

SOLAR CONTROL GLASS COATING



Liquid NanoTint®
Application Manual

Liquid NanoTint® Liquids



Cleaner

Unique preparation cleans and micro-grinds glass for special nanocoating primer



Primer

Bonds tightly to glass at molecular level to create ideal surface for NanoTint finish



Finish Part A

Patented technology evenly delivers nanoparticles to glass surface



Hardener Part B

Reacts with Part A to ensure a strong bond to glass with a hard finish

Liquid NanoTint® Tools



Microfiber Cloth

Best in class fabric for application and removal of Cleaner



Mixing Cups

New, clean, solvent-resistant mixing cups to measure/mix Liquid NanoTint finish.



Mixing Paddle

Stainless steel mixing paddle cleans easily to prevent contamination



6" Roller Frame

Wire frame chassis is smaller in diameter, requiring less material to load



Specialized Roller Cover

Proven to apply water-thin material evenly to glass surfaces



Roller Trays

New, clean, solvent-resistant trays to apply Liquid NanoTint primer and finish

Recommended Tools



Portable Digital Scale - .01 - 500 gr
Weigh material for mixing to ensure proper application thickness



UV/IR Rejection Detector + Visible Light Transmission (VLT) Meter
Capture glass performance - use pre and post-application. Available on aliexpress



TempStick
Capture environmental data over time - use pre and post application



UVAIRX
Unique technology removes odors and VOC's without creating ozone Available through Drywired



Denatured Alcohol or Isopropyl Alcohol
Immediate cleanup of tools, spatters, spills etc.



Respirator w/ ABEK (3M 6059) Cartridges
Protect installer from fumes while working with product



3M 2090 Masking Tape - 1 1/2" - 2"
For inside edge of glass to prevent contamination from sealants



Spray Bottle with Water
Wet glass before Cleaner / Spray after - water will 'sheet' when surface is clean



Ladders/Scaffold
Ready access to all glass on project



BTU Unit
Capture glass performance - use pre and post-application.



IR & UV Meters
Capture glass performance - use pre and post-application.



Aluminum Foil
Disposable foil for tray



Table w/ waste can
Ready access to mixing table and metal disposal can with lid



Safety Goggles
Protect installer from material splatter



4" Glass Scraper
To remove paint and other hard contaminants on glass



Measuring Tape
Used to measure window dimensions

Kit Configurations

NanoTint Kit	Sample Kit 40 sq ft	Starter Kit 375 sq ft	Pro Kit 375 sq ft
Liquids			
Glass Cleaner	45 grams	450 grams	450 grams
Primer	80 grams	32 oz	32 oz
Finish Part A	117 grams	900 grams	900 grams
Hardener Part B	13 grams	110 grams	110 grams
Tools			
Mixing Container	2 ea - 8 oz (250mL)	6 ea - 8 oz (250mL)	-
Mixing Paddle	1 ea	1 ea	-
Specialized Roller Cover	2 ea	4 ea	4 ea
6" Roller Handle	1 ea	1 ea	-
7" Roller Tray	1 ea	1 ea	-
Squeegee	1 ea	1 ea	-
Microfiber Cloth	2 ea	3 ea	-
Collateral			
Instructions	1 set	1 set	1 set
SDS's	1 set	1 set	1 set

Prepare For Application

Calculate Square Feet

- Measure each glass panel separately - measure in inches
- Sq. Ft. = Length X width, then divide by 144
- Add together sq. ft. of all panels to determine material needed

Evaluate Surfaces and Environment

- Identify scratches, trapped moisture, exterior debris, etc. - NanoTint cannot repair
 - Make notes, take pictures, explain to client
- Use auto data logger, such as Kestrel Drop D2, for at least 1 week to identify baseline temperatures - also compare after application to prove effectiveness

Determine Liquid, Tool and Labor Requirements

Liquid NanoTint System	System Tools	Other Tools
<ul style="list-style-type: none">▪ Glass Cleaner: 9.6 sq ft / 10 gr▪ Primer: 5.1 sq ft / 10 gr▪ Finish A + B: 4.3 sq ft = 9grams of 'A' + 1 gram of 'B'	<ul style="list-style-type: none">▪ Microfiber▪ Mix cups▪ Mix paddle▪ Roller frame▪ Roller covers▪ Trays/liners	<ul style="list-style-type: none">▪ Safety equipment▪ Masking tape▪ Spray bottle▪ Table/waste can▪ Alcohol (cleanup)▪ Ladders/Scaffold

