

## FR89 Low VOC Epoxy Filler

### Product Description

FR89 is a two pack, pigmented low VOC epoxy filler designed as a ground coat to enhance the appearance of either epoxy or polyurethane topcoats used on the external structure of aircraft.

- Chemical resistant
- Sandable
- Direct adhesion to composites
- Meets SHR requirements of Def Stan 00-080

### Components



#### Mix Ratio (by volume)

- FR89 (Base) 3 parts
- ACT205 (Activator) 1 part

### Specifications



FR89 is qualified to:

- Def Stan 80-216

#### Product Compatibility

FR89 is compatible with the following primer/topcoat specifications:

- BS2X33A+B
- BS2X34A+B
- Def Stan 80-161
- Def Stan 80-225

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

### Surface Preparation and Pretreatment



Ensure surface is clean, dry and intact, using a high performance cleaner - DeSoto® CN20 or Desoclean™ 45 solvent cleaners are recommended.

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## Instructions for Use



Thoroughly stir base to ensure all components are adequately dispersed. Add activator while stirring.

*Note: All products and components should be placed in ambient conditions of 15-30°C (59-86°F) for at least 24 hours prior to mixing and application.*



### **Induction Time:**

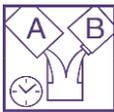
Not required



### **Viscosity:** (23°C/73°F)

- |          |                 |
|----------|-----------------|
| • AFNOR4 | 19 - 28 seconds |
| • BSB3   | 35 - 55 seconds |
| • FORD4  | 17 - 24 seconds |
| • ISO4   | 34 - 53 seconds |
| • ZAHN2  | 22 - 34 seconds |

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



### **Pot Life:**

3 hours @ 21 - 25°C (70 - 77°F)

## Application Guidelines

### **Recommended Application Conditions:**

Temperature	15 - 30°C (59 - 86°F)
Relative Humidity	30 - 80%

### **Application:**

Apply 1-2 double track coats to achieve the recommended dry film thickness of 30-40µm

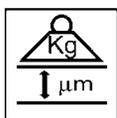


### **Theoretical Coverage:** (ready for use)

16 m<sup>2</sup>/Lt @ 35 µm dry film thickness  
640 ft<sup>2</sup>/US gal @ 1.4 mil dry film thickness

### **Recommended Dry Film Thickness:**

30-40 µm  
1.2-1.6 mil



### **Dry Film Density:**

1.87 g/cm<sup>3</sup>  
15.6 lbs/US gal

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## Dry Film Weight:

66 g/m<sup>2</sup> @ 35 µm dry film thickness  
0.013 lbs/ft<sup>2</sup> @ 1.4 mil dry film thickness

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

**Equipment:** FR89 is compatible with all current types of spray equipment.



Equipment Type	Tip Size	Material Pressure	Pot Pressure	Atomisation Pressure
Airmix	609 to 611	29 to 44 psi (2 to 3 bar)		43 to 58 psi (3 to 4 bar)
HVLP Airspray	1.4 to 1.8			29 psi (2 bar)
Pressure Pot	1.0 to 1.2		10 psi (0.7 bar)	29 psi (2 bar)
Airless	609 to 611			29 to 44 psi (2 to 3 bar)
Air Assisted Electro	609 to 611	29 to 44 psi (2 to 3 bar)		58 to 73 psi (4 to 5 bar)
Low Pressure Electro	1.0 to 1.2	15 to 29 psi (1 to 2 bar)		44 to 73 psi (4 to 5 bar)

## Physical Properties



### Colour:

White



### Gloss:

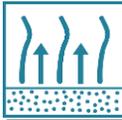
≤ 25 units with a 60° gloss meter



Drying Times @ 50 % R.H.	23°C (73°F)	70°C (158°F)
Dry to Sand	8 hours	
Hard Dry	6 hours	1 hours
Dry to Overcoat (without sanding)	8 to 48 hours	
Full Cure	7 days	3 hours

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*Note: Drying times listed above are dependent upon film thickness applied, air flow conditions and application technique.*



## Flash Off Time:

N/A



## VOC: (ASTM)

Mixed ready for use	370 g/Lt
FR89 Base Component	380 g/Lt
ACT205 Activator	330 g/Lt



## Flash Point:

FR89 Base Component	-11°C (12°F)
ACT205 Activator	23°C (73°F)

## Shelf Life:

FR89 Base Component	24 months in original unopened container
ACT205 Activator	24 months in original unopened container

*Note: Shelf life may vary due to OEM specification requirements. Refer to container label for specific shelf life information.*

*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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### **Americas**

1 (818) 362-6711 or 1-800-AEROMIX

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