

45GY005 Chrome-Free Water Reducible Epoxy Primer

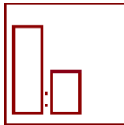
TECHNICAL DATA SHEET

Product Description

45GY005 is a chrome-free, water reducible, epoxy primer designed for use on composite surfaces.

- Fast dry
- Two hour overcoat time
- Water reducible
- Resistant to immersion in hydraulic fluids, lubricating oils, and distilled water

Components



Mix ratio (by volume):

- | | |
|--|---|
| • 45GY005 (base component) | 2 parts |
| • 45GY005CAT (catalyst component) | 1 part |
| • Reducer (Distilled or Deionized water) | 4.5 parts by volume
(150% ± 10% reduction) |

Specifications



45GY005 primer is qualified to:

- | | |
|-----------------------------|-------------|
| • BMS 10-103 Type I Grade E | • GAC 115AE |
| • MS100016E Class W | |

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

Product Compatibility:

45GY005 primer is compatible with the following topcoat specifications:

- | | |
|------------------------------|-----------------------|
| • BAMS 565-009 | • DHMS C4.04 |
| • BMS 10-11 Type II | • DPM 6546 |
| • BMS 10-60 Type I & Type II | • MEP 10-069 |
| • BMS 10-72 Type VIII | • MS 100029E Class HS |

Surface Preparation and Pretreatments



45GY005 primer can be applied over clean, dry and intact composite surfaces.

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Instructions for Use



Mixing Instructions:

1-Step mixing (mixed in base container):

Slowly add the entire catalyst component to the base component. Fill the can to the chime with distilled or deionized water. Secure the can lid and shake on paint shaker in an inverted position for 10 - 15 minutes. Do not shake longer than 15 minutes. Primer is now ready for use.

Kit Size	45GY005 Base	45GY005CAT	D.I. Water	Yield
Gallon	32 oz. / 946 ml	16 oz. / 473 ml	72 oz. / 2.13 L	120 oz. / 3.54 L
Quart	8 oz. / 236 ml	4 oz. / 118 ml	18 oz. / 532 ml	30 oz. / 886 ml

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:

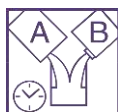
Not Required



Viscosity: (23°C/73°F)

- #2 EZ Zahn cup 4 to 20 seconds

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



Pot Life:

4 hours @ 21 - 25°C (70 - 77°F)

Application Guidelines

Recommended Application Conditions:

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

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Application:

Ground the aircraft and the application equipment before priming. Stir the primer slowly during the application. The suggested film thickness is 13 to 20 microns (0.5 to 0.8 mils). This can be accomplished by one medium coat with a 50% overlap.

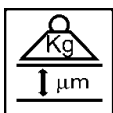
These application guidelines represent PPG's best advice in standard conditions. Some parameters will be influenced by environmental conditions, equipment settings, and other variables.



Theoretical Coverage:

10 square meters/liter at 25 microns dry film (400 square feet/gallon at 1 mil dry film)

Recommended dry film thickness: 13 to 20 microns (0.5 to 0.8 mils)



Dry Film Density:

1.82 grams/cubic centimeter (15.18 pounds/gallon)

Dry Film Weight:

4.3 grams/square meter at 25 microns dry film (0.0095 pounds/square feet at 1 mil dry film)



Equipment:

45GY005 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)

**Note: When spraying with electrostatic spray equipment, ensure that this is rated for use with water-borne coatings. Spraying water-borne coatings with regular electrostatic spray equipment can result in safety hazards.*

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Equipment Cleaning:

Water will clean approximately 95% of liquid primer remaining on equipment. Follow with Deft's IS-248 Cleaning Solvent for Water Reducible Primer to remove any residual primer from equipment. Once material has cured, use an approved chemical paint removal system to strip primer from parts and equipment.

Physical Properties (product)



Color: Light Gray



Gloss: Not Applicable



Dry Times	21 - 27°C (70 - 80°F)
Dust Free	30 minutes
Dry to Topcoat	2 hours
Full Cure	7 days

Note: Dry times above were established at room (ambient) temperatures, 75° ± 5°F and 50% ± 10% relative humidity.

For dry to stack conditions only: Allow a minimum of 30 minutes flash off time at ambient temperatures* prior to exposing painted parts to high temperatures. Complete testing should be done prior to use. Below are suggested starting points. Other variables may affect these cure schedules.

Temperature	Time
49°C (120°F)	45 minutes
60°C (140°F)	30 minutes
71°C (160°F)	20 minutes
82°C (180°F)	15 minutes

Note: Ambient temperatures are defined as 70° ± 10°F and 50% ± 10% relative humidity.

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VOC:

Mixed, ready to use VOC (EPA method 24)	339 grams/liter
Base Component	338 grams/liter
Catalyst Component	340 grams/liter



Flash point closed cup:

Base Component	22°C (72°F)
Catalyst Component	31°C (87°F)

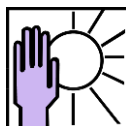
Shelf Life:

12 months from date of manufacture.

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

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