PRODUCT DATA SHEET

PT-799 POLYURETHANE TOPCOAT

PTI POLYURETHANE SERIES

DESCRIPTION

PT-799 Polyurethane are high performance, two component polyurethane topcoats designed for exterior use on high performance general aviation, business jet, and commercial aircraft. This high performance coating is also used widely for industrial, oil & gas as well as original equipment manufacturing. PT-799 Polyurethane meets, and exceeds MIL-PRF-85285D/E Type I, II & VI Class H. These high performance coatings have excellent resistance to hydraulic jet fluid, fuel, crude oil, impact, salt and ultraviolet rays. PT-799 Polyurethane is extremely durable with excellent color and gloss retention.

- **PT-799Conductive** black is also available. It is formulated as an electrically conductive paint which can be used for coating and sealing non-metallic surfaces by brushing or spraying. The Conductive Coating is intended for use where an electrostatic discharge path is required for electrical continuity on non-metallic substrates.

COLORS

This coating can be provided in **any color & gloss range** as designated by the Federal Standard 595C. Custom colors are also available.

COATING PROPERTIES & CHARACTERISTICS

Mix Ratio, by volume	1 part Base to 1 part Catalyst
Reducer	PT-1003 Type I
Recommended Dry Film Thickness	1 mil
Hardness	Pencil Hardness – 5H
Flexibility	¼ " Mandrel – Passes
Salt Spray	1000 + Hours
Admixed Viscosity	15 seconds, max #4 Ford
Admixed Weight per Gallon	10.2 lbs.
Admixed Solids By Weight	65%
Theoretical Coverage	600- 800 sq. ft.²/gal.
Pot Life	4 hours
Coatings VOC	340 g/L

SHELF LIFE

Shelf life is only applicable for materials stored in unopened and undamaged original factory filled containers.
1 year when stored between 50°-85° Fahrenheit.

WEATHER & CHEMICAL RESISTANCE PROPERTIES

Salt Spray per ASTM B117 (corrosion)	1000+ hours
Humidity (Filiform)	1000+ hours
Lubricating Oil Conforms to MIL-L-23699	24 hrs. at 250° F
Hydraulic Fluid Conforms to MIL-H-5606/MIL-H-83282	24 hrs. at 150° F
JP-5 Jet Fuel Conforms to MIL-T-5625	7 Days at Room Temperature
Skydrol 500B Conforms to MIL-C-83286B	7 Days at Room Temperature

Methyl Ethyl Ketone soaked cloth 100+ rubs	Passes
DS2 [1,5-Dichloropentane]	Passes
The Chemicals listed below were tested at:	**1 drop per day for five (5) days:**
Phosphoric Acid [10%]	Passes
Isopropanol [99%]	Passes
Acetone	Passes
Ethanol [99%]	Passes
Triton X-100	Passes

MIXING INSTRUCTIONS

Shake component A in a paint shaker for 5 – 10 minutes for optimal results.
Admix by volume:

1 Part Component A (Base)

1 Part Component B (Catalyst)

Add the Catalyst into the Base.
Admixed material should be allowed a 15-minute induction time for best application results.

Reduce: Use reducer PT-1003 Type I, 10% by volume.

- If using PTI additives to adjust the dry and cure times of the coating, please refer to those Product Data Sheets for specific instructions for admixing the material.

APPLICATION

This product can be applied using conventional air spray equipment, HVLP spray system. Please consult with a PTI representative for specific equipment recommendations and settings.

1. Make sure pots, guns, and lines are purged and cleaned.
2. Mix both base and catalyst thoroughly and filter/strain before spray application.
   NOTE: It is not recommended to strain flat/matte coatings.
3. HVLP Spray Pressure: 7-10psi. Convention Equipment Spray Pressure 15-30psi
4. Always air-blow and tack wipe the surfaces to be painted. Aircraft should be grounded to prevent static.
5. Best application results: apply 3 coats: 1 fog/tack coat & 2 full coats from 0.6 – 1 mil thickness.
6. Do not allow more than 48 hours to pass before applying the second coat.
7. Recommended Dry Film Thickness is 1-2 mils. Some colors may require thicker films to achieve hiding.
8. For wet sanding or buffing of coating, wait a minimum of 13 hours but not more than 26 hours.
   NOTE: If paint is allowed to cure for more than 48 hours wet sanding and buffing is not possible.

NOTE: Application of PTI products requires the use of all OSHA approved safety equipment, including proper ventilation. Additionally, PTI products require the recommended temperature/humidity conditions and film thickness ranges for optimal performance. The material, hangar, and aircraft skin temperatures should be no lower than 75° F / 25° C before, during and after application.

PRODUCT DATA SHEET

DRYING & CURING SCHEDULE

Dry times are based on the dry film thickness between 1-2 mils (25-50 microns).

Air Dry Times (75°F / 25°C and 50% Relative Humidity)

Set to Touch
6 hours

Dry Hard
12-15 hours

Recoat Time:

1 hour or tack dry. You can recoat without sanding up to 72 hours after application.

Accelerated (Using PTI PolyKick™)
30 minutes – 1 hour (see PolyKick™ Data Sheet)

Full chemical cure requires 7 days minimum.

Force Dry Times: 15 minute air dry before placing the painted part in the oven. Full chemical cure requires 2 hours at 225°F after the coating has dried hard.

EQUIPMENT CLEANUP

Use clean PT-1003 Type I Reducer. Do not allow material to dry or cure inside any equipment.

HEALTH, SAFETY, & STORAGE REQUIREMENTS

Refer to each individual material SDS (Safety Data Sheet) for specific requirements on the health, safety, storage and handling requirements. Follow all local, state, and national regulations during surface preparation, material application and cleanup.

PRODUCT INFORMATION & DISCLAIMER

Product Data Sheets are periodically updated to reflect new information. It is important to use the latest and most recent revision for the product being used. The foregoing information is accurate to the best of our knowledge. However, due to differences in customer handling, use and method of application which are not known and are beyond our control, Products Techniques, Inc. makes no warranties as to the end result.