



Now Available for Your Personal Aircraft!

The same specialty paint used by major airlines, the Patriot Missile project, the Space Shuttle Challenger project, the RAM Missile, and the Stealth Bomber...

PTI specialty paint is now available for you.

PTI is a specialty paint manufacturer with a 60-year track-record of satisfied customers including: Boeing, Raytheon, Hawker Pacific Aerospace, Honeywell, Embraer, United Airlines, and more...

Leading-edge specialty paint is now available for your personal aircraft, from PTI and Aircraft Spruce.

 **PTI**
PRODUCTS TECHNIQUES INC.

Specialty Paint & Protective Coatings



The PTI Complete Specialty Paint System

Maximum Beauty, Protection & Performance

1. Paint Stripper
2. Primers: Acid Etch and Epoxy
3. Topcoat: A chemical resistant Polyurethane with UV protectors
4. PTI Polykick™ to accelerate drytime

Note: Strong professional recommendation – These products have been specifically formulated to work together. So, while PTI's polyurethane will work with other primers and PTI's primers will work with other topcoats, maximum adhesion, durability and performance is achieved when these products are applied as a system.

To Purchase Your PTI Specialty Paint System

Simply tell us the make and model of your aircraft, and the Federal 595 Color – see chart. Need a custom color that is not on the chart? – Ask us, we can help you with that too.

Order Now

Call us at (626) 914-6122 or Fax us at (626) 914-0087 for ordering and recommendations.





The PTI Mirror-Finish

The mirror-image finish is PTI's one-of-a-kind trademark for plane owners.

The PTI mirror-image finish is an extremely high gloss finish. PT-799 has excellent coverage and "high hiding" properties.

This high quality PTI paint is applied with conventional spray equipment. It's easy to mix, shoot, and fully supported by PTI.

The cured finish has excellent resistance properties to all jet fuels, lubricating, and hydraulic fluids. PTI reinforces your mirror-finish with UV protection – delivering beauty and quality to you.



Specialty Paint & Protective Coatings

Answers to Your Most Frequently Asked Questions

We have compiled the most frequently asked questions we receive from customers who want to paint their plane. Please take the time to look through the questions and our responses.

You'll discover the secrets to PTI Specialty Paint & Protective Coatings. These professional recommendations will help you achieve high quality, beauty, protection and performance for your personal aircraft.

If you have a question that does not appear here, write us at PTI.direct@yahoo.com.

Thank you for purchasing PTI Specialty Paint,

Steven D. Andrews
President



Specialty Paint & Protective Coatings

I want to paint my plane. What do you recommend I use?

First, we recommend that you do the following:

1. Strip the existing paint with either the blue or yellow PTI stripper. The yellow stripper is a fast acting and very effective stripper that will take you right to the metal if properly applied. Safety clothing must be worn when using this stripper. The blue stripper is just as effective but because it is more “environmentally friendly” it takes longer to penetrate the paint. The advantage to the blue stripper is that it remains alive for up to eight hours. Therefore, if you are interrupted while removing the paint, you can leave the stripper on the plane and come back some hours later to complete the task – the stripper will not have dried. For best results – regardless of the stripper used – be generous in applying it to the surface of the plane.
2. Completely remove stripper. You should also wipe the surface with a solvent such as isopropyl alcohol or toluene.
3. You are now ready to begin painting. Bare metal attracts corrosive elements quickly. So we recommend that you begin with the PTI acid-etch wash primer (application data is available at www.aircraftspruce.com). Apply a very thin coat of the wash primer. If you apply the wash primer too heavily you will inhibit its adhesion properties. The acid-etch primer performs two important functions: it inhibits corrosion and promotes adhesion for the remaining coatings.
4. Next, we recommend applying the PTI Epoxy primer (a strontium chromate primer). This primer is a durable primer that provides excellent protection for the exterior of the plane.
5. Finally, we recommend the use of the PTI polyurethane topcoat.

Note: Application data is available on the tech data sheets in this document.

How does your paint compare to other manufacturers?

PTI paint is specifically formulated to meet the demands of aviation and aerospace. It is the same material that is used by companies such as Hawker Pacific Aerospace (primarily on commercial aircraft landing gear), Boeing, Lockheed Martin, Sundstrand Aviation, Northrup Gruman and other aviation/aerospace defense contractors. Our paint is formulated to current military specifications and will perform to meet or exceed those specifications with respect to chemical and other resistance properties. Such is not necessarily the case with other manufacturers.

PTI paint can be purchased in quantities and colors not readily available with any other manufacturer.

There are no fillers or other additives in PTI paint – things that add volume and reduce manufacturing costs, but do nothing to enhance performance or reduce the price you pay.

Features that Dupont or Sherwin Williams will charge you extra for, we do not – things like UV protection and paint that is chemically resistant to jet fuel and skydrol.

Can I get colors in small quantities for touch-ups?

Yes! And you can get as little as one pint or one aerosol can for single component systems (lacquers, enamels).

Can you match colors and is there a charge?

We can match virtually any color if we have a color standard to match. Generally, there is no extra charge for custom matching. However, if the color proves to be labor intensive or requires pigment we don't normally use, there can be an extra charge.

Is there a warranty?

