

IMPROVED  
FORMULA



**INDUSTRIAL STRENGTH  
SURFACE PROTECTION**  
FOR INDUSTRIAL USE ONLY

Ultra-Ever Dry is a superhydrophobic (water) and oleophobic (hydrocarbons) coating that will repel most water-based and some oil-based liquids. Ultra-Ever Dry uses proprietary omniphobic technology to coat an object and create a surface chemistry and texture with patterns of geometric shapes that have "peaks" or "high points". These high points repel water, some oils, wet concrete, and other liquids unlike any other coating.

Ultra-Ever Dry has vastly improved adhesion and abrasion resistance, compared to previous superhydrophobic technologies, allowing it to be used in applications where greater durability is required.

*Superhydrophobic - superior water repelling property that causes a water droplet to have a contact angle that exceeds 150 degrees.*

70°

Steel

90°

Waxed Car

110°

Windshield Coating

170°

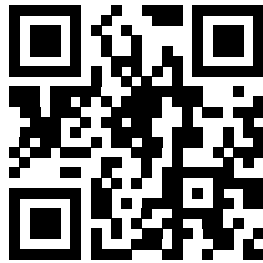
Ultra-Ever Dry®

Water droplet angle on:

**STOP!**

**MUST SEE VIDEO.**

To truly understand and appreciate what Ultra-Ever Dry can do, you have to see it in action. Scan this QR Code with your smart phone or visit



[www.UltraEverDry.com](http://www.UltraEverDry.com)



**ANTI-WETTING ★ ANTI-CORROSION ★ ANTI-CONTAMINATION  
ANTI-ICING ★ SELF-CLEANING ★ PRODUCT LIFE-EXTENDING**



**ULTRATECH**  
INTERNATIONAL, INC.

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The superhydrophobic coating keeps objects dry. Water and many other liquids are easily repelled.



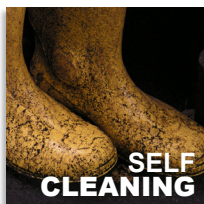
Ultra-Ever Dry offers enhanced corrosion protection since the superhydrophobic coating repels water, saltwater, aqueous acids and bases.



The superhydrophobic properties of Ultra-Ever Dry keep coated materials completely dry, eliminating the formation of ice or, in the case of frost, making the removal of ice dramatically easier.



Water and other liquids that contain bacteria or radiation never actually contact the surface of the coated material so bacteria and radiation is greatly diminished or eliminated and the surface is easy to decontaminate. Dust and dirt are easily removed with low pressure water.



Ultra-Ever Dry repels dirty water and some oils, and remains clean and virtually bacteria-free. When dust, dirt or other molecules accumulate on a superhydrophobic coated surface, a light spray of water or a blast of air grabs the dust and removes it.



Many products fail from moisture, water, oil or simply getting too dirty for continued use. Use Ultra-Ever Dry superhydrophobic coating to extend the life of electric motors by preventing the build up of moisture on the windings, coat nuts and bolts to prevent corrosion, coat tools, equipment, and virtually any item that needs to be kept dry, corrosion free, de-iced, uncontaminated or clean. Save money, improve safety and create a cleaner work environment.



## HOW IS IT APPLIED?

Ultra-Ever Dry is sprayed on using a variety of air powered sprayers. UltraTech offers the Ultra-Mini Sprayer and Ultra-Power Sprayer, but other sprayers can be used for specific applications. NOTE: Both parts (top and bottom coat) are required for all applications of Ultra-Ever Dry.



Ultra-Mini Sprayer



Ultra-Power Sprayer



Air Brush

HVLP Spray Gun



Concrete block test with food coloring and water.

