

Application Guide for Ultra-Ever Dry®



Revised 1-6-14

CAUTION: Items coated with Ultra-Ever Dry® will have a hazy white appearance which may affect the color of the finished product. **TEST ON A SAMPLE AREA BEFORE FULLY COATING.**

Personal Protective Equipment: Always wear the following equipment when applying: respirator (NIOSH/MSHA approved half-face respirator P100 rating with organic vapor cartridge - international distributors should check local regulations to determine if this approval is sufficient for use.), safety goggles, nitrile gloves. A paint suit / Tyvek suit is also recommended.

Application Equipment Options for industrial applications:

Note: With all sprayer options, it is important to adjust the volume to allow Ultra-Ever Dry to be applied in a fine mist. For best results, use separate sprayers for the top and bottom coat.

Ultra-Mini Sprayer: For small jobs. Remove filter at the bottom of the dip tube before use. Insert the dip tube firmly into the bottom of the power unit. If unit clogs, cover nozzle and depress trigger to clean the dip tube with backflow. For more information see: <http://www.preval.com/sites/default/files/Preval.pdf>

Ultra-Power Sprayer: For medium/large jobs. Includes 1.0 mm needle/tip set. Volume should be set between low and medium to create a fine mist. Keep turbine in a well-ventilated area as far removed from the spray area as possible. The volume adjustment dial should be approximately 25% open. For more information see: <http://www.earlex.co.uk/pdf/hv2900-3500-3900-5900.pdf>

HVLP Spray Gun. For medium/large jobs. Use Warwick 881H or similar, 1.7 mm needle/nozzle set. Use air compressor capable of delivering 13 CFM with an inlet pressure of at least 43 psi. Use plenty of hose or pipe to allow compressed air to sufficiently cool to ambient temperature. Use of an inline moisture trap close to spray gun is strongly recommended. Adjust line pressure to 40-45 psi. Adjust working pressure (half-trigger pull) to 24-28 psi. Perform test spray with xylene. Adjust air volume such that the dial is fully open. Adjust fluid tip at back of gun as well as spray pattern. With nozzle 8-16 inches from a test surface, fully squeeze trigger and look for even, uniform pattern. Adjust fluid tip and spray pattern until proper spray pattern is found. Discard excess xylene in a hazardous waste container. For more information see: <http://www.warwick-sprayguns.com/PDF/UM/827HF8881H.pdf>

Airbrush. For small jobs. Use Iwata NEO BCN or similar, tip size ≥ 0.5 mm. Use plenty of hose to allow compressed air to sufficiently cool to ambient temperature. Use of an inline moisture trap close to spray gun is strongly recommended. Working pressure generally varies between 10 and 60 psi, depending on what type of work is being done. A good working pressure may be approximately 15-25 psi. The desired spray characteristics will also affect the optimal pressure. Perform test spray with xylene. Discard excess xylene in a hazardous waste container. For more information see: http://www.iwata-medea.com/wp-content/uploads/legacy/iwata-pdf/NEO%20IM-Long_REV2.pdf

See specific sprayer manufacturer instructions for safe and proper usage.

Spreading Rate (coverage) per gallon (3.8 L) of top and bottom coat: approximately 250 ft² (23 m²) at 0.5 mils (13 μ m); varies per application method.

Application: Surface Preparation: Remove all oil, grease, dust, dirt, loose rust, and other foreign materials to ensure adequate adhesion of bottom coat. Use heavy-duty Scotch-Brite® or 320-800 grit sandpaper for enhanced surface adhesion on smooth surfaces. Porous surfaces may require more bottom coat than top coat.

Step 1: Bottom Coat - Mix bottom coat for at least 5-10 minutes in order to thoroughly and evenly distribute the solids that may have settled. Less mixing may produce unreliable results. Fill fluid cup on the sprayer between 1/3 and 2/3 full. Maintain some agitation by swirling (not shaking) the fluid cup between passes. Do not swirl the fluid cup during application in order to maintain a steady spray. Apply multiple thin coats to obtain a wet thickness of approximately 1.5 – 3.0 mils (38 - 75 μ m). This will form a dry film thickness of 0.5 – 1.0 mils (13 – 25 μ m). Avoid pooling. Allow at least 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.

Step 2: Top Coat - Use a clean sprayer for top coat. If the bottom coat sprayer is used for top coat, it must be thoroughly cleaned with xylene and allowed to dry. Mix the top coat for at least 3-5 minutes. Less mixing may produce unreliable results. Apply the top coat using the same method and guidelines described for the bottom coat. Apply multiple thin and uniform coats. Avoid pooling. As the top coat dries, it will become hazy in appearance.

Step 3: Drying/Curing of System - 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.