Schedule Install

- In teams of 2
- When space is vacated during application +12 hours
- When conditions are appropriate for application +2 hours*
 - 45° - 90° F Air and surface temperatures
 - < 70% Relative humidity
 - No direct sunlight

*Use automatic data logger, such as Kestrel Drop D2, at least 1 week in advance to identify proper conditions - also to compare data after application to prove effectiveness

At Time Of Application

Step 1: Prep

- Ensure no ignition sources in work area
 - Any equipment must be explosion-proof
- Avoid electrostatic build-up
 - Increase humidity, spray carpets with anti-static treatment
- Control Air Movement
 - Turn off heat and air conditioners
 - Point fans away from project to draw odors out of the vicinity
- Remove All Contamination

REMOVAL OF CONTAMINATION IS MOST IMPORTANT STEP

- Completely remove previous solar film
- Use glass scraper to remove contaminants, wipe frames with alcohol, vacuum floor, etc.
- Setup mixing table, waste can, liquids and tools

Step 2: Clean

- Spray water mist on glass to be treated
- Use Microfiber sheet or buffer to apply NanoTint Glass Cleaner
- **Cleaner Applied @ 0.96 sq. ft. per gram**
 - Divide project sq ft by 0.96 = grams required
- Continue water mist as necessary to maintain watery-smooth paste
- Work paste in firm, circular motion to clean glass thoroughly
 - Special effort required in corners, at edges, and on older glass
- When glass is clean, remove remaining paste with clean cloth or buffer
- Confirm glass is clean with a light mist of water across entire surface
 - Water will 'sheet' unbroken when clean
 - If 'sheeting' is diverted, continue to clean that area until water no longer diverts

Step 3: Mask

- Mask all surfaces which need to be protected - NanoTint will stain surfaces
- Mask edges 1/8" - 1/4" to prevent contamination from glass sealant

Step 4: Primer

- Prepare New Tray:
 - Add enough primer to cover one glass panel @ 0.51 sq. ft per gram
 - Pour only what can be applied in 3-5 minutes
 - Team member adds more primer to tray as necessary
- Steadily apply primer with microfiber cloth in thin, even coat
- Work from top to bottom, overlap 20%
- Let dry approximately 2 minutes
- Repeat application until material for desired panels is completely applied

Step 5: Finish

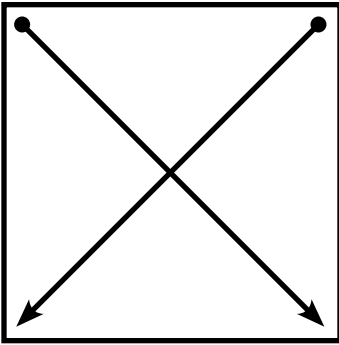
- Make sure glass is dry and free of contaminants
- Assemble new roller cover and frame. Remove stray lint with masking tape
- Confirm sq. ft. of panels to be coated within next hour
- Prepare mixture immediately before use
 - **9:1 Mix Ratio by Weight**
 - **Refer to page 9 for Mixing Ratio Chart**
- **Finish Applied @ 0.43 sq ft per gram**
 - Divide project sq ft by 0.43 = grams required
 - 10 gr = 4.3 sq ft
 - 50 gr = 21.5 sq ft
 - 100 gr = 43.0 sq ft
 - Prepare New Mixing Cup - Finish Part A:
 - Multiply grams required by 0.9 = Total Finish Part A
 - Add Hardener Part B:
 - Multiply grams required by 0.1 = Total Hardener Part B
 - Slowly pour Hardener Part B to Part A mixing cup and steadily stir until uniform

Keep solution covered at all times to slow cure and prevent evaporation

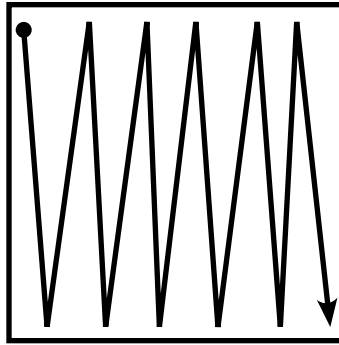
- Prepare New Roller Tray:
 - Add enough coating to finish one panel @ 0.43 sq ft per gram
 - Add 30 grams to account for roller retention per each roller
 - Pour only what can be applied in 3-5 minutes
 - Team member adds more as necessary
 - Do not use noticeably thick solution
 - Do not use coating prepared more than 2 hours prior to application

