately. Wipe the saturated applicator edge on small panel sections in a front-to-back direction to ensure a smooth and even finish. Re-apply Nano-Clear on the wet applicator until saturated, then gently go over the surface again in a front-to-back direction to ensure no areas were missed and to avoid streaking and high spots.

Question:

Can Nano-Clear be sprayed?

Answer:

Nano-Clear can be wiped, dipped or sprayed by professionals. Nano-Clear can be sprayed using an HVLP spray gun and approved face mask with adequate ventilation (see MSDS). Recommended gun settings including 29 psi at the gun, 1.3 - 1.4 mm tip and full fan. It is recommended that wet-on-wet application approach be used. Spray 1 wet coat, then allow 1 - 2 minutes for solvent evaporation. Then spray 2nd or 3rd wet coats while allowing 1 - 2 minutes for solvent evaporation between each coat. *Avoid recoating after 20 minutes.*

Question:

How long will Nano-Clear for Textured Plastics last on a surface?

Answer:

Nano-Clear for Textured Plastics is backed by a 10 Year Warranty.

Question:

How can Nanovere make such claims?

Answer:

A coatings longevity is directly related to the adhesion properties to the substrate, the chemical resistance of the coating, the UV resistance and the crosslink density of the coating. Tests by leading organizations confirm that Nano-Clear has remarkable adhesion over a wide range of substrates including textured black plastics, epoxy paint, powder coatings, anodized aluminum, fiberglass and marine gel-coatings. When cured, Nano-Clear is resistant to most solvents including MEK. Nano-Clear provides long-term (years and years) of UV protection. Nano-Clear is a highly cross-linked 1K coating system which provides superior properties over conventional 2K clear coatings.

Question:

How many wipe-on coats should be applied?

Answer:

The number of wipe-on coats should be determined by the *"absorption properties"* of the material it is being applied to. A slightly oxidized textured plastic surface may only require one single coat, assuming the desired gloss is achieved. A second layer of Nano-Clear would increase gloss of the surface. *Nano-Clear is not designed to be applied over smooth plastics using the "wipe-on" technique as streaking will occur. Nano-Clear is not designed for use on glass.*

Question:

Why use rubber gloves?

Answer:

Nano-Clear is a solvent borne polymer system that cures with air and humidity. Nano-Clear permanently bonds to difficult to adhere substrates. As a result, Nano-Clear will also bond directly to skin similar to superglue, but not as fast. To remove Nano-Clear from skin takes solvents like acetone which are not at all good for the skin.