PTI's paint is the best that can be had. If stored properly it will last a year or longer on the shelf. We warrant that if you follow our recommendations and properly store and apply our paint, it will perform. Proper performance depends on proper preparation of the material to be painted and proper application of the product. Durability in performance requires that appropriate primers be used with the topcoats. The surface painted should be properly stripped and cleaned before priming and painting. All old paint, dirt, grease and paint stripper must be removed from the surface. And, of course, how long paint will last depends on weather and other factors. Planes that are housed in a hangar will get more life out of their paint job than those left outside. The number of flights and the type of weather the plane is flown in also affect the life of the paint job. We cannot guarantee those factors that are beyond our control.

Will PTI provide technical support?

Technical data for PTI paint products is available on the tech data sheets in this document. If the technical data is insufficient, you may contact us at PTI.direct@yahoo.com.

Can I use PTI paint over another brand of paint?

We do not recommend applying any topcoat to another topcoat. We recommend stripping old paint off, priming and then painting. Our primer can be used under another topcoat and our topcoats can go over other primers. We recommend however, that if you are going to use our primer that you also use our topcoat. Likewise, if you are going to use our topcoat, you should also use our primers. That is because our paints are formulated as a system – to be used together. We know that they will not adversely react to one another and that they are of the highest quality – we do not use “fillers” or other unnecessary additives – when you buy our paint, you get paint. We cannot make similar claims with respect to any other company’s product.

Will PTI paint work on fabric covered airplanes?

Our coatings are not specifically formulated for use on fabric covered planes.

Can I get the color I want in lacquer or enamel base?

Yes. And you can also get the color you want in a polyurethane or epoxy system as well.

How do I keep the nozzle on the aerosol can from clogging?

We recommend that all aerosol cans be stored upside down. Shake the can well prior to use. This is particularly important for the chromate and nonchromate primers due to the composition of the primer. When you are finished spraying, turn the can upside down and press the nozzle to clear it of paint residue. Cap the can and store it upside down.

Your Guide to PTI Specialty Paint

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Our Clients

Products Techniques, Inc. (PTI) was founded in 1947 specifically to serve the aviation industry. PTI has more than 60 years of experience in laboratory controlled formulation, testing, manufacturing and processing of advanced materials protection coatings.

PTI products are listed in more than 50 major aerospace or defense contractor customer specifications and meet or exceed numerous DOD, MIL, MIS, FAA, ORD, Federal (TT) and customer specifications.

When you use a PTI coating to protect and beautify your private aircraft, you are using the same products that the military, commercial airlines and aerospace companies have relied upon for years.

It is said that “a company is known by the customers it keeps.”

We are proud to include among our most valued, and tenured, aerospace and aviation customers, such fine companies as those listed on the following page:



Specialty Paint & Protective Coatings

Partial List of PTI Clients with strict performance-critical standards:

Boeing

Raytheon

Hawker Pacific Aerospace

Northrop Gruman

Sundstrand Aviation

Aerojet

Beckman Ireland

United Airlines

Fiat

Bombardier

Embraer

Rockwell International

Japan Airlines

Symbolic Displays

Sperry

GE Engine Services

Honeywell

Loral Defense Systems

“What Our Clients Say – In Their Own Words – About the Value of PTI Products”

“PTI is the sole approved source for paints procured for Shuttle Orbiter usage under Shuttle heritage Boeing North American (BNA) Specification MB0125-095.”

“PTI is listed on the Qualified Source List (QSL). These products have undergone rigorous testing by NASA as well as Raytheon.”

George Fry
BOEING



“While restoring our P-51 Mustang as well as the P-38 Lightning that is in process now, we needed a high quality paint for a reasonable price, and one that met our needs for custom and correct military colors and quantities.”

“PTI filled that need with a product that outperforms Axo Nobel, DuPont, Sherwin Williams and PPG Aerospace. I can, and do, recommend PTI paint for use on corporate, general and commercial aircraft.”

Jeff Harris, Director/Pilot
Allied Fighters Inc. Warbird Collection
Commercial Airline Captain, B-767
Chino, California



PRODUCTS TECHNIQUES INC.

Specialty Paint & Protective Coatings

'Lily' Gets a Facelift

Story featured in *Warbird Digest*, Winter 2005

The Planes of Fame Air Museum located at historic Chino Airport is refinishing its B-17G-90-DL. For a number of years, efforts have been underway to raise the necessary funds to return the bomber to the air, but in the meantime it needed a new coat of paint. This new coating will provide protection from the weather as well as provide a much needed 'refresh' to the display.

The project is a joint effort sponsored by Jack Croul and Steve Andrews of Products Techniques Inc. (PTI) of Rialto, California. PTI was founded in 1947 specifically to serve the needs of the aviation industry. They have over fifty years of experience in laboratory controlled formulation and testing of advanced coating materials. Their products are in use by over fifty major aerospace manufacturers. Their advanced paints are now available for use on warbirds and vintage aircraft, and they have the capability to match the original military color specification.

Jack Croul was a B-17 navigator who completed 33 missions during two tours with the 338th Bomb Squadron, 96th Bomb Group based at Snetterton Heath, England. His interest in World War Two aircraft was recently rekindled and he now has two fighters under restoration. The first is a P-51D USAAF Serial No. 44-73420 that is well underway at Chino under the direction of Jeff Harris. The second is a P-38 Lightning, USAAF Serial No. 44-26996 N5586V that is under restoration with WestPac in Rialto, California.

