

18 Series Mar Resistant Rotor Blade Polyurethane Topcoat

Product description

Chemically cured, PTFE filled polyurethane topcoat intended for mar-resistant coating applied on aluminum or composite rotor blade surfaces. When used over properly applied Military primer, it provides excellent protection of rain erosion.

- Resistant to hydraulic fluids, lubricating oils, JP-5 fuel, humidity and water
- Compatible with many types of spray equipment

Components



Mix ratio (by volume)

- | | |
|-------------------------------|---------|
| • 18 Series (Base component) | 3 parts |
| • 18CAT (Activator component) | 1 part |

Specifications



18 Series PTFE Filled Polyurethane Topcoats are qualified to the following material specifications:

- 299-947-494

Note: PPG Aerospace recommends you check the most recent specification QPLs for updated information.

Product Compatibility:

18 Series PTFE Filled Polyurethane Topcoats are compatible with the following primer specifications:

- MIL-PRF-85582

Surface preparation and pretreatments



18 Series topcoats can be applied properly on cleaned composite or aluminum surfaces that have been primed with epoxy primer coating. Refer to the technical data sheet for the above mentioned primer.

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Instructions for use



Mixing Instructions:

Thoroughly stir or mechanically shake the base component (Part A) for at least 10 minutes before combining to ensure all solids are completely dispersed. Add one volume of catalyst component (Part B) to three volumes of base component (Part A). Do not use the catalyst component (Part B) from another color. Mix by hand stirring, paint shaker or mechanical mixing to ensure the base/catalyst mixture is homogeneous. Do not shake or mechanically mix the admixed material for longer than 10 minutes.

Note: It is important to condition the paint for 24 hours prior to mixing by placing all materials in the shop or hangar, with ambient temperatures between 13° and 35°C (55° to 95°F). The minimum temperature of the paint components should be 13°C (55°F) prior to mixing.



Induction time:

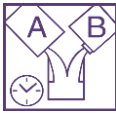
Not Required



Viscosity: (23°C/73°F)

- #4 Ford cup 30 seconds maximum

Note: Viscosities quoted are typical values obtained when using specified mix ratio.



Pot life: 4 hours @ 21 - 25°C (70 - 77°F)

- #4 Ford cup 60 seconds maximum

Application guidelines

Recommended application conditions:

Temperature 15 - 32°C (60 - 90°F)

Relative Humidity 20 - 80%

Application:

Coating may be applied over properly cleaned composite or aluminum surfaces primed with epoxy primer coatings. Apply the topcoat at a total dry film thickness of 1.7 - 2.3 mils. Conventional, Air, Air Assisted Airless, HVLP, Electrostatic spray equipment may be used to apply this material.

These application guidelines represent PPG's best advice in standard conditions. Some parameters will be influenced by environmental conditions, equipment settings, and other variables.

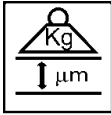
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Theoretical coverage:

20.0 – 20.6 square meters/liter at 25 microns dry film (689 – 790 square feet/gallon at 1 mil dry film)

Recommended dry film thickness; 42 to 58 microns (1.7 to 2.3 mils)



Dry film density:

1.47 - 1.98 grams/cubic centimeter (12.27 - 16.55 pounds/gallon)

Dry film weight:

37.35 – 50.38 grams/square meter at 25 microns dry film (0.00765 - 0.010318 pounds/square foot at 1 mil dry film)



Equipment:

18 Series topcoats are compatible with all current forms of spray equipment.

Equipment Type	Tip Size	Pot Pressure	Atomization Pressure at the Cap
Electrostatic Air Spray Gun	1.2 mm or 1.5 mm	10 to 20 psi (0.69 to 1.4 bar)	45 to 60 psi (3.1 to 4.1 bar)
Electrostatic Air Assisted Airless Spray Gun	#611 or #613 (Graco Nomenclature)	700 to 1200 psi (48 to 82 bar)	40 to 60 psi (2.8 to 4.1 bar)
High Volume Low Pressure Spray Gun (HVLP)	1.0 mm to 1.4 mm	10 to 20 psi (0.69 to 1.4 bar)	10 psi maximum (0.69 bar)
Conventional Air Spray Gun	1.2 mm to 1.8 mm	10 to 20 psi (0.69 to 1.4 bar)	45 to 60 psi (3.1 to 4.1 bar)

Equipment cleaning:

Clean spray equipment as soon as possible after use. Flush spray equipment with IS-213 Polyurethane Reducer (MIL-T-81772 Type I) DeSoto® CN20, DeSoto® CN44, or Desoclean™ 45 high performance solvent cleaner. Once material is fully cured, use an approved chemical paint removal system to strip off coating.

Physical properties (product)



Color: Available in limited colors.

18BK006 - 37038 Camouflage Black
18BL001 - 35237 Camouflage Blue
18GN004 - 34088 Camouflage Olive Drab
18GY032 - 36375 Camouflage Gray
18OR005 - 14278 Semi-Gloss Orange
18W010 - 27925 Semi-Gloss White
18W011 - 37875 Camouflage White

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Gloss: Semi-Gloss: 15 – 45 G.U. at 60°
Camouflage: 7 –14 G.U. at 60°



Dry times	22 - 28°C (71 - 84°F)
Set to touch	6 hours maximum
Dry to tape	12 hours maximum
Dry hard	12 hours maximum
Full cure	14 days

Forced Dry Schedule: For dry to stack conditions only. Allow a minimum of 30 minutes flash off time at ambient temperatures* prior to exposing painted parts to high temperatures. Complete testing should be done prior to use. Below are suggested starting points. Other variables may affect these cure schedules.

Note: Ambient temperatures are defined as 75° ± 10°F and local standard relative humidity.

Note: The cure rates are not affected by humidity.



VOC:

Mixed, ready to use VOC (EPA method 24) for all colors is < 420 grams/liter.



Flash point closed cup:

Base component	23 – 67°F
Activator component	76 –136°F

Shelf life:

12 months from date of manufacture to most OEM material specifications. Consult the specification to verify shelf life requirements.

Note: Shelf life is provided for original, unopened containers.

Note: The application and performance property values above are typical for the material, but not intended for use in specifications or for acceptance inspection criteria because of variations in testing methods, conditions and configurations.

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Storage recommendations



Inspect the condition of the container to ensure compliance. The material should be stored at temperatures between 5°C to 35°C (41°F to 95°F) to ensure shelf life.

Note: When procuring to a qualified material specification, follow those storage instructions.

Health precautions

This product is safe to use and apply when recommended precautions are followed. Before using this product, read and understand the Safety Data Sheet (SDS), which provides information on health, physical and environmental hazards, handling precautions and first aid recommendations. An SDS is available on request. Avoid overexposure. Obtain medical care in case of extreme overexposure.

For industrial use only. Keep away from children.

Additional information can be found at: www.ppgaerospace.com

For sales and ordering information call the local PPG office at the numbers listed below:

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ASC – Australia

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Issue Date: 11/18
Lit: 4621