



Technical Data Sheet

Aerospace Coatings



44GN036 Water Reducible Epoxy Primer

Product Description

44GN036 is a chromated, water reducible, chemically cured, low density epoxy primer. Available in can kits for spray application or in Touch-up Kit for brushing/touch up application.

- Corrosion inhibiting
- Low VOC
- Water reducible
- Chemical and solvent resistant
- Resistant to immersion in hydraulic fluids, lubricating oils, phosphate ester based hydraulic fluids and distilled water

Components



Mix ratio of can kits (by volume):

- 44GN036 (base component) 2 parts
- 44GN036CAT (catalyst component) 1 part
- Reducer (Distilled or Deionized water) 4.5 parts water by volume (150% reduction)

Available in touch up kits. For more details see [Instructions For Use Section](#).

Specifications



44GN036 primer is qualified to:

- 5PTMRT03
- PWA 36515-1
- FMS-3027 FORM 2

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

Product compatibility:

44GN036 primer is compatible with the following topcoat specifications:

- DMS2115
- MIL-PRF-85285
- MIL-PRF-22750
- MMS420

Surface preparation and pretreatments



44GN036 can be applied over clean, dry, intact aluminum surfaces treated with materials conforming to MIL-DTL-5541 or equivalent.

44GN036 Water Reducible Epoxy Primer

Instructions for use



Mixing instructions:

Standard can kit (mixed in separate container):

Stir or shake the base component to ensure any pigment, which may have settled on the bottom of the can, has been fully incorporated into the base. Do not stir or shake the base component longer than 5 minutes. Pour two volumes of base component into a separate clean container. Slowly add the one volume of catalyst to the two volumes base component. Mix by hand stirring, paint shaker or mechanical mixing to ensure the base/catalyst mixture is homogeneous. Do not shake or mechanically mix material for longer than 5 minutes. To the catalyzed primer, add approx. 4.5 volumes (150%) of distilled or deionized water. Slowly add the water in one-third increments, mixing thoroughly after each addition, until fully incorporated and homogeneous. Be sure to scrape the sides and bottom of the container. Constant agitation of the material during spray application is recommended. The water is used to adjust the viscosity. Volumes of water needed may vary between 125 - 175%.

1-Step mixing (mixed in base container):

Add the entire catalyst component to the base component container. Fill the can to the chime with distilled or deionized water. Secure the can lid and place on paint shaker in an inverted position for 10 - 15 minutes. **DO NOT SHAKE LONGER THAN 15 MINUTES.** Primer is now ready for use.

Touch-up kits available in 1TU and 1ATU configuration:

Mix ratio (1TU) 2:1 parts by volume
 2 parts 44GN036 base component to
 1 part 44GN036CAT catalyst component

Mix ratio (1ATU) 2:3 parts by volume
 2 parts 44GN036 base component to
 3 part 44GN036CAT catalyst/Acetone blend

All touch-up kit configurations consist of an inner cup, which contains the 44GN036CAT catalyst or catalyst/acetone blend located inside an outer cup (bottle) that contains the 44GN036 base component.

To mix, remove lid, pour contents of inner cup (catalyst or catalyst / acetone blend) into outer cup (base). Replace lid and shake well by hand, approximately 2 minutes. Material is now ready to apply.



Induction time:

Not Required

44GN036

Page 2

44GN036 Water Reducible Epoxy Primer



Viscosity (can kits): (23°C/73°F)

- #2 EZ Zahn cup 20 ± 2 seconds
- #4 Ford cup 16 ± 2 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%

Application:

Stir the primer slowly during the application. The suggested film thickness is 15 to 22.5 microns (0.6 to 0.9 mils). This can be accomplished with one medium coat with a 50% overlap.

Touch-Up-Kit application:

After mixing the touch-up-kit, use a brush, roller or Preval® Sprayer to apply.

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:

9.25 square meters/liter at 25 microns dry film (388 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:

1.44 grams/cubic centimeter (12.01 pounds/gallon)

Dry film weight:

36.6 grams/square meter at 25 microns dry film (0.00750 pounds/square feet at 1 mil dry film)

44GN036 Water Reducible Epoxy Primer



Equipment:

44GN036 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.*

Equipment cleaning:

Water will clean approximately 95% of liquid primer remaining on equipment. Follow with 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: Green



Gloss: Not Applicable



Dry times	21 - 27°C (70 - 80°F)
Tack free	1 hour minimum
Overcoat time	2 hours minimum to – 8 hours maximum*
Dry hard	6 hours maximum
Full cure	7 days

44GN036

Page 4

44GN036 Water Reducible Epoxy Primer

*If the 8-hour maximum overcoat time is exceeded, solvent wipe the entire primed surface prior to applying topcoat. After 24 hours of dry time, scuff sand the entire primed surface followed by solvent wiping prior to applying topcoat

Higher temperatures will reduce the recoat time while lower temperatures will increase the recoat times.

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

Forced dry schedules: For dry to stack conditions only. Allow a minimum of 15 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.

VOC

VOC:

Mixed, ready to use VOC (EPA method 24)	346 grams/liter
Base Component	346 grams/liter
Catalyst Component	344 grams/liter



Flash point closed cup:

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

Shelf life:

Can kit: 12 months from date of manufacture.

Touch Up kit: 4 months from date of packaging.

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.

44GN036

Page 5

44GN036 Water Reducible Epoxy Primer

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.

44GN036 Water Reducible Epoxy Primer

All recommendations, statements, and technical data contained herein are based on tests we believe to be reliable and correct, but accuracy and completeness of said tests are not guaranteed and are not to be construed as a warranty, either expressed or implied. User shall rely on his own information and tests to determine suitability of the product for the intended use and assumes all risks and liability resulting from his use of the product. Seller's and manufacturer's sole responsibility shall be to replace that portion of the product of this manufacturer which proves to be defective. Neither seller nor manufacturer shall be liable to the buyer or any third person for any injury, loss, or damage directly or indirectly resulting from use of, or inability to use, the product. Recommendations or statements other than those contained in a written agreement signed by an officer of the manufacturer shall not be binding upon the manufacturer or seller.

PRC-DeSoto International, Inc.

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44GN036

Page 7



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