



INSTRUCTIONS

Labsphere's 6080 Coating



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Labsphere 6080 Coating may be used wherever a high reflectance coating is needed. The coating may be applied to metallic and most plastic surfaces with proper surface preparation. The coating exhibits very high reflectance over a wide wavelength range, is non-luminescent, and is nearly perfectly lambertian if properly applied.

Additional Equipment Needed

The following items are/may be needed to aid in preparation/application of WRC-680

White Reflectance Coating:

- ~ Spectrophotometric grade ethanol
- ~ distilled water
- ~ detergent
- ~ masking tape or similar
- ~ airless sprayer
- ~ airbrush
- ~ razor blade or razor knife

Storage

Store coating sealed in original container at room temperature (15° - 30° C). The coating is delivered packed under a nitrogen atmosphere to enhance shelf life. Low temperatures (below 10° C) may cause the coating to gel or separate. After use, the coating should be stored sealed in the original container. Storing under a nitrogen atmosphere should prolong shelf life.

Coating Preparation

Thoroughly stir the coating immediately before application. The coating should be creamy and without lumps or agglomerations. For proper application, the coating should have a Wagner cup viscosity between 13 and 15. If the coating is too viscous, it may be thinned by dilution. To dilute, prepare a solution of 50/50 (vol./vol.) spectrophotometric grade ethanol/distilled water. Slowly add a small aliquot of the ethanol/water solution to the WRC-680 in a thin stream with constant stirring.

NOTE: The use of certain denatured alcohols may cause a reduction in the UV reflectance of the coating.

Surface Preparation

Surfaces must be free of grease, oil, or mold release agents before application. This can usually be accomplished by washing in hot water and detergent, rinsing thoroughly with hot water, and wiping with ethanol. Sandblasting or otherwise roughening the surface aids in adherence. Primer is not recommended for end-use temperatures $\geq 70^{\circ}$ C, as it may degrade the coating performance. All areas that do not require coating should be masked, although clean-up of overspray may be removed with a cotton swab moistened with distilled water.

Spraying Equipment

The choice of proper spraying equipment is crucial for proper application of coatings. A siphon feed or gravity feed HVLP spray gun is used for large-scale applications while an airbrush may be used for smaller items. Minor touch-ups may also be done with a small paint brush. Spray equipment should be free from contaminants such as oil and grease. The reservoir should be stainless steel, glass or aluminum.

Application

A number of lighter base coats should be applied, the subsequent coats should be heavier. Allow sufficient drying time between coats until the coating no longer gleams due to solvent remaining in the applied layer. Examine the previous coat carefully to assure it is no longer wet before applying the next coat. Applying while the previous coat is still wet may cause bubbling.

Apply coating until a thickness of 16-24 mils (0.4-0.6 mm) is reached. Additional thickness beyond 24 mils does not increase the reflectance.

Allow the coating to dry thoroughly, then contour edges where necessary with a razor blade or razor knife. Clean the spray equipment with water and ethanol. Allow the equipment to dry thoroughly before next use.

Notice

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