The B-17, USAAF Serial No. 44-83684 is not a combat veteran but has significant history as a television and movie star. First appearing in the television series "Twelve O'Clock High" which ran from 1964-1966, it was painted as 'Picadilly Lily.'

The B-17 will be repainted in its olive drab paint scheme, but will carry the markings of one of the 96th Bomb Group aircraft that Croul flew to war.



Product Lines

PTI uses the latest in chemical technology in its formulations.

Our specialty paints and protective coatings are featured in space, aerospace and aviation applications throughout the world – the Space Shuttle and Space Station projects, the Patriot and Stinger missile projects, and in the refurbishing of landing gear for commercial aircraft.

PTI's primers and topcoats "wet" the substrate better, giving the film better adhesion which promotes a longer life.

Important Note: Not only are PTI's coatings of the highest durability, but with our current pigment bases, any custom color and gloss can be made.

PTI manufactures an extensive number of military and federal specification coatings (MIL, MIS, ORD, TT, and FAA).

Moreover, PTI products are listed in more than 50 major customer specifications.



Specialty Paint & Protective Coatings

Paint Strippers

PTI-PRB

A non-toxic paint stripper designed for removing polyurethane and other paint systems. It contains no halogenated solvents, phenol, heavy metals or other toxic materials. It clings to vertical, inclined and overhead surfaces and is slow drying for a long reaction time. PTI-PRB is also free rinsing and its surfactants are biodegradable. It is a low odor product suitable for indoor use. The remover is safe on all aircraft structural metals including high strength steel. This non-toxic stripper conforms to the specifications: Boeing D6-17487 Revision H, Douglas CSD-1, T.O. 1-1-8, MIL-R-81249D, Type I & II (partial testing) and AMS1375B (partial testing).

PTI-PRY

A high performance stripper for removing urethanes, epoxies, primers and enamels. In addition to the fact that it is effective, it is economical. This stripper is a low odor product that is suitable for indoor use. The product is safe on most aircraft structural metals including high strength steel, mild steel, cadmium, aluminum, magnesium and copper alloys. The surfactants on this stripper are biodegradable. PTI-PRY conforms to the following specifications. MIL-R- 81249D, Types I,II &IV and Class 3 (QPL), T.O. 1-1-8, AMS 1375, Douglas CSD-1, Type III and Boeing D6-17487 Revision H.

Primers

Acid Etch Primer

PTI's air dry wash primer is a polyvinyl butyral zinc chromate formulation that may be used to prime all plain or plated metallic surfaces. Priming surfaces with this primer will ensure maximum adhesion of all bake or air-dry finish coats (including lacquer finish coats). The finely ground emulsions of zinc chromate pigment, resins and phosphoric acid hardeners are virtually non-settling. Once applied, PTI's air dry wash primer requires no sanding. For the best results follow the instructions on the technical data sheet. This primer exceeds the performance standards specified in Department of Defense specification (DOD) 15328 and Military Specification MIL-8514.

Zinc Chromate Primer

PTI's zinc chromate primer is formulated to exceed the performance standards in the Federal Specification TT-P-1757. This primer promotes maximum adhesion to bare aluminum and steel and is recommended for that purpose. PTI's zinc chromate primer is a formulation proven to perform.

Zinc Oxide Primer

PTI's zinc oxide primer is formulated to exceed the performance standards in the Federal Specification TT-P-1757 (the chromate free version of that specification). This primer promotes maximum adhesion to bare aluminum and steel and is recommended for that purpose. PTI's zinc oxide primer is formulated to provide a high performance primer that is considered a safer, more environmentally friendly alternative to the zinc chromate primer.

Epoxy Primer

(PTI YEP & GEP)

PTI's epoxy primer is a low VOC (volatile organic compounds) epoxy polyamide solvent primer which conforms to the military specification MIL-P-23377 Rev. E. This coating is highly recommended for use on aluminum and all plated or unplated metallic surfaces to insure maximum protection against corrosion. This primer may be used as an interior or exterior primer that insures maximum adhesion of any paint or lacquer finish coats. In laboratory tests, PTI's epoxy primer maintained its integrity when subjected to the following chemical and other resistance properties tests:

Lubricating Oil 24 hour immersion @ 250F	No defects
Hydraulic Fluid 24 hour immersion @ 150F.	No defects
Methyl Ethyl Ketone-Soaked Cloth 100+rubs	Passes
DS2 (1,5-Dichloropentane)	Passes
Full Chemical Resistance after	7 days
Salt Spray per ASTM B117	1000+ Hours
Humidity (Filiform)	1000+ Hours

Note: Before applying, refer to the technical data sheets for these products.

Topcoats

PTI Enamel

PTI's enamel is formulated to meet the performance specifications of Federal specification TT-E-489G. This product is high quality alkyd enamel which performs best when used with PTI's zinc chromate or chromate free primer. It may be applied over wood or metal and is suitable for both interior and exterior applications.

PTI Wingwalk Coating

PTI's wing walk coating is a "non-slip" walkway coating. It is a unique formulation of high molecular urethane resin. This coating is designed to cure at ambient temperatures.

