DeSoto® 519X303 High Temperature Epoxy Primer

Product description

DeSoto® 519X303 is a high temperature epoxy primer that can withstand an operating temperature of up to 204°C (400°F). 519X303 can be used over aluminum and composite surfaces.

- Compatible with all current non-electrostatic spray equipment
- Excellent adhesion and corrosion resistance
- Room temperature curing
- Excellent fluid resistance
- Can be applied in a wide range of conditions
- Service temperature -54°C to 204°C (-65°F to 400°F)

Components

Mix ratio (by volume):

• 519X303 (base component)	3 parts
• 910X357 (activator component)	1 part
• 020X324 (thinner component)	2 parts

Specifications

519X303 primer is qualified to:

- 642AS0844
- 299-947-167 Type I
- CPW 268
- KMB-YW0002
- MEP 10-090
- MM1256
- MMS-425B
- MMS-436
- PCS5409
- PS 13375

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

Product compatibility:

519X303 primer is compatible with the following topcoat specifications:

- AIMS 04-04-21
- BAC 5710 Type 53
- BAMS 565-013
- CPW 269
- DPM 5893
- EMS 93284 Class A Grade 1
- HS 4675
- MMS 420
- PAI 3751-21-2
- RPS 13.84
- SMS-111207 Type 4

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Surface preparation and pretreatments

519X303 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 to the base component and stir well, and add the thinner component while stirring. 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	16 to 22 seconds
• #4 Ford cup	10 to 17 seconds
• ISO 3mm cup	37 to 64 seconds
• ISO 4mm cup	18 to 30 seconds
• BSB3 cup	26 to 34 seconds
• BSB4 cup	15 to 20 seconds
• AFNOR #2.5 cup	45 to 66 seconds
• AFNOR #4 cup	15 to 18 seconds

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

Pot life:

10 hours @ 21 - 25°C (70 - 77°F)

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Application guidelines

Optimum recommended application conditions:

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

Application:

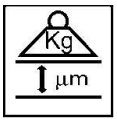
Ground the aircraft and the application equipment before priming. Stir the primer slowly during the application. The suggested film thickness is 25 to 50 microns (1.0 to 2.0 mils). This can be accomplished with one medium coat with a 50% overlap.

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:

6.5 square meters/liter at 25 microns dry film (267 square feet/gallon at 1 mil dry film)

Recommended dry film thickness; 25 to 50 microns (1.0 to 2.0 mils)



Dry film density:

1.44 grams/cubic centimeter (12.0 pounds/gallon)

Dry film weight:

36 grams/square meter at 25 microns dry film (0.00764 pounds/square feet at 1 mil dry film)

Equipment:

519X303 primer is compatible with all 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: Aluminized Blue-Green

Gloss: Not Applicable

Dry times	13 - 21°C (55 - 70°F)	22 - 28°C (71 - 84°F)	>29°C (>85°F)
Time between coats	45 minutes	30 minutes	20 minutes
Dry to stack	5 hours	4 hours	3 hours
Dry to overcoat	8 - 24 hours	6 - 24 hours	4 - 24 hours
Full cure	14 days	14 days	14 days

Accelerated cure for dry to stack:
Allow 30 minutes flash off at 24°C ± 3°C (75°F ± 10°F)
followed by 90 - 120 minutes at 121°C (250°F)

VOC:

Mixed, ready for use VOC (EPA method 24)	698 grams/liter
Base Component	622 grams/liter
Activator Component	744 grams/liter
Thinner Component	820 grams/liter

Flash point closed cup:

Base component	-4°C (24°F)
Activator Component	3°C (37°F)
Thinner Component	14°C (57°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: The coating shelf life is provided for original, unopened containers.

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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.

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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ASC – Australia
Tel 61 (3) 9335 1557
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This document has been reviewed by the PPG Aerospace Export Control Department and has been determined to contain only EAR99 controlled data

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