

DeSoto® 513X390 Military Epoxy Primer

TECHNICAL DATA SHEET

Product Description

DeSoto® 513X390 military, conventional solids, epoxy primer is used over aluminum and composite surfaces prior to top coating.

- Excellent fluid resistance
- Compatible with Desothane® HS topcoats
- Excellent adhesion and corrosion resistance
- Service temperature -54°C to 177°C (-65°F to 350°F)

Components



Mix ratio (by volume):

- 513X390 (base component) 1 parts
- 910X624 (activator component) 1 parts

Specifications



513X390 primer is qualified to:

- FMC 7715-01
- FMS-3027A
- MIL-P-23377F Type I Class 1

Note: PPG Aerospace recommends you check the most recent specification QPL for updated information.

Product Compatibility:

513X390 primer is compatible with the following topcoat specifications:

- DMS 2115
- MIL-PRF-85285
- MMS 420

Surface Preparation and Pretreatments



513X390 primer can be applied over clean, dry intact aluminum and composite surfaces. Aluminum surfaces shall be treated with materials conforming to MIL-C-5541 or equivalent.

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Instructions for Use



Mixing Instructions:

Prior to mixing, thoroughly shake the base component. Add the activator component to the base component and stir well. Maintain constant agitation for 10 minutes to ensure proper mixing. Induction time is required.

Note: It is important to condition the paint for 24 hours prior to mixing by placing all materials in the shop or hangar, with ambient temperatures between 13° and 35°C (55° to 95°F). The minimum temperature of the paint components should be 13°C (55°F) prior to mixing.



Induction Time:

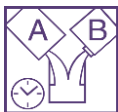
Temperature	13 - 21°C (55 - 70°F)	22 - 28°C (71 - 84°F)	>29°C (>85°F)
Induction Time Required	40 minutes	30 minutes	10 minutes



Viscosity: (23°C/73°F)

- #2 Signature Zahn cup 29 seconds maximum
- #4 Ford cup 22 seconds maximum
- ISO 4mm cup 45 seconds maximum
- BSB3 cup 47 seconds maximum
- BSB4 cup 26 seconds maximum
- AFNOR #4 cup 25 seconds maximum

Note: Viscosities quoted are the typical values obtained when using specified mix ratio.



Pot Life:

8 hours @ 21 - 25°C (70 - 77°F)

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Application Guidelines

Recommended Application conditions:

Temperature 15 - 30°C (59 - 86°F)
 Relative Humidity 20 - 90%

Application:

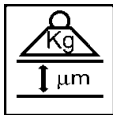
Ground the aircraft and the application equipment before priming. Stir the primer slowly during the application. The suggested film thickness is 15 to 23 microns (0.6 to 0.9 mils). This can be accomplished with one coat with a 50% overlap.

These application guidelines represent PPG's best advice in standard conditions. Some parameters will be influenced by environmental conditions, equipment settings, and other variables.



Theoretical Coverage:

9 square meters/liter at 25 microns dry film (398 square feet/gallon at 1 mil dry film)
 Recommended dry film thickness; 15 to 23 microns (0.6 to 0.9 mils)



Dry Film Density:

1.76 grams/cubic centimeter (14.66 pounds/gallon)

Dry Film Weight:

44 grams/square meter at 25 microns dry film (0.00889 pounds/square feet at 1 mil dry film)



Equipment:

513X390 primer is compatible with all current non-electrostatic spray equipment.

Equipment Type	Tip Size	Pot Pressure	Atomization Pressure at the Cap
High Volume Low Pressure Spray Gun (HVLP)	1.0 mm to 1.4 mm	10 to 20 psi (0.69 to 1.4 bar)	10 psi maximum (0.69 bar)
Conventional Air Spray Gun	1.2 mm to 1.8 mm	10 to 20 psi (0.69 to 1.4 bar)	45 to 60 psi (3.1 to 4.1 bar)

Equipment Cleaning:

Clean spray equipment as soon as possible after use. Flush spray equipment with DeSoto® CN20, DeSoto® CN44, or Desoclean™ 45 high performance solvent cleaner.

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Physical Properties (product)



Color: Yellow



Gloss: Not Applicable



Dry Times	13 - 21°C (55 - 70°F)	22 - 28°C (71 - 84°F)	>29°C (>85°F)
Tack Free	70 minutes	60 minutes	50 minutes
Dry to Topcoat	2 - 24 hours	1 - 24 hours	1 - 24 hours
Dry Hard	7 hours	6 hours	5 hours
Full Cure	7 days	7 days	7 days

Accelerated cure to dry hard:

Allow 30 minutes flash off at 24°C ± 3°C (75°F ± 10°F)
followed by 30 minutes at 65.5°C (150°F)

Note: If top coating after 24 hours sand and clean the primed surface before applying the topcoat.



VOC (EPA method 24):

Mixed, ready for use VOC	650 grams/liter
Base Component	510 grams/liter
Activator Component	690 grams/liter



Flash point closed cup:

Base Component	-6°C (22°F)
Activator Component	7°C (45°F)

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Shelf Life:

12 months from date of manufacture to most OEM material specifications. Consult the specification to verify shelf life requirements.

24 months from date of manufacture for PRC-DeSoto Standard.

Note: Shelf life is provided for original, unopened containers.

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

Storage Recommendations



Inspect the condition of the container to ensure compliance. The material should be stored at temperatures between 5°C to 35°C (41°F to 95°F) to ensure shelf life.

Note: When procuring to a qualified material specification, follow those storage instructions.



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Health Precautions

This product is safe to use and apply when recommended precautions are followed. Before using this product, read and understand the Safety Data Sheet (SDS), which provides information on health, physical and environmental hazards, handling precautions and first aid recommendations. An SDS is available on request. Avoid overexposure. Obtain medical care in case of extreme overexposure.

For industrial use only. Keep away from children.

Additional information can be found at: www.ppgaerospace.com

For sales and ordering information call the local PPG office at the numbers listed below:

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