

Technical Data Sheet

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Description

Gentoo F-16 is a durable, thin, hydrophobic coating designed to decrease the water pooling issues observed with F-16 canopies when landing in inclement weather. Gentoo F-16 exhibits excellent abrasion resistance, high water shedding capabilities and optical transparency.

Features

Initial % Solids = 16.5%
After Dilution % Solids = 8.8%
Coating thickness: 2.5-3.5 μm
Room temperature and elevated cure after completion of coating stack-up
Tack free after 10 minutes

Pot life - Use within 8 hours of mixing.

Solution will gel completely after a few days if stored in closed container. Solution will gel faster with open container and/or heat applied.

Surface Preparation

Gentoo F-16 coating should be applied 30 min after room temperature flash of the Gentoo F-16 Primer, which should have been applied after a 60 min room temperature flash of the PPG Texas C992 polyurethane coating system.

Handling Precautions

Parts A and B are flammable. Do not handle or use until the material Safety Data Sheets have been read and understood. Use appropriate PPE and engineering controls. Apply in a well-ventilated area. Avoid contact with skin and eyes.

Mixing

1. Shake Part A and Part B well, prior to mixing.
2. Part A and Part B are mixed in a 1:1 ratio by weight. The Gentoo F-16 Part A and Part B quart kits are filled to 810 g, respectively. Slowly, add Part B to Part A. GENTLY mix solution with a magnetic stirrer bar in plastic container, slow overhead mixer or hand stir for a minimum of 5 minutes. DO NOT ROLL SOLUTION TO MIX.

If magnetic stirrer bar is used, stirring can continue throughout 2.5 hour hydrolysis time.

COVER SOLUTION WITH A LID TO PREVENT SOLVENT LOSS.

Quart Kits, as received

Gentoo F-16	<u>Mix Ratio</u>	<u>Part A</u>	<u>Part B</u>
	By Weight	1 quart	1 quart

- Gentoo F-16 mixture must sit or be mixed for minimum of 2.5 hours for solution to hydrolyze. Maximum mixing time, prior to thindown, is 4.5 hours. MIXTURE MUST HYDROLYZE PRIOR TO THINDOWN. Cover the mixture to prevent solvent loss during stirring.
- Dilution of Gentoo F-16 Mixture: After hydrolysis is complete, the Gentoo F-16 mixed solution must be diluted from 16.5% to 8.8% solids. For every production quart kit, 1418 g of Isopropyl alcohol (IPA) must be added SLOWLY to the Gentoo F-16 Mixture (1 quart Part A + 1 quart Part B). Mix GENTLY with stirrer bar, overhead mixer or by hand for a minimum of 10 minutes.

DILUTION SHOULD OCCUR A MINIMUM OF 2.5 HOURS AFTER LUNA RR2 PART A and PART B MIXED.

Quart Kits, Dilution Ratio for PPG Texas Application

Gentoo F-16 Dilution	<u>Mix Ratio</u>	<u>Gentoo F-16 Mixture</u>	<u>Isopropyl Alcohol (IPA)</u>
	By Weight	1 quart Part A + 1 quart Part B	1,418 g

- Diluted Gentoo F-16 solution can be transferred to the solution application tank and begin circulating. The diluted Gentoo F-16 solution must be used within 8 hours of initial mixing, or properly disposed of.

A Gentoo F-16 coating designated application tank must be used. Wipe with IPA prior to use. All lines from tank to coating head must be new.

Recommended long-term storage temperature is less than 75°F. Refrigerated storage of Part A is highly recommended.

Coating Instructions

Using the applicator tank, coat the canopy with the diluted Gentoo F-16 solution after allowing a 30 min room temperature flash of the Gentoo F-16 Primer. Typical coating thickness is 2-3.5 µm.

Curing

Initial Room Temperature Flash - allow the coating to flash off excess solvent for 30 min at room temperature before moving to an oven for the elevated cure cycle.

Elevated Temperature Cure Cycle - 0.5 h at 150°F

2 h at 250°F

20 h at 185°F

Remove canopy from oven and allow to cool for 20-30 min or until canopy temperature is close to room temperature.

Follow refurbishment procedure to finalize coating. 2h at 185°F cure following refurbishment finalizes the canopy cure cycle.

Storage and Waste Disposal

The expected shelf life of Parts A and B is 24 months from the date of production when stored unopened in the original containers at room temperature. Use the mixed Gentoo F-16 within 8 hours. Cured material should be safe for disposal, but check with local, state, and federal legislation of waste disposal.

Part A is stored under nitrogen purge, as it is very sensitive to moisture. Part A CANNOT be opened and resealed, unless an inert gas is used to purge the headspace. If Part A is opened, it must be either 1) resealed with an inert gas blanket (nitrogen, argon), 2) used within 24 hours or 3) disposed of.

Clean Up

If possible, do not allow solution to dry or gel in mixing equipment. IPA should be used to clean out the tank and flush tubing used for Gentoo F-16 Coating application to canopy. Dispose of waste IPA following normal local, state, and federal legislation of waste disposal.

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