Wash primer P99 (7641/3600)

Description

Wash primer P99 is a two-pack, ambient curing, etch primer designed to provide high resistance to filiform corrosion. Wash primer P99 can be used as an alternative pretreatment to the chemical chromate filming process, i.e. Alodine. Wash primer P99 is designed for use in aerospace paint systems where high flexibility and chemical resistance are required. Wash primer P99 promotes excellent adhesion between polyurethane primers, such as PAC33 or PAC33 CF, and a variety of light alloys as well as to steel. Wash primer P99 has been used successfully on a wide variety of aircraft throughout the world.

Wash primer P99 is compatible with all current non-electrostatic spray equipment and is easy to apply. For further details on the application parameters for these primers, consult the application guide for wash primer P99 or contact your local PRC-DeSoto International Application Support Center.

P99 wash primer is qualified to the following specifications:

- Airbus NT 007 10113
- I.C. Dassault

Note: Do not use etch primer P99 with an intermediate epoxy primer.

Application properties

Application temperature	65°F to 95°F (18.3°C to 35°C)
Application humidity	30% - 75%
Mix ratio (by volume)	
7641/3600 (Base)	1 part
0841/9000 (Activator)	1 part
0434/9000 (Thinner)	To viscosity
Viscosity at 68°F(20°C)	
Cup	
BSB3	26-30 sec.
AFNOR 4	16-18 sec.
DN4	13-15 sec.
BSB4	20-22 sec.
#4FORD	15-17 sec.
Pot life	
8 hours (Note: 30 minute induction time is required.)	
VOC, EPA method 24	900 grams/l
Theoretical coverage	
44 to 56 ft^2 (4 to 5 $meters^2$) at 0.4 mils (10 microns) film thickness assuming 40% loss factor	
Dry film density	1.6 to 1.8
Recommended dry film thickness	0.3 to 0.4 mils (8 to10 microns)
Drying times @ 68°F (20°C) and 55% R.H.	
Dry to touch	20 min. max.
Dry to handle	50 min.
Dry to overcoat	1 to 24 hours
Maskable	2 hours
Full cure	7 to 9 days
Accelerated cure	
30 minutes flash off @ 77°F (25°C), then 20 minutes at 150°F (51°C)	
Spray equipment	
Compatible with all non-electrostatic spray equipment	

PRC-DeSoto International

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Performance properties

Service temperature	
-65°F to 350°F	
(-54°C to 176.7°C)	Conforms
Flexibility	
180° Conical mandrel	Conforms
Low temperature flexibility	
4 inch (100 mm) mandrel	
@ -65°F (-54°C)	Conforms
Impact resistance	
40 inch/lbs (46 cm/kg), Gardner	Conforms
Fluid resistance	
(tested with PAC33 and topcoat)	
Skydrol® (LD-4), 14 days	
@ 77°F (25°C)	Conforms
Distilled H_20, 7 days	
@ 77°F (25°C)	Conforms
Corrosion	
Salt spray	
Passes 3000 hours	Conforms
Filiform	
Passes 30 days @ 100°F	
(37.8°C) and 85% RH	Conforms

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

Storage life

The storage life of P99 base 7641/3600 and activator 0841/9000 is twelve months and the storage life of reducer 0434/9000 is unlimited, when stored at temperatures between 41°F and 85°F (5°C and 25°C) in the original unopened containers. Partly used containers must be re-sealed immediately after use. Once opened, activator 0841/9000 must be used within two months.

Health precautions

This product is safe to use and apply when recommended precautions are followed. Before using this product, read and understand the PRC-DeSoto International "Safe Handling Guide" for aerospace coatings and the Material Safety Data Sheet (MSDS), which provide information on health, physical and environmental hazards, handling precautions, and first aid recommendations. An MSDS and the Safe Handling Guide are available on request. Avoid over-exposure. All mixing and spraying must be conducted with adequate ventilation and proper personal protective equipment as recommended. Obtain medical care in case of extreme overexposure.

For industrial use only. Keep away from children.

For emergency medical information call 1-800-228-5635.

For sales and ordering information call 1-800-AEROMIX (237-6649).

Printed in U.S.A.

P-99
wash primer application guide

PRC-DeSoto
International

Use

P-99 wash primer is a filiform corrosion resistant adhesion promoting primer. It is used on non-chromate converted surfaces such as aluminum, composite, and sanded surfaces. It has been used with both conventional and high solids topcoats.

Surface preparation

Good surface preparation is essential to ensure full protective properties and maximum adhesion.

Aluminum substrates

P-99 wash primer has excellent adhesion to all clean untreated aluminum surfaces. It is not compatible with chromate conversion coatings such as Alodine 1000, 1200 or sealed anodized surfaces.

1. Clean the aluminum surface with an alkaline cleaner and rinse with warm water to make sure no residue remains.
2. Solvent wipe surface with Desoclean® 110 cleaner to ensure there are no contaminants or other organic material, such as Skydrol®, left on the surface.
3. Apply the P-99 wash primer to an even dry film thickness of approximately 0.3 to 0.4 mils (8 to 10 microns).

Material inspection

Prior to using, inspect the containers for damage or leaks that may have occurred during shipping.

