

1. Scope

This guide provides step-by-step instructions for applying APW100 topcoat on aircraft and ground support equipment surfaces. APW100 can be applied directly to aluminum, or over existing primer/topcoat systems.

2. Materials & Supplies

Below is a recommended list of supplies.

- Alkaline cleaning solutions (Simple Green Extreme or equivalent)
- Abrasive cleaning pad (Scotch-Brite 7447 or equivalent)
- Lint-free cloth
- High Volume Low Pressure (HVL) Spray Gun
- Brush and/or Roller
- Mixing cups, strainers, stir sticks
- Wet and dry film thickness gauge

3. Surface Cleaning & Preparation

Step 1. Mix an approved cleaning solution diluted with clean potable water.

Note: When available, Oceanit recommends clean non-chlorinated potable water, distilled, or deionized water to ensure proper surface preparation prior to AeroPel application.

Step 2. Using lint-free cloth, remove visible dirt, oil, and grease from the surface.

Step 3. Use abrasive pad and alkaline cleaning solution to achieve a rough surface.

Step 4. Rinse with clean water. Let the surface dry and perform a water-break free test.

Note: Water break condition is determined as follows:

- Pass: Water does not bead on surface after 30 seconds of wetting, water should spread out and flow off surface as a continuous sheet
- Fail: Water beads on the surface within 30 seconds of wetting

Repeat step 3 until the water-break free condition is achieved.

Step 5. Wipe excess water with a lint-free cloth and allow the surface, including seams and joints, to dry completely.

Step 6. Verify cleanliness using a wipe test with a clean, white lint-free cloth. Inspect the surface for any visible residue (e.g., dirt, dust, mildew, or rust). If risk of salt contamination on the surface is present, perform a soluble salts test in accordance with ISO 8502-6. The surface is considered clean when soluble salt levels are below $5 \mu\text{g}/\text{cm}^2$ or $70 \mu\text{S}/\text{cm}$.

4. Coating Application

Mixing: If mixing the entire kit volume, pour entirety of Part B into the Part A container. Otherwise, combine Part A and Part B in a 30:1 volume ratio.

- For 5-gallon kits, mix for 15 minutes.
- For 1-gallon kits, mix for 10 minutes.
- For 1-quart kits, mix for 5 minutes.

Mix thoroughly and pass it through a paint strainer before spraying to remove debris and bubbles.

Pot life: APW100 has a pot life of 24 hours at 77 °F (25 °C) when stored in an enclosed container.

Coating Thickness: The final dry film thickness (DFT) for APW100 should range between 1 to 2 mils. The wet film thickness (WFT) for each coat should range between 3 to 5 mils.

HVLP Spray: Use HVLP spray equipment and follow the manufacturer's recommended settings to achieve a smooth and even spray pattern. Apply each stroke with 50% overlap and apply two coats in a crosshatch pattern for 100% coverage.

Brush/Roller: Recommended for touch-up, stripe coating, or hard to reach areas. Use foam brush or short-nap roller. Apply evenly to avoid bubbles.

5. Drying & Inspection

Dry to touch: Let each coat dry for at least 60 mins at 77°F (25°C), or until coating is no longer tacky, before applying the following coat.

Full cure: The coating will be cured to service after 24 hours at 77°F (25°C) and a humidity below 65%. Applications at lower temperatures or higher humidities may require longer curing periods.

Inspection: As necessary, verify dry film thickness using a DFT gauge.

6. Removability

Utilize an abrasive cleaning pad (Scotch-Brite 7447 or equivalent) with 70% isopropyl alcohol or acetone to remove APW100. Gently abrade surface in a small circle until substrate is exposed. Continue rewetting the surface with 70% IPA as necessary.

7. Safety & Cleanup

No personal respiratory protective equipment is required if appropriate engineering controls are utilized. In case of insufficient ventilation, utilize a standard NIOSH approved filtered mask such as a P95 mask when applying via HVLP Spray. Small quantities of fully mixed residual coating may be left to air dry and solidify. Dispose of fully cured and dried material as regular solid waste. Dispose of expired or waste solvent and raw materials per local environmental regulations.