UNTREATED

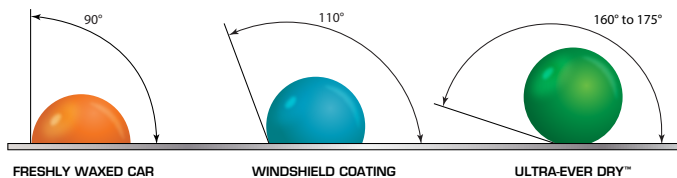
# Frequently Asked Questions

## 1. How does Ultra-Ever Dry® work?

The bottom coat bonds to most materials and acts as a primer. It provides a consistent material for the top coat to bond to while interacting with the top coat to self-assemble the surface, creating finely textured geometry. This surface is comprised of patterns of geometric shapes and billions of interstitial spaces. There are "high points" in the surface that help to create a low surface energy, which causes droplets of water to touch a very small percentage of the coating. The water in the droplet that does not touch these "high points" is held together by intermolecular cohesive forces of the water molecules. It is the combination of these elements that allow Ultra-Ever Dry® to be superhydrophobic and oleophobic for some, but not all, oil-based liquids.

## 2. What do the terms "superhydrophobic" and "oleophobic" mean?

Ultra-Ever Dry® surface protection coating creates a solid/liquid contact angle of 160-175 degrees in air. Well-known windshield water repellents have a contact angle closer to 110 degrees and are only hydrophobic. A superhydrophobic contact angle allows for the self-cleaning properties associated with Ultra-Ever Dry®. Oleophobicity refers to the ability to repel some, but not all, oil-based liquids (which have values of surface tension less than that of water). Unfortunately, oleophobicity is not an absolute term, as many oils have broad ranges of surface tension which may straddle the limit of the effective range of Ultra-Ever Dry®. For many oils, testing is required to determine if the specific oil or grade of oil will be repelled by Ultra-Ever Dry®.



## 3. How long will an Ultra-Ever Dry® coating last?

The Ultra-Ever Dry® formula is susceptible to environmental conditions such as UV. This coating will offer approximately one year of outdoor life before recoating of the top coat would be required. When used in indoor or covered applications outdoors, the coating should last for a year or more. If the top coat has diminished due to environmental conditions, simply reapply the top coat to regain the superhydrophobic properties (assuming the bottom coat is still present). Ultra-Ever Dry® coating is also susceptible to abrasion.

## 4. What is the working temperature range for Ultra-Ever Dry®?

The working temperature range for a coated surface is from -30°F to 300°F (-34°C to 149°C) once it has been applied. We would recommend further testing for any application that will be exposed to temperatures above 300 °F (149 °C). The coating should be applied at temperatures between 50°F to 90°F (10°C to 32°C).

## 5. What materials will the Ultra-Ever Dry adhere or bond to?

Please note that the coating has a hazy translucent white appearance. Almost any material is a candidate for application: steel, aluminum, other metals, plastic, leather, fabric, wood, concrete, etc. The coating can be applied to and will bond to smooth surfaces. Preparing an already cleaned surface with heavy-duty scotch brite and/or sanding the surface with 320-800 grit sandpaper will improve adhesion. Ultra-Ever Dry® is not recommended for use on acrylics due to the high solvent content.

## 6. How abrasion-resistant is Ultra-Ever Dry®?

Ultra-Ever Dry® surface protection is significantly more abrasion resistant than previous superhydrophobic materials, registering a result of 30 cycles with a CS-10 wheel and 1000g load on the Taber Abraser before droplets no longer roll off the coating at a slope of 5 degrees from horizontal. The coating may still be

superhydrophobic at this point, but droplets may "pin" or stick in the abraded area, and may not roll off until the substrate is tilted to a greater degree. If abrasion is a concern, testing is recommended. If the coating is removed due to repeated or severe abrasion, it can be reapplied.

## 7. Will the coating still work if the top coat is largely removed due to abrasion?

Perhaps. In many situations, the superhydrophobic nature of the material may be diminished but the remaining top coat and bottom coat still provide the functionality of keeping the coated material from getting wet, iced up or corroding. This is application dependent.

## 8. What color is the coating?

The standard product is a hazy translucent white. We do not have a transparent formula at this time. Custom colors are not available at this time. It is recommended to try the coating in an inconspicuous area first if color is important.



## 9. How many square feet or square meters can one gallon of Ultra-Ever Dry® cover?

250 square feet or 23 square meters at a dry film thickness of 0.5 mils (13 microns).

## 10. How long does Ultra-Ever Dry® take to cure?

Base Coat: Allow 30-60 minutes of dry time before applying top coat. A heat gun / blow dryer may be used on a low setting to decrease dry time.