PTI Polyurethane

PTI's polyurethane topcoat is durable two-component catalyst cure aliphatic polyurethane which meets, and exceeds, MIL-PRF-85285D. This coating is formulated to retain its flexibility in extreme environments or when exposed to rapid changes in temperature. This coating has excellent gloss retention and is chemically resistant to lubricating oil, hydraulic fluid, JP-5 jet fuel, Skydrol 500B and most solvents. Ultra Violet inhibitors help lengthen the life and color of the paint. If mixed according to PTI instructions, this coating will conform to air pollution rules and regulations including California's strictest air standards. PTI's polyurethane topcoat is available in a wide range of colors and may be applied with conventional spray equipment. PTI recommends that its acid etch pretreatment wash primer and its high solids epoxy primer be used as a part of the application of this coating system to assure unsurpassed corrosion protection and maximum adhesion. With a cure time of 4 hours set to touch, your aircraft will have a minimum of downtime.

PolyKick

PTI PolyKick

PTI PolyKick is formulated to accelerate the cure time for PTI's polyurethane formulations.

Note: Before applying, refer to the technical data sheets for these products.

Product: **PTI-PRB Non-toxic**
Epoxy/polyurethane Paint Stripper

Typical Uses: PTI-PRB does not contain halogenated solvents, phenol, heavy metals, or other toxic substances. With its thixotropic properties it clings to vertical, inclined, and overhead surfaces. PTI-PRB can be safely used on all aircraft metals. It is capable of removing all two component epoxies, polyurethanes, and other paint systems.

Physical Properties:

Flash Point: None

Color: Thick Pale Blue Liquid

Weight: Approx. 8.5 Lbs/gallon

Voc: 345 G/L

Ph: 11

Application: For optimum results, the substrate should be less than 85 deg. F. The surface to be stripped should be clean and free of all water. Using a high-pressure hose and spray wand with a fan type nozzle, apply a light coat of stripper. Keep the wet with stripper until the paint begins to buckle. The paint will lift from 1 hour to overnight, depending on toughness of paint. Remove all loosened paint. Reapply if necessary. Use a stiff wire brush if necessary. Rinse with water – a high pressure rinse may be used.

Precautions: **WARNING:** Avoid eye and skin contact. Contact is immediately apparent. Therefore, always wear face shield or goggles, gloves, aprons, boots, and any other protective clothing necessary. Provide adequate ventilation. For accidental contact, immediately flush area with water for 30 minutes. Seek medical attention if necessary. Always open container slowly to avoid spewing on contents.

Product: **PTI-PRY High-tech Epoxy**
Paint Stripper

Typical Uses: PTI-PRY is specially formulated and safe to use on most aircraft metals. This includes high strength steel, mild steel, cadmium, aluminum, magnesium, and copper alloys. It is capable of removing all two component epoxies and polyurethanes.

Physical Properties: **Flash Point:** None

Color: Thick Yellow To Amber Liquid

Weight: Approx. 9.0 Lbs/gallon

Voc: 167 G/L

Application: For optimum results, the substrate should be less than 80 deg. F. Apply a thin uniform coat of stripper by brush or roller. Avoid splashing. Let stand for _ hour or until paint curls. Wipe off or scrape loosened coating from surface. Use a stiff wire brush if necessary. Rinse with water – high pressure rinse may be used.

Precautions: **WARNING:** Avoid eye and skin contact. Contact is immediately apparent. Therefore, always wear face shield or goggles, gloves, aprons, boots, and any other protective clothing necessary. Provide adequate ventilation. For accidental contact, immediately flush area with water for 30 minutes. Seek medical attention if necessary. Always open container slowly to avoid spewing on contents.

Product: **Acid Etch Primer Exceeds
DOD-P-15328 and MIL-C-8514**

Other products used with:

Reducer PT-1045

Typical Uses: This AIR DRY WASH PRIMER is a polyvinyl butyral zinc chromate formulation that may be used to prime all plain or plated metallic surfaces. Priming surfaces with this primer will ensure maximum adhesion of all bake or air-dry finish coats (including lacquer finish coats).

**Physical
Properties:**

The finely ground emulsions of zinc chromate pigment, resins and phosphoric acid hardeners are virtually non-settling. Once applied, the primer requires no sanding. The primer has a pot life of 8 hours. However, it can be “revitalized” after an 8 hour period by adding 3 parts of component A to the unused primer and then recatalyzing the mixture with the correct proportion of component B. **Extreme humidity can affect the bonding of the coating (See below).**

Application: Cleaning

All parts must be chemically or mechanically cleaned so that they are film free. Only an industry recognized method for cleaning should be used.

Mixing

Mix 4 parts of component A to 1 part of component (catalyst) B. When applied by spraying, thin the 4 to 1 mixture as necessary with 2 to 3 parts PT-1045 reducer.

Method of Application

Parts to be primed may be dipped or sprayed.

Caution

This primer may “blush” (take on a gray coloring when drying) if applied in environments with extremely high humidity. If the primer does “blush,” no bond exists between the primer and the surface of the material being coated. Before priming the surface again, wash the material being coated with PT-1045 reducer.

A very thin film should be applied (approximately .2 mil). This primer will not promote adhesion if too thick a coat is applied is too thick. The pre-treatment primer may be coated with a regular primer or topcoat within 15-30 minutes. If another primer is used, refer to its application instructions before applying the topcoat.

Curing: This primer air-dries in 1 to 10 minutes to a translucent yellow or green film.

Product: **Zinc Chromate Primer**
TT-P-1757 (Composition L)

PT-522

Other products used with:
Reducer PT-1003 Type III

Typical Uses: ZINC CHROMATE PRIMER is primarily intended for spray application on metal and wood surfaces.

