

# DeSoto<sup>®</sup> 513X419 Military Epoxy Polyamide Primer

## TECHNICAL DATA SHEET

### Product Description

DeSoto<sup>®</sup> 513X419 military epoxy primer is a high solids, chemical and solvent resistant coating. It is used over aluminum and composite surfaces prior to top coating.

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

### Components



#### Mix ratio (by volume):

- 513X419 (base component) 3 parts
- 910X942 (activator component) 1 part

### Specifications



513X419 primers are qualified to:

- MCS 9053 Type 1 Class 1 Grade 1
- MIL-PRF-23377 Type I Class C2
- RBO 125-014 Grade B

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

#### **Product Compatibility:**

513X419 primers are compatible with the following topcoat specifications:

- DMS 2115
- DPM 6330
- MIL-PRF-85285
- MMS 420

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## Surface Preparation and Pretreatments



DeSoto® 513X419 epoxy polyamide 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.

## 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.

*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:**

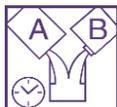
Not Required



### **Viscosity: (23°C/73°F)**

- |                         |                    |
|-------------------------|--------------------|
| • #2 Signature Zahn cup | 35 seconds maximum |
| • #4 Ford cup           | 25 seconds maximum |
| • ISO 4mm cup           | 58 seconds maximum |
| • BSB3 cup              | 58 seconds maximum |
| • BSB4 cup              | 30 seconds maximum |
| • AFNOR #4 cup          | 30 seconds maximum |

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



### **Pot Life:**

4 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:

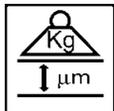
Ground the aircraft and the application equipment before priming. Stir the primer slowly during the application. The suggested film thickness is 20 to 30 microns (0.8 to 1.2 mils). This can be accomplished with one medium coat with a 50% overlap.

*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:

24 square meters/liter at 25 microns dry film (979 square feet/gallon at 1 mil dry film)  
Recommended dry film thickness; 20 to 30 microns (0.8 to 1.2 mils)



### Dry Film Density:

1.72 grams/cubic centimeter (14.33 pound/gallon)

### Dry Film Weight:

43 grams/square meter at 25 microns dry film (0.0088 pounds/square feet at 1 mil dry film)

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### Equipment:

513X419 primer is compatible with all current forms of spray equipment.

Equipment Type	Tip Size	Pot Pressure	Atomization Pressure at the Cap
Electrostatic Air Spray Gun	1.2 mm or 1.5 mm	10 to 20 psi (0.69 to 1.4 bar)	45 to 60 psi (3.1 to 4.1 bar)
Electrostatic Air Assisted Airless Spray Gun	#611 or #613 (Graco Nomenclature)	700 to 1200 psi (48 to 82 bar)	40 to 60 psi (2.8 to 4.1 bar)
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

## 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)
Dust Free	45 minutes	30 minutes	20 minutes
Tack Free	6 hours	5 hours	4 hours
Dry Through	9 hours	8 hours	6 hours
Dry to Topcoat	6 - 24 hours	5 - 24 hours	4 - 24 hours
Full Cure	14 days	14 days	14 days

Accelerated cure for dry hard:

Allow 15 minutes flash off at 24°C ± 3°C ( 75°F ± 10°F)  
followed by 30 minutes at 60°C (140°F)

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*Note: If top coating over 24 hours, then the primer surface needs to be sanded and cleaned before applying the topcoat.*



**VOC:**

Mixed, ready for use VOC (EPA method 24)	340 grams/liter
Base Component	353 grams/liter
Activator Component	255 grams/liter



**Flash point closed cup:**

Base Component	16°C (61°F)
Activator Component	6°C (42°F)

**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](http://www.ppgaerospace.com)**

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

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