



MIL-C-83231A AMS-C-83231

COATINGS,
POLYURETHANE
RAIN EROSION RESISTANT,
FOR AIRCRAFT

TECHNICAL PRODUCT BULLETIN

PRODUCT DESCRIPTION AND USES

MIL-C-83231A Rain Erosion Resistant Polyurethane Coatings are intended for use on high-speed aircraft and missiles for protection from rain erosion while in flight. The type II class of these coatings contain anti-static properties which discharge and dissipate static electricity, alleviating radio and radar interferences.

This product is furnished as a kit which consists of primer, primer activator, rain erosion coating with appropriate activator if Class A, anti-static coating with appropriate activator if Class A and thinner which is used to reduce viscosity and clean-up.

Class B coatings are single component polyurethanes which cure by atmospheric moisture and do not require separate activators.

Type I coatings of both classes do not contain the antistatic coatings. Only Type II contains the antistatic coating as part of the kit.

This product has excellent flexibility and the fully cured coating is resistance to water, fuel and most petroleum products.

PRODUCT DATA

VOC Content:
3.5 pounds/gal; 420 grams/liter

Type of Material:
Polyurethane based finish

Weight Solids:
Varies according to component

Estimated Coverage:
Approximately 80 square feet per kit

Recommended Film Thickness:
See application instructions

Method of Application:
Spray, brush, or roll

Number of Coats:
One or two as required

Thinner and Clean Up Solvent:
Thinner enclosed in kit

Shelf Life:
1 year from DOM @ 75°F

Pot Life:
4 hours at 75° F.

Dry Time: **See application instructions**

Flash Point:
68° F. (20° C)

Color and Gloss:
Black; gloss or flat

Mixing Ratio:
See application instructions

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DIRECTIONS FOR USE

DIRECTIONS FOR USE:

This kit consists of multiple components:

2 pints primer (1 pint of base and 1 pint of catalyst). This product is mixed 1 to 1 by volume (equal volumes) before use. After mixing, wait 30 minutes before using.

1 gallon kit of Rain Erosion Resistant Coating. There is a gallon can containing 3/4 gallon of the base and a quart of the activator. This product is mixed 3 to 1 by volume before use. Wait 15 minutes after mixing before using.

1 quart kit of Antistatic Coating. There is a quart can which is 3/4 filled with the base and a 1/2 pint can of the activator. This is mixed in a ratio of 3 to 1 by volume before use. Wait 15 minutes before use.

2 quart containers of thinner which are to be used as needed for thinning and clean up.

Activators for the Rain Erosion Coating and the Antistatic Coating are only supplied for Class A coatings. Class B coatings do not use the activator and are ready to use as soon as properly mixed.

All surfaces subject to application must be thoroughly cleaned. The mixed primer should be applied to a clean, dry substrate at a thickness of 1-2 mils (25-50 microns dry.)

The Rain Erosion Coating should be completely mixed by adding the quart to the short filled gallon can. This coating should be applied as soon as the primer is tacky for best adhesion. Apply in as many coats as necessary to achieve 9-11 mils (225-275 microns) dry film thickness. Apply each coat which the succeeding coat is still tacky.

The Antistatic Coating is the last coat. Add the 1/2 pint catalyst (activator) to the short filled quart and thoroughly mix. Apply one coat only since this coat cannot be recoated without sanding to achieve a proper profile for adhesion.

Allow 5 days to totally cure.

Do not apply at any time when the temperature is lower than 45° F. or if the dew point is within 5° F. of the surface temperature.

Store between 30° F. and 110° F.

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