Physical Properties: Contains Zinc Chromate, use with adequate ventilation and wear protective breathing equipment during application.

Application: Cleaning

All parts must be cleaned film free using an appropriate cleaning method.

Mixing

Mix 1 part primer with 1 part reducer (PT-1003 Type III, MIL-T-81772B Type III).

Method of Application

This primer may be applied by dipping, rolling or spraying. Apply a thin wet coat. A topcoat may be applied after 20 minutes. Optimum adhesion occurs if topcoat is applied within 8 hours.

Curing: A normal coat dries tack free in 5 minutes and dries hard in 30 minutes.

Product: **Zinc Oxide Primer**
TT-P-1757 Chromate Free

Other products used with:

Reducer PT-1022X66

Typical Uses: ZINC OXIDE PRIMER is primarily intended for spray application on metal and wood surfaces.

Physical Properties: Contains no zinc chromate, use with adequate ventilation and wear protective breathing equipment during application.

Application: Cleaning
All parts must be cleaned film free using an appropriate cleaning method.

Mixing
Mix 1 part primer with 1 part reducer (**PT-1022X66**).

Method of Application
This primer may be applied by dipping, rolling or spraying. Apply a thin wet coat. A topcoat may be applied after 20 minutes. Optimum adhesion occurs if topcoat is applied within 8 hours.

Curing: A normal coat dries tack free in 5 minutes and dries hard in 30 minutes.

Product: **Epoxy Primer MIL-P-23377E**
High Strontium Prime-all Primer
PT-513

Other products used with:

Air Dry Wash primer; Reducer PT-1003 Type 2 or PT-1002

Typical Uses: This is a low VOC epoxy polyamide solvent primer which conforms to MIL-P-23377 Rev. E. This coating is *highly* recommended for use on aluminum and all plated or unplated metallic surfaces to insure maximum protection against corrosion. This primer also insures maximum adhesion of PTI TUF/FILM coating, or any other paint or lacquer finish coats.

Physical Properties:

Shelf Life: 1 year in a controlled environment

Pot Life: 8-12 hours

Resistance Properties:

Salt Spray per ASTM B117 (corrosion).....1000+ hours

Humidity (Filiform)1000+ hours

Chemical Properties:

Chemical Resistance:

Lubricating oil 24 hr. immersion at 250°F No Defects

Hydraulic fluid 24 hr. immersion at 150°F No Defects

Methyl Ethyl Ketone soaked cloth 100+rubs Passes

DS2 (1,5- Dichloropentane) Passes

Full Chemical Resistance after 7 days

Application: Cleaning

All parts must be cleaned by a recognized cleaning specification (such as Federal Test Method Standard, #141, Method 2013) and pretreated with chemical conversion coating materials to produce a pretreatment coating equivalent to MIL-C-5541 and/or primed with a an acid wash primer equivalent to MIL-C-8514.

Use of Solvent

Acetone can be used as exempt solvent to maintain 340 G/L VOC limitation. If no limitations are required, PT-1002 or PT-1003 Type II, may be used.

Mixing

This primer system consists of Component “A” pigmented or clear resin system and Component “B” hardener. Stir each component well or shake with a commercial shaker before mixing.

1. Add 1 volume of Component “A” to 1 volume of Component “B” and mix thoroughly. Allow to stand one (1) hour at room temperature before using. Reduce with exempt solvent(s) if required (see use of solvent above).
2. Mix only an amount that can be used in one day.

Method of Application

This low VOC primer builds quickly. Thick films are detrimental to good adhesion. Therefore, spray a thin film, .6 to .9 mils by cross spraying.

Curing: Air dry for minimum of one (1) hour before applying top coat. Do not bake top coats over 400°F.

Product: **PTI Enamel**
Federal Specification TT-E-489G
PT-389

Other products used with:
Zinc Chromate Primer; Zinc Oxide Primer

Typical Uses: A high quality product for painting vehicles, equipment and machinery.

Physical Properties: May be applied over wood or metal, interior or exterior. For best results use PTI's zinc chromate or chromate free primer.

Coverage: 350-400 square feet per gallon.

Application: Cleaning
All parts must be chemically or mechanically cleaned, film free by a recognized specification or method.

Use of Primer
Zinc chromate or chromate free primer is highly recommended.

Mixing
For spraying: Thin 8 parts enamel with 1 part PT-1022X66 thinner.

For Brushing: Thin 8 parts enamel with up to (but not more than) 1 part PT-1022X66 thinner.

Method of Application
Apply one tack coat, followed by one full wet coat.

Curing: Dries to touch in 1-2 hours. Dries hard in 8-10 hours..

Product: **PTI Wingwalk Coating Meets and exceeds MIL-W-5044C Ty. I or Ty. II**

Other products used with:
Epoxy Primer

Typical Uses: Non-slip walkway coating. PTI's wing walk coating is a unique formulation of high molecular urethane resin, which cures at ambient temperatures.

Physical Properties: **Shelf Life:** 1 year unopened

Pot Life: 8 hours

Application: **Cleaning**

All parts must be chemically or mechanically cleaned, film free, by a recognized cleaning specification.

Use of Primer

PTI's Epoxy Primer is recommended.

Mixing

Mix component A and component B hardener 1:1 by volume, no other thinning necessary.