Top Coat: The coating will become superhydrophobic within 15-30 minutes of the top coat application. Allow 2 hours of additional dry time for good results.

For best results, including optimum oleophobicity, allow the bottom coat to dry for at least 1 hour and allow the top coat to dry overnight.

## 11. What is the shelf life of Ultra-Ever Dry® and what temperature should it be stored at?

Typically, shelf life of the product will be four years when stored between 40°F and 115°F (4°C and 40°C).

## 12. Does Ultraviolet (UV) light affect Ultra-Ever Dry®?

Ultra-Ever Dry® is affected by UV, reducing its useful life.

## 13. How chemically resistant is Ultra-Ever Dry®?

As with most materials and coatings, this will depend on the chemical. In general, it is resistant to a wide range including many water-based acids and bases. It may or may not be compatible with oil-based liquids, since these substances have varying values of surface tension, and liquids with low values of surface tension are not compatible with Ultra-Ever Dry®. Testing may be required to ensure compatibility. Ultra-Ever Dry® surface protection will not repel organic solvents including, but not limited to: acetone, xylene, t-butyl acetate, naphtha, MEK, etc.

## 14. What known chemicals are incompatible with Ultra-Ever Dry® coating?

Soaps and detergents will cause the surface of the coating to "wet-out". Once these chemicals are removed (using low pressure water), the superhydrophobicity will generally return. Alcohols and solvents will dissolve/remove the coating.

## 15. How well does Ultra-Ever Dry® stand-up to acids/bases?

Strong acids and bases are typically not a problem. Testing has been completed with sulfuric, hydrochloric, and phosphoric acid with excellent results. We have also seen good results shedding strong caustic and some bleach solutions.

► More FAQs available at [UltraEverDry.com](http://UltraEverDry.com)

# ENDLESS APPLICATIONS



PAPER & PULP MILLS



VEHICLES & EQUIPMENT



MACHINERY & COMPONENTS



BOATS & SHIPYARDS



TOOLS



CONCRETE & BRICK



RIGS & WALKWAYS



CORROSIVE ENVIRONMENT



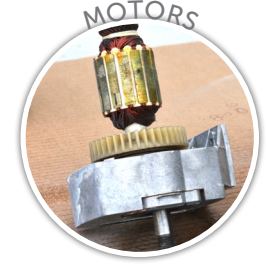
STRUCTURES & BUILDINGS



MARINAS



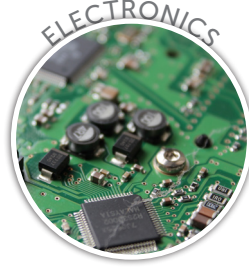
MILITARY



MOTORS



NUTS, BOLTS, & HARDWARE



ELECTRONICS



FACTORIES

## INDUSTRIAL STRENGTH FOR INDUSTRIAL USE ONLY

Ultra-Ever Dry®				
Part# Bottom Coat	Part# Top Coat	Size	Color	Average Coverage sq. ft. (sq. m)*
4000	4001	1 Quart (0.95 L)	Translucent White	62.5 (6)
4002	4003	1 Gallon (3.8 L)	Translucent White	250 (23)
4004	4005	5 Gallons (19 L)	Translucent White	1,250 (116)
4008	4009	50 Gallons (189 L)	Translucent White	12,500 (1,150)
4120	Ultra-Power Sprayer (Electric air sprayer) <i>Note: International part numbers available at UltraEverDry.com</i>			
4122	Ultra-Mini Sprayer (Air cartridge sprayer) <i>Note: International part numbers available at UltraEverDry.com</i>			
4126	Ultra-Mini Sprayer, Replacement Cartridges (12-pack) <i>Note: International part numbers available at UltraEverDry.com</i>			
4105	Personal Protective Equipment Kit (qty. 1), includes goggles, gloves, and respirator (size medium)			

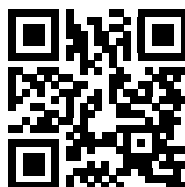
\*Per 0.5 mil of thickness

Ultra-Ever Dry® is a two-part system. Both the bottom and top coat must be applied for the product to be effective.

NOT FOR CONSUMER PURCHASE OR USE.



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