Step 6: Application

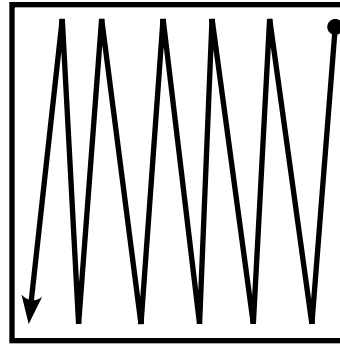
- **To Ensure A No Line - No Streak Finish**
 - Cover entire panel quickly
 - Smooth drips immediately
 - Maintain wet edge
 - Ensure all material poured in tray is used for application
 - Avoid sliding roller
- **Dry and Cure Times**
 - After 15 minutes – Remove masking tape
 - After 2 hours – Dry to touch - turn heat or air conditioning back on
 - After 24 hours - Odor should be full dissipated
 - After 14 days - Full cure - clean with mild household cleaners or soap, water and squeegee



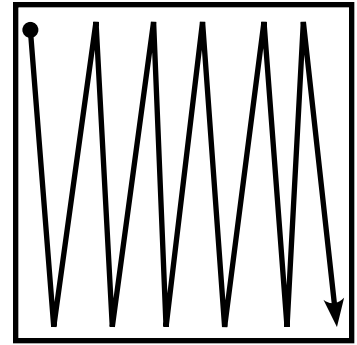
Step 1: Form an X using firm pressure



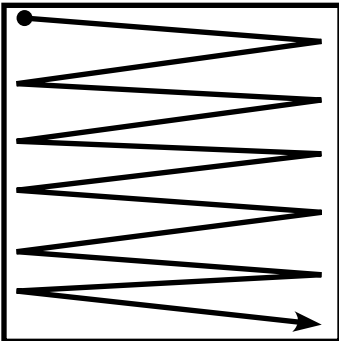
Step 2: Go from left to right of the window using vertical zig zags with moderate pressure



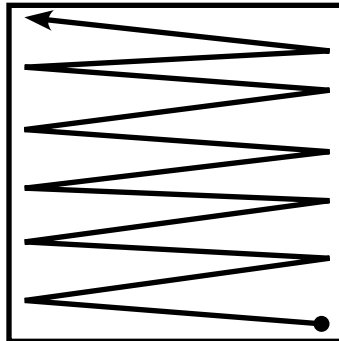
Step 3: Go from right to left of the window using vertical zig zags with moderate pressure



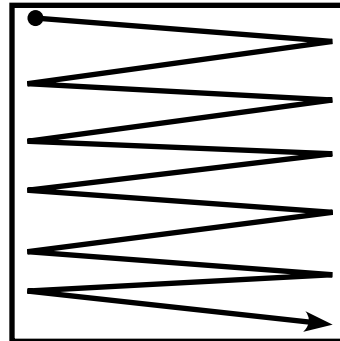
Step 4: Go from left to right of the window using vertical zig zags with moderate pressure



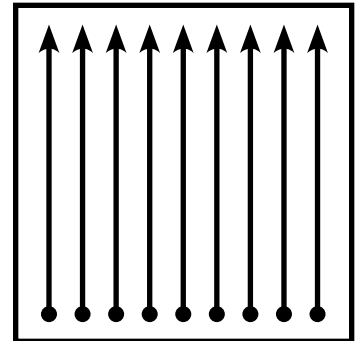
Step 5: Go from top to bottom of the window using horizontal zig zags with moderate pressure



Step 6: Go from bottom to top of the window using horizontal zig zags with moderate pressure



Step 7: Go from top to bottom of the window using horizontal zig zags with moderate pressure



Step 8: Go from bottom to top of the window with slightly overlapping vertical passes, use extremely

▪ **Cleanup & Storage**

- Clean drips, spills and tools immediately with Denatured Alcohol
- Properly dispose of all waste according to local, federal and national regulations
- Ensure proper storage of unused liquids per Safety Data Sheet