Method of Application

Brush or Spray (Sprays like any conventional lacquer. Spray in a suitable area with adequate ventilation).

Curing: **Dry Time (Tack Free):** 45 minutes to 1 hour

Dry Hard: 8 hours

Curing Time: 5 days (for full chemical resistance)

Force Dry: 30 minutes at 250°F

Product: **PTI Polyurethane**
(MIL-PRF-85285D Ty. 1) PTI-799

Other Products used with:

PTI Epoxy Primer, PTI Acid Etch Primer ; Reducer PT-1003 Type 1.

Typical Uses: PTI Polyurethane is a two component catalyst cure aliphatic polyurethane which meets, and exceeds, MIL-PRF-85285D Type 1 & 2. When mixed and reduced according to PTT's instructions, this polyurethane topcoat will conform to most of California's air pollution rules and regulations including SCAQMD rules 1107 and 1124.

Aerospace/Aviation

Aircraft (commercial and military), helicopters, radar equipment, cabin interiors (e.g., space shuttle) due to its self-extinguishing properties in the event of fire.

Industrial

Material handling equipment, pumps, pipes, valves, fan equipment.

Marine

Holding tanks, machinery, ship superstructure.

Recreation

Playground equipment, golf carts, decks.

Physical Properties:

Toxicity: Contains no substance of known toxicity under normal conditions of usage.

Colors: Available in clear, white, blacks, grays and most Federal Standard number 595B (FS#) colors or glosses. Custom colors are available upon request.

Viscosity: Admixed and reduced [17925] -- 15 seconds with #4 Ford Cup.

Solids: Nonvolatile admixed & reduced [17925] – 65% by weight.

Weight: Weight per gallon-admixed and reduced [17925] – 10.2 lbs/gal

Hardness: Pencil Hardness [17925] – 5H

Flexibility: 1/4" Mandrel – Passes.

Salt Spray: Saturated Salt Spray 1,000 hours minimum

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

Results: All pass with no blistering, softening, or other coating defects

Chemical Properties:**Chemical Resistance:**

Methyl Ethyl Ketone soaked cloth 100+ rubs	Passes
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

Note: Other chemicals are currently being tested. As results are available, they will be published.

Application: Cleaning

All materials to be coated must be chemically or mechanically cleaned using a recognized cleaning method.

Use of Primer

PTI recommends PTIYEP or PTIGEP as parts of the application of this coating system to assure unsurpassed corrosion protection and maximum adhesion. An acid etch pre-treatment wash primer, PTI-YACID or PTI-GACID, should be used prior to applying the Epoxy Primer.

Mixing

Stir component "A" and component "B" thoroughly before mixing. Mix one (1) part of component "A" to one (1) part of component "B" by volume. Reduce with PT-1003, Type 1 MIL-T-81772B – Type 1 thinner to stay within the required 420 g/l VOC's. Do not add more than 10% by volume of the reducer. Do not mix more than can be used within a four hour period. Do not combine this material with that of another manufacturer.

Method of Application

PTI Polyurethane may be applied by conventional spraying, brushing, or rolling. For best results PTI recommends spraying using an HVLP (high pressure low volume) system. Spraying should be accomplished in a suitable area having adequate ventilation and clean filtered air. A N.I.O.S.H. approved respirator should always be worn when spraying this material. See MSDS before using this material. To avoid contamination, no other materials should be sprayed in the immediate area at the same time.

Curing: Air Cure

Set to touch: 4 hrs. maximum.

Dry Hard: 8 hrs. maximum.

Full Chemical Cure: 7 days minimum.

Force Cure

Dry Hard: 15 minutes air then 2 hrs. at 225°F

Full Cure: [After dry hard] 2 hrs. at 225°F



Product: **PTI PolyKick™**

Other products used with:

Use only with PTI Polyurethanes

Typical Uses: PTI PolyKick is formulated to accelerate the cure time for PTI's polyurethane formulations.

Directions

for Use: At 1% by weight added to admixed material:

Tack Free: 1 hour

Dry Hard: 1.5 hours

Material Jelled: 2.5 hours

At 5% by weight added to admixed material:

Tack Free: 20 minutes

Dry Hard: 30 minutes

Material Jelled: 45 minutes

Product: **PTI PolyKick™**

Other products used with:

Use only with PTI Polyurethanes

Typical Uses: PTI PolyKick is formulated to accelerate the cure time for PTI's polyurethane formulations.

Directions

for Use: At 1% by weight added to admixed material:

Tack Free: 1 hour

Dry Hard: 1.5 hours

Material Jelled: 2.5 hours

At 5% by weight added to admixed material:

Tack Free: 20 minutes

Dry Hard: 30 minutes

Material Jelled: 45 minutes

MIL Specs – Military Specifications

Manufactured and Certified by PTI

Most of our coatings are manufactured to meet demanding military and other federal specifications – approximately 100 such specifications.

We serve major aviation corporations like Boeing, Raytheon, Hawker Pacific Aerospace, GE Engine Services, Honeywell, United Airlines and more...

Products Techniques, Inc. manufactures an extensive number of military and federal specification coatings (MIL, MIS, ORD, TT, and FAA).

Our specialty paints and protective coatings are featured in space, aerospace and aviation applications throughout the world – the Space Shuttle and Space Station projects, the Patriot and Stinger missile projects, and in the refurbishing of landing gear for commercial aircraft.

