

WX-2100™ and FluoroThane-MW™

FluoroThane-MW™ is a 1-step, 20 microns, air-dry super-hydrophobic coating that is easily applied by spraying.

MW versus WX2100

FluoroThane-MW is the active component in WX2100 aerosol cans. It is a super-hydrophobic water repellent coating. When a surface is coated with FluoroThane-MW, water forms beads and rolls-off the surface preventing water film formation and ice buildup.



Appearance

The coated surface is frosty in appearance due to the nano-particles on the surface.

Performance

Super-hydrophobic performance is retained under a variety of conditions and for extended periods of time. The system is used for anti-wetting, anti-icing and anti-corrosion. The picture shows two satellite dishes during a moderate snowstorm with snow accumulation of 2 to 3 inches. The dish coated with FluoroThane on the right-hand side had signal strength of 96%. The uncoated dish on the left-hand side experienced a 50% loss of signal and loss of TV reception with the snow accumulation.



Durability

FluoroThane repels rain, ice and snow for up to 5 years. The FluoroThane coated surface may be washed with a hose spray, but handling or rubbing it, will reduce performance. To achieve better abrasion resistance a specialty base coat primer and a specialty formulated FluoroThane is available.

Coverage

Apply by spraying or rolling. However, spray application provides the most consistent results. Coverage will vary by the thickness of coating applied. The coverage of FluoroThane per gallon is 200 to 800 square-feet depending on the thickness of the spray application.

Directions

The temperature of the surface to be sprayed should be between 45°F and 95°F. At lower temperatures, the coating requires several days to properly dry. Keep container at room temperature prior to use. All surfaces need to be dry, clean and free from dust, wax, grease and polishes for good adhesion. Shake can vigorously for 30 seconds. Hold the spray-gun vertically 8-10 inches from surface. Depress the button fully. Move evenly across the surface covering 6-10 inches per second. Apply half overlapping strokes 3-4 inches apart. Shake the reservoir for a few seconds every 15 seconds. Allow 2 hours to dry before exposure to rain. The coating is substantially cured in 24 to 48 hours. For best performance never touch the coated surface.

Purchasing and cost

FluoroThane is offered for sale by online, calling or emailing Cytonix. FluoroThane solvents are flammable and is usually shipped via UPS ground to the 50 United States, Canada and Mexico. Overseas shipments require appropriate certified packaging, labelling and shipping method.

UV resistance

FluoroThane M-series shows complete resistance to 280 to 380 nm UV exposure that could be expected during 5 years at equatorial installations. Surface analysis after prolonged exposure showed no evidence of erosion or water penetration

Temperature Cycle Testing FluoroThane was uncompromised by rapid temperature cycling and can be expected to perform well in both cold and hot environments.

Salt Fog and Chlorine Exposure FluoroThane is functionally uncompromised by the extremely corrosive chlorine atmosphere and can be expected to perform well in many other corrosive environments. FluoroThane showed complete or substantial resistance to high salt and high humidity environments that are expected for marine or coastal installations. No visible corrosion after 1,000 hours of salt fog.

Performance FluoroThane exhibited no significant loss of contact angle after 6 hours of rain. In subsequent tests, FluoroThane had 145° contact angles after exposure to extreme rain at 60 inches per hour for one hour. The coating and substrate remains dry under 1 foot of water for one month.

History FluoroThane has been available for commercial applications since 2003. This includes large applications such as that shown in the picture in Norway, wind farms in Spain and wind speed sensors worldwide.



Customer Testimonial "In my opinion this super-hydrophobic coating may be the best countermeasure in the prevention of ice accretion on non-shielded microwave dishes equipped with molded spherical or conical radomes, shielded microwave dishes equipped with non-hydrophobic surfaced rigid planar radomes, parabolic grid dishes, mobile radio fiberglass radomed panel antennas, passive reflectors and many more telecommunication applications." - RSG



Substrates Recommended for Wood, metal, glass, fabrics, plastics, rubber and paper based products.

Limitations Excessive abrasion will reduce performance. Organic solvents will reduce performance.

Color:	Standard frosty white
Tints:	Gray, tan, blue, red, green
Solids percent:	~10%
Flammability:	Flammable
Storage temperature:	20-30°C
Shelf life:	1 year
Weatherability:	1 - 5 years (varies based on environmental conditions)
Dielectric constant:	3 at 100 MHz
Electrical resistivity:	~2 tera ohms
Taber abrasion:	Super-hydrophobic after 5-10 cycles with CS10 wheel
Water contact angle versus exposure time in a rapid aging environmental chamber:	-- 1 year (7 days in chamber): 145° -- 5 years (25 days in chamber): 144° -- 10 years (48 days in chamber): 138° -- 15 years (72 days in chamber): 119°

Copyright Cytonix LLC, 2017

The information in this document is believed to be correct on the date of issue. Judgments of the suitability of the information for the purchaser's purposes are the purchaser's responsibility. Although reasonable care has been taken in the preparation of this information, Cytonix extends no warranties, makes no representations, and assumes no responsibility as to the suitability of the information for the purchaser's application.

8000 Virginia Manor Rd, #130
Beltsville, MD 20705, USA
www.cytonix.com
emailbox@cytonix.com
301.470.6267