Liquid NanoTint 2.0			
Hardener Part B (g)	Finish Part A (g)	Weight of Total Mixture (g)	Area Covered (SQ FT)
Add 30 grams for new roller application			
3.00	27.00	30.00	N/A
1.25	11.25	12.50	5.0
1.88	16.88	18.75	7.5
2.50	22.50	25.00	10.0
3.13	28.13	31.25	12.5
3.75	33.75	37.50	15.0
4.38	39.38	43.75	17.5
5.00	45.00	50.00	20.0
5.63	50.63	56.25	22.5
6.25	56.25	62.50	25.0
6.88	61.88	68.75	27.5
7.50	67.50	75.00	30.0
8.75	78.75	87.50	35.0
10.00	90.00	100.00	40.0
11.25	101.25	112.50	45.0
12.50	112.50	125.00	50.0
13.75	123.75	137.50	55.0
15.00	135.00	150.00	60.0
16.25	146.25	162.50	65.0
17.50	157.50	175.00	70.0
18.75	168.75	187.50	75.0
20.00	180.00	200.00	80.0
21.25	191.25	212.50	85.0
22.50	202.50	225.00	90.0
23.75	213.75	237.50	95.0
25.00	225.00	250.00	100.0
26.25	236.25	262.50	105.0
27.50	247.50	275.00	110.0
28.75	258.75	287.50	115.0
30.00	270.00	300.00	120.0
31.25	281.25	312.50	125.0
32.50	292.50	325.00	130.0
33.75	303.75	337.50	135.0
35.00	315.00	350.00	140.0
36.25	326.25	362.50	145.0
37.50	337.50	375.00	150.0
38.75	348.75	387.50	155.0
40.00	360.00	400.00	160.0
41.25	371.25	412.50	165.0
42.50	382.50	425.00	170.0
43.75	393.75	437.50	175.0
45.00	405.00	450.00	180.0
46.25	416.25	462.50	185.0
47.50	427.50	475.00	190.0
48.75	438.75	487.50	195.0
50.00	450.00	500.00	200.0

Frequently Asked Questions v.7 020620

What is Liquid Nanotint?

Liquid Nanotint is a highly transparent solar control coating that blocks UV and IR. Unlike dark window film, it is more durable and transparent.

What is Nanotint's optical performance?

The specially formulated Solar Control Liquid NanoTint coating blocks up to 99.9% of ultra-violet (UV) light and absorbs up to 95% of Infra-Red (IR) light on the window, while still allowing for up to 85% visible light transmission.

How is DryWired® Liquid NanoTint applied?

Liquid NanoTint is a 2-component solution that, once mixed, has a pot life of 2 hours. The mixed solution is applied with a specialized paint roller. For more detailed information, please consult the application instructions for DryWired® Liquid NanoTint.

Is Liquid NanoTint applied on the interior or exterior of a glass surface?

DryWired® recommends coating the interior surface of a glass. Interior environmental conditions are more easily controlled resulting in optimum clarity and uniformity of the final fully cured coating.

Are special conditions required during the application process?

Yes, DryWired® recommends application at a temperature between 41-95 °F (5-35 °C) and relative humidity 70% or less. Air circulation should be minimized to mitigate contamination in the form of dust and dirt during the application process and for at least the initial 60 minutes time.

What is the coverage rate of the DryWired Liquid NanoTint?

Each high-density foam roller used will absorb and retain 30 grams of Liquid NanoTint solution. In addition to these initial 30 grams, every additional 30 grams of Liquid NanoTint solution will cover an area of 1m² (10ft²).

What type of surface preparation is required?

Clean glass is essential to successful Nanotint applications. We provide a glass cleaner and a primer that should be applied prior to the Nanotint. For more detailed information, please consult the Standard Operating Procedure for DryWired® Liquid NanoTint.

How large of a surface area can a single person coat in the recommended 4 minute time frame?

One person can coat approximately 2m² (21ft²) before encountering application challenges.

Can the Liquid NanoTint coating be applied by a method other than the high-density foam roller?

HVLP spray application is possible but not recommended due to overspray challenges.

Are there any odors associated with the application of the product?

Similar to a household paint, there is an initial odor that lasts for a few hours as Nanotint dries. We recommend vacating the premises during the application for a minimum of 4 hours. Once the coating has fully dried (within 90 minutes), odors begin to diminish and off gassing occurs as validated by independent third party testing. This documentation is available upon request.

What are the recommended safety procedures?

As with any material being used in the workplace or home, please refer to label for safety precautions. More detailed information is provided in the DryWired® Liquid NanoTint Safety Data Sheet which includes safe handling, storage, personal protective equipment, and disposal procedures.

Can the Liquid NanoTint coating be removed from glass surfaces?

Yes. Nanotint is removable with specialty solvents and a razor blade.

Is there a warranty on this product?

There is a 15 year warranty on this product.

Can the NanoTint surface be cleaned with common cleaning supplies?

Yes common cleaners will not affect the Nanotint coating once it dries. We recommended waiting 48 hours before cleaning the window. Abrasive cleaning materials should be avoided.

Can this coating be physically scratched?

Abrasion of the coating is possible. It is important to remember that the coating is only as sound as the substrate. If a material will abrade glass, it will abrade the Liquid NanoTint Coating.