Our specialty paint and protective coatings are also used in other performance-critical applications that are not aviation related.



Specialty Paint & Protective Coatings

Military Specifications

Manufactured and Certified by PTI

Military Specifications	PTI Product	Summary Description
O-A-51H.....	Sold to Specification	Solvent
O-E-760D (Type 2 Grade B)	Sold to Specification	Solvent
O-M-232F	Sold to Specification	Solvent
OS 11773	PT-750-4.....	Polyurethane
AA-208 (TT-I-1795)	Sold to Specification	Marking Ink Flat
TT-C-490 (Type 3 Only)	Sold to Specification	Cleaning Method
TT-C-2114	D-115F#30277	Enamel Fast Dry
TT-E-485F – Type 2	PT-385-2.....	Enamel
TT-E-485F – Type 4	PT-385-4.....	Enamel
TT-E-488B Type 1.....	Sold to Specification	Enamel
TT-E-488B Type 2.....	Sold to Specification	Lacquer
TT-E-488B Type 3.....	Sold to Specification	Primer
TT-E-489G (Type 1 Bulk).....	Cl. A PT-389 Gloss.....	Air Dry Enamel
TT-E-489G (Type 2 Aerosol)	Cl. B D-114 Gloss	Bake Enamel
TT-E-490E	D116.....	Silicon Enamel
TT-E-496B (Type 2 only)	Sold to Specification	Enamel
TT-E-515A	Sold to Specification	Enamel Fast Dry
TT-E-516A	PT-316	Enamel Lusterless

Military Specifications	PTI Product	Summary Description
TT-E-522A (Type 1 Flat)	Sold to Specification	Enamel Phenolic
TT-E-522A (Type 2 Semi Gloss).....	Sold to Specification	Enamel Phenolic
TT-E-527C (Air Dry)	PT-327	Enamel Lusterless
TT-E-527C (Bake Dry)	D-114	Enamel Lusterless
TT-E-529F (Type 1 Air Dry)	PT-329	Enamel Semi-Gloss
TT-E-529F (Type 2 Bake Dry).....	D-114	Enamel Semi-Gloss
TT-L-20A	PT-112	Lacquer
TT-L-26B.....	PT-126 Gloss Only	Lacquer
TT-L-32A	PT-111 Gloss Only	Lacquer
TT-L-50G (Type 1)	Sold to Specification	Nitrocellulose
TT-L-50G (Type 2)	Aerosol Specification Only ...	Acrylic
TT-L-50G (Type 3)	All three types	Acrylic-Cellulose
TT-L-54C (Type 1 Black).....	PT-128	Lacquer
TT-L-54C (Type 2 White)	PT-128	Lacquer
TT-L-58D (Type 1 Clear).....	PT-158	Lacquer
TT-L-58D (Pigmented) Cl. 1 gloss, Cl. 2 semi-gloss ..	PT-158	Lacquer
TT-M-00261D.....	Sold to Specification	Solvent
TT-M-268C	Sold to Specification	Solvent

Military Specifications

Manufactured and Certified by PTI

Military Specifications	PTI Product	Summary Description
TT-N-95B	Sold to Specification	Solvent
TT-N-97B	Sold to Specification	Solvent
TT-P-25E	Sold to Specification	Primer
TT-P-28G	Sold to Specification	Heat Resistant Aluminum
TT-98C (Cl. 1)	Sold to Specification	Stencil Paint
TT-P-636D	Sold to Specification	Red Oxide Primer
TT-P-645A	Sold to Specification	Zinc Chromate Primer
TT-P-664C	Sold to Specification	Rust Inhibiting Primer
TT-P-1757 (MIL-P-8585)	PT-522	Zinc Chromate Primer
TT-V-109C	PT-108	Spar Varnish
TT-V-119D	Sold to Specification	Spar Varnish
DOD-P-15146B	Sold to Specification	Exterior Paint
DOD-P-15328D	PT-402 (Green)	Wash Primer
DOD-P-17545	Sold to Specification	Primer
DOD-E-24635	Sold to Specification	Silicon Enamel
MIL-T-152B Cleaning Spec	PT-107	Fungus Resistant Varnish
MIL-V-173C	PT-107	Fungus Resistant Varnish
MIL-R-3043B	L-336	Baking Phenolic

Military Specifications	PTI Product	Summary Description
MIL-W-5044C (Type 1 – no grit)	L-132	Walkway Coating
MIL-W-5044C (Type 2 – grit)	L-132	Walkway Coating
MIL-D-5549B	Sold to Specification	Cellulose Acetate Butyrate
MIL-P-6808	PT-522	Application Spec
MIL-M-7866B	Sold to Specification	Moly
MIL-P-7962D	PT-562	Nitrocellulose Primer
MIL-C-8514C	PT-402	Wash Primer
MIL-L-8937	PT-14	Tech Lube
MIL-L-10287 (Type 1 – Opaque)	PT-111 Gloss only	Lacquer
MIL-L-10287 (Type 2 – Clear)	PT-112 Semi-gloss & Flat	Lacquer
MIL-L-11195D	PT-112 Flat only	Lacquer
MIL-P-11414D	Sold to Specification	Rust Inhibiting Lacquer Primer
MIL-V-12276D (Type 3, Cl. A)	PT-201R (Clear Only)	Phenolic Varnish
MIL-V-13811D	Sold to Specification	Waterproof Varnish
MIL-F-14072A	Application Specification	
MIL-P-14105C	PT-1854	Heat Resistant Paint
MIL-E-15090C (Type 1)	Sold to Specification	Air Dry Enamel