Mixing

Before mixing the wash primer it should be held at room temperature for 24 hours. Be sure all mixing and measuring containers are clean and free from contamination. Shake the base component or stir it thoroughly until there is no solid material left on the bottom of the can.

Mix one volume of catalyst (0841/9000) to one volume of base component (7641/3600). Then add thinner (0434/9000) to the suggested viscosity listed below.

Note: Do not use thinners or flow control agents from another source. They often contain materials that will degrade the cure, adhesion, or appearance of the primer. Do not use material beyond its shelf life.

Table I

Viscosity of mixed P-99 wash primer

Cup	Seconds
BSB3	26-30
AFNOR 4	16-18
DN4	13-15
BSB4	20-22
#4FORD	15-17

Pot life

P-99 wash primer should be allowed to stand for 30 to 45 minutes before spraying. Strain the mixed coating through a mesh cloth to remove any particles that may have been introduced into the coating during mixing and measuring. Stir the mixed material before and during use. The pot life is four hours at 68°F (20°C).

Spray equipment

P-99 wash primer is suitable for application with HVLP, air spray guns, airless, and air assisted airless spray equipment.

Note: This wash primer is not suitable for application with electrostatic spray equipment. In case Graco PRO spray guns are being used, be sure the electrostatic is switched off.

HVLP

Airverter

Tip size	1.2 to 1.5 mm
Air cap	10 or 12
Compressor pressure	40 to 60 psi (2.6 to 4.0 bar)
Atomization pressure at gun	10 psi (.67 bar) maximum

Binks Mach I

Tip size	#91 or 94
Pot pressure	15 to 35 psi (1.0 to 2.3 bar)
Atomization pressure at gun	10 psi (.67 bar) maximum

Graco 1265

Tip size	0.047 or 0.057 inches (1.19 or 1.45 mm)
Pot pressure	15 to 35 psi (1.0 to 2.3 bar)
Atomization pressure at gun	10 psi (.67 bar) maximum

Air assisted airless

Tip size	.011 or .013 inches (.279 or .375mm)
Fluid pressure	1450 to 1850 psi (100 to 130 bar)
Air pressure	45 to 75 psi (3.0 to 5.0 bar)

Note: In order to achieve 45-50 psi (3 to 3.5 bar) air atomization pressure at the spray gun, the regulated pressure at the mixing pot should be set higher to compensate for the pressure loss in the hose. Table II lists the air regulator pressure requirements for different hose lengths.

Table II

Air regulator pressure required to maintain 45-50 psi (3 to 3.5 bar) atomization pressure at the gun.

Air hose length	Air regulator pressure
4 feet (1.3 meters)	45 psi (3 bar)
15 feet (5 meters)	50 psi (3.5 bar)
25 feet (8 meters)	55 psi (4 bar)
36 feet (12 meters)	65 psi (4.5 bar)
50 feet (15 meters)	70 psi (5 bar)
75 feet (23 meters)	85 psi (6 bar)
100 feet (30.5 meters)	100 psi (7 bar)

Application

Apply P-99 wash primer to a dry film thickness of 0.3 to 0.4 mils (8 to 10 microns). This can be accomplished by spraying one wet coat at a 50% overlap. The applied coating should have an iridescent yellow to golden color. A dark brown or black color should be avoided because this indicates excessive film build.

Application conditions

The optimum conditions for appying P-99 wash primer are 30% to 75% relative humidity, and the temperature must be higher than 59°F (15°C). If the environment is outside these conditions, adhesion failures may result.

Cure conditions

At 68°F (20°C) and 55% relative humidity and a film thickness of 0.3 to 0.4 mils (8 to 10 microns), the dry times are as follows:

Dry to touch	15 to 20 minutes
Dry to handle	45 to 50 minutes
Dry to mask	1.5 to 2.0 hours
Dry to overcoat	1.0 to 24.0 hours
Dry to overcoat at 15°C to 20°C	2.0 to 24.0 hours
Full cure	7 to 9 days

The surface should be kept clean before overcoating. If the P-99 wash primer should become contaminated, use a mild solvent cleaner, such as Desoclean® 110 cleaner, and lint free cloths to clean the surface. Care should be taken to keep from damaging the primer with either strong solvents or Scotch-Brite™ pads.

Accelerated cure

The cure can be accelerated by heating. After a flash off time of 30 minutes, the primed part can be placed in an oven for 20 minutes at 150°F (51°C).

Clean up

Flush equipment with a strong solvent such as isopropyl alcohol (IPA).

The wash primer is a chemically reacting system. It is no longer soluble in solvents after it has cured. For this reason, equipment should be cleaned as soon as possible after the wash primer has been applied and before the material has cured. Note that even a fresh coating deposits a film on the equipment that doesn't dissolve easily. Agitation with a brush or cloth can help remove these deposits.

Health and safety

This product is safe to use and apply when recommended precautions are followed. Before using this product, read and understand the PRC-DeSoto International "Safe Handling Guide" for aerospace coatings and the Material Safety Data Sheet (MSDS) which provide information on health, physical and environmental hazards, handling precautions and first aid recommendations. An MSDS is available on request. Avoid overexposure. All mixing and spraying must be conducted with adequate ventilation and proper personal protective equipment as recommended. Obtain medical care in case of extreme overexposure.

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