

## PRODUCT DATA SHEET

### PT-750 POLYURETHANE PTI POLYURETHANE SERIES

#### DESCRIPTION

**PT-750 Polyurethane** is a durable and economical two component polyurethane protective coating system which can be applied to any material capable of being coated such as metal, cement, wood and synthetic materials. PT-750 can be filled with PTFE for added abrasion properties. For circuit board inspection, a UV Dye can be added (PT-750-1). Other typical uses include:

- Aerospace/Aviation:** Aircraft and aircraft parts (commercial and military), material handling equipment, electronic cabinets, electronic circuit boards.
- Chemical Industry:** Pipes, valves, pumps, tanks, fertilizer tanks.
- Industrial:** Use for maintenance on floors, walls, equipment, clean rooms plating tanks and other applications.
- Marine:** Decks, holds, tanks, machinery buoys.
- Recreation:** All recreation and playground equipment.

#### 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	3 part Base to 1 part Catalyst
Reducer	PT-1003 Type I & PT-1004
Recommended Dry Film Thickness	1 mil
Pencil Hardness	4h to 8h
Flexibility – 1/8 <sup>th</sup> Mandrel 0.125al	No Cracking or Flaking
Impact – 1lb. Ball Dropped 6ft	No Cracking or Chipping
Taber Abrasion	1000 cycles/mil, CS-17 wheel
Temperature Range	-65°F to 450°F
Theoretical Coverage	800 sq. ft./gal.
Pot Life	8-12 hours
Specifications	MIL-C-27227 & Clear meets MIL-C-83019

#### RESISTANCE PROPERTIES

ASTM Salt Spray	No effect	Salt water
Lactic Acid	No effect	Hydrochloric Acid 10% 50%
Oxalic Acid	No effect	Sulfuric Acid 10%
Stearic Acid	No effect	Nitric Acid 10%
Acetic Acid	No effect	Chromic Acid 10%
Ammonium Hydroxide (15%)	No effect	Sodium Hydroxide 15%
Aluminum Sulfate	No effect	Sodium Carbonate

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Calcium Chloride	No effect	Sodium Nitrate
Chlorinate Solvent	No effect	Jet Fuels
Aromatic Hydrocarbon	No effect	Benzene Reagents
Aliphatic Hydrocarbon	No effect	Heptane
Esters	No effect	Vegetable oils
Synthetic lubricants	No effect	Fatty Acids
Skydrol #500	No effect	Skydrol 7000

**Note:** The chemical and solvent resistance immersion tests were tested on the 750 series with 2mil film over .3mil wash primer on bonderized steel.

### INCIPIENT SURFACE CHANGE

SOLUTION TESTED	SURFACE CHANGES	NATURE OF CHANGE
Tap Water & Sea Water	Exceeds 24 Months	None
Common Salt (30%)	Exceeds 24 Months	None
Hydrochloric Acid 10%	Exceeds 11 Months	Small Blisters
Hydrochloric Acid 37%	Exceeds 18 hours	None
Sulfuric Acid 5%	Exceeds 24 Months	None
Sulfuric Acid 10-20%	Exceeds 20 Months	None
Sulfuric Acid 30%	Exceeds 15 months	Small Blisters
Sulfuric Acid 50%	Exceeds 7 Months	Small Blisters
Citric Acid	Exceeds 24 months	None
Oleic Acid	Exceeds 24 Months	None
Gasoline	Exceeds 24 months	None
Toluene	Exceeds 24 months	None
Xylene	Exceeds 24 Months	None
Methanol 99%	Exceeds 24 months	None
Ethanol 15-99%	Exceeds 24 Months	None
Butanol	Exceeds 24 months	None
Ethyl Acetate	Exceeds 24 months	None
Butyl Acetate	Exceeds 24 Months	None
Acetone	Exceeds 2 Months	Softening
Methyl Ethyl Ketone	Exceeds 2 Months	softening
Methyl Isobutyl Ketone	Exceeds 20 Months	None
Sodium hydroxide 5- 40%	Exceeds 20 Months	None
Ammonia 5-10%	Exceeds 15 Days	None
Tri Sodium Phosphate solution 10%	Exceeds 20 Months	None
Skydrol A500	Exceeds 20 months	None
Dish Washing Detergent	Exceeds 24 Months	None
Jet Fuel	Exceeds 24 Months	None
Diesel fuel, Lubricating Oil & Grease	Exceeds 24 Months	None

### DIELECTRIC PROPERTIES

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- Dielectric Constant at 2.74 per 1000 Cycles
- Dielectric Strength 3700+ volts per mil
- Power Factor At 1000 .002 cycles
- Radome Microwave 2023 DB in range
- Transibility 20-25 DB
- Surface Resistivity Infinite Resistance

### SHELF LIFE

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

### CLEANING

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All parts must be chemically or mechanically cleaned, film free, by an industry recognized cleaning specification or method

### USE OF PRIMER

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No primer is required except for in instances where specifications call for a primer. In which case PTI recommends the following

- PT-500: Meets MIL-PRF-23377
- PT-750P
- CC-750P: Meets MIL-C-27725

### MIXING INSTRUCTIONS

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Shake component A in a paint shaker for 5 – 10 minutes for optimal results.

Admix by volume:

**3 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-1004 or PT-1003 Type I no more than 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

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This product can be applied using brush, roller, 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.

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3. HVLP Spray Pressure: 7-10psi. Conventional Spray Equipment 15-30%
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.

### DRYING & CURING SCHEDULE

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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)

Unaccelerated

12-15 hours

Accelerated (Using PTI PolyKick™)

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

Recoat Time:

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

Full chemical cure requires 7 days minimum.

**Force Cure Times:** Air dry for 20 – 30 minutes between coats then bake dry according to the following. 30 minutes at 250° F, 1 hour at 180° F, or 2 hours at 150° F

### EQUIPMENT CLEANUP

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Use clean Acetone, IPA, PT-1004 or PT-1003 Type I. Do not allow material to dry or cure inside any equipment.

### HEALTH, SAFETY, & STORAGE REQUIREMENTS

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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

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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.