Military Specifications

Manufactured and Certified by PTI

Military Specifications	PTI Product	Summary Description
MIL-E-15090C (Type 2)	Sold to Specification	Fast Dry Enamel
MIL-E-15090C (Type 3)	Sold to Specification	Baking Enamel
MIL-E-15310C (Superseded by TT-E-490)		
MIL-P-15328C	PT-402 Blue	Wash Primer
MIL-P-15930C	PT-572	Vinyl Zinc
MIL-E-15935B (Superseded by TT-E-490#26197)		
MIL-E-15936B (Superseded by TT-E-490#26270)		
MIL-E-16663A (Cl. 1 only)	Sold to Specification	Fast Dry Enamel
MIL-I-17384A	PT-128	Electrical Insulate
MIL-C-17504B	PT-104	Acrylic Compound
MIL-L-19537C	PT-113 Gloss Only	Acrylic Nitrocellulose Lacquer
MIL-L-19538C	PT-113 Semi-gloss/ Flat	Acrylic Nitrocellulose Lacquer
MIL-P-21035B (Type 1 only)	L-187	Zinc Dust Paint
MIL-E-22118B	Sold to Specification	Electrical Insulating Enamel
MIL-P-22332B	PT-532	Priming Paint for Ammunition
MIL-C-22750D	PT-426	Epoxy Polyamide

Military Specifications	PTI Product	Summary Description
MIL-C-22750E & F	PT-426E & PT-426F	High Solid, low VOC Epoxy-Poly
MIL-P-23377E (Type 1 – yellow)	PT-500	Epoxy Poly Primer
MIL-P-23377E (Type 2 – green)	PT-500	Epoxy Poly Primer
MIL-P-23377F (Type 1 – yellow)	PT-500F* & G*	Low VOC Epoxy Poly Primer
MIL-P-23377F (Type 2 – green)	PT-500F* & G*	Low VOC Epoxy Poly Primer
MIL-I-24092B (Grade CHB)	PT-201R	Insulating Varnish
MIL-L-25681B	PT-605	Anti -Seizing Compound
MIL-P-26915B (Type 1 – Cl.B)	L-187	Zinc Rich Primer
MIL-C-27725B (Type 2 only)	CC-750-P	Polyurethane
MIL-P-22808 (Superseded by MIL-C-22750)		
MIL-P-38336	L-187	Primer Coat – Zinc Dust
MIL-I-43553A (Type 1)	PT-401	Air Dry Epoxy
MIL-I-43553A (Type 2)	PT-401	Dielectric Epoxy
MIL-L-46010	PT-17	Tech Lube
MIL-I-46058C (Type ER)	PT-4121	Circuit Board Coating
MIL-I-46058C (Type PUR)	PT-750-1	Circuit Board Coating (Polyurethane with dye)

Military Specifications

Manufactured and Certified by PTI

Military Specifications	PTI Product	Summary Description
MIL-E-46117.....	PT-327.....	Enamel
MIL-E-46136.....	PT-461.....	Alkyd
MIL-E-46145.....	D-115F #34087 only.....	Enamel
MIL-L-46159A (Type 1 – Bulk).....	PT-110 Black/ Green.....	Acrylic Lacquer
MIL-L-46159A (Type 2 Aerosol).....	PT-110 Black/ Green.....	Acrylic Lacquer
MIL-P-47115.....	PT-471.....	Epoxy Air Dry
MIL-C-47117.....	PT-110.....	Acrylic Lacquer
MIL-C-47175.....	PT-750.....	Polyurethane
MIL-L-52043.....	PT-112.....	Lacquer
MIL-P-53022A (Type 1 only).....	L-373.....	No lead primer
MIL-L-81352A.....	PT-110.....	Acrylic Lacquer
MIL-C-81773B (Superseded by MIL-C-83286B)		
MIL-C-83019 (Brush).....	PT-750.....	Polyurethane
MIL-C-83019 (Spray).....	CC-750.....	Polyurethane
MIL-C-83286B.....	CC-750-4.....	Polyurethane
MIL-C-85285B.....	PT-785.....	High Solid Polyurethane
MIL-P-85582 (Type 1-Lt. Green).....	PTW-582 (Class 2 only)*.....	Water Reducible Primer
MIL-P-85582 (Type 2-Dk Green).....	PTW-582 (Class 2 only)*.....	Water Reducible Primer

Military Specifications	PTI Product	Summary Description
MIS-13884 (Type 2)	PT-750 Clear	Polyurethane
MIS-14204	PT-401	Epoxy Air Dry
MIS-14208	PT-4121	Epoxy Polyurethane Circuit Board Coating
MIS-19377	CC-750-5#24087 (Only)	Polyurethane
MIS-35735	PT-201	Epoxy

Note: This represents only a partial list of formulations that PTI is capable of manufacturing. If you require a coating not listed above, please contact our offices at 909-877-3951.

PTI is registered with the Department of Defense Central Contractor Registration System DUNS #06776293.

** PTI is on the federal government's Qualified Products List for this coating.*

Beauty, Protection, Performance.