The bottom coat will continue to dry even after the top coat is applied. Dry time is dependent upon how much bottom and top coat is applied, as well as upon ambient temperature and humidity, and thus it may be longer than listed above. Thorough drying is especially important for applications involving liquids other than water.

Cleanup: Pour the remaining Ultra-Ever Dry back into the original container. Use xylene to clean spray equipment and tools immediately after use. See sprayer manufacturer instructions for complete cleaning details. Failure to properly clean sprayers can result in damaged or clogged equipment. Dispose of cleaning materials according to local regulations.

Ultra-Mini Sprayer: Clean the Ultra-Mini Sprayer by spraying a small amount of xylene into a rag or hazardous waste container. Unscrew the power unit from the glass jar, and backflow the sprayer by placing one finger over the spray nozzle and pressing the spray button. The dip tube should now be clean.

Ultra-Power Sprayer: Clean the Ultra-Power Sprayer by spraying a small amount of xylene into a rag or hazardous waste container. Take the spray gun apart and clean the gasket, nozzle assembly, tip and needle with xylene. The smaller parts can be placed in the jar and allowed to soak in xylene for a minute or two. Allow these parts to dry completely before reassembling the spray gun. Wipe the gun, jar, threads and other areas with xylene to avoid build-up of bottom or top coat.

HVLP: Once you have finished applying Ultra-Ever Dry, disconnect the air supply from the gun. Pour the remaining Ultra-Ever Dry back into the original container. Pour a small amount of xylene into the spray cup. With the air disconnected, pull the trigger and let the xylene flow out of the nozzle into a hazardous waste container for a few seconds. Reconnect the compressed air line to the spray gun and spray a small amount of xylene into a rag or hazardous waste container. Using the remaining xylene in the spray cup, wipe the cup out with a rag. Use the rag to wipe the air nozzle and the outside of the gun. Remove the air cap and wipe the fluid tip with the rag. With the air cap and fluid cup disconnected from the spray gun, perform a visual inspection to ensure the gun is clean.

Airbrush: Pour a small amount of xylene into the fluid cup and spray it into a rag or hazardous waste container. Release the needle, pull it back, and remove the air cap. Using a folded corner of the rag wetted with xylene, clean the air cap and check to ensure no material remains there. Run the airbrush dry. Use the rag to clean the outside of the airbrush. Disconnect the fluid cup and allow it to dry.

Care and Repair: Ultra-Ever Dry® is a durable coating that exhibits superhydrophobicity and some oleophobicity. After curing, the coatings will repel water mixtures and some oils. Cleaning of the surface should be performed using low pressure water spray (less than 30 psi or typical garden hose pressure). The surface should demonstrate self-cleaning properties under these conditions. Dust and dirt should rinse off easily. The surface will remain completely dry. The surface will lose its properties if treated with detergents, soap, some solvents or high pressure water. Due to the natural oils in the skin, excessive handling with bare hands of treated materials can cause a reduction in performance as can significant abrasion.

DANGER: EXTREMELY FLAMMABLE. Do not spray near sparks, heat, or open flames. Vapors will accumulate readily and may ignite explosively. Keep area ventilated during use and until all vapors are gone. DO NOT SMOKE WHILE USING. Turn off stoves, electric tools, and appliances, and any other sources of ignition. Only mix with equipment designed for flammable liquids.

Avoid prolonged exposure to sunlight or heat from radiators, stoves, hot water, and other heat sources. Exposure to temperatures above 120 °F may cause container to burst and cause injury. Do not puncture, incinerate, or place container in trash compactor. Care should be taken not to store container in automobiles or trunks of automobiles when interior temperatures may exceed 120 °F.

VAPOR HARMFUL. Use with adequate ventilation. Avoid continuous breathing of vapor and spray mist. To avoid breathing vapors or spray mist, open windows and doors or use other means to ensure fresh air entry during application and drying. If you experience eye watering, headaches, or dizziness, increase fresh air or leave the area. Avoid contact with skin and eyes. Refer to Safety Data Sheet for complete safety and health information.

FIRST AID: In case of eye contact, flush thoroughly with plenty of water for 15 minutes and get medical attention. For skin contact, wash thoroughly with soap and water. In case of respiratory difficulty, provide fresh air and call physician. If swallowed, get medical assistance immediately.

NOTICE: Reports have associated repeated and prolonged occupational overexposures to solvents with permanent brain and nervous system damage.

INTENTIONAL MISUSE BY DELIBERATELY CONCENTRATING AND INHALING THE CONTENTS MAY BE HARMFUL OR FATAL.

TOP COAT CONTAINS: Acetone (CAS 67-64-1), Silica (CAS 112945-52-5), Proprietary Additives.

BOTTOM COAT CONTAINS: Xylenes (CAS 1330-20-7), t-Butyl Acetate (CAS 540-88-5), Acetone (CAS 67-64-1), Proprietary Polymers, Proprietary Additives.



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