PPG NOVAGUARD® 5090 Epoxy Filler

formerly known as Milamar ICO GEL Epoxy Filler

DESCRIPTION

Three-component, 100% solids, epoxy patching material primarily designed for horizontal, vertical and overhead applications

PRINCIPAL CHARACTERISTICS

- 100% solids
- Can fill holes up to 1" (2.5 cm) thick on vertical or overhead surfaces without shrinkage or sagging
- Bonds to dry and damp concrete
- Self priming on concrete and steel
- TYPICAL USES:
- Filler for bug holes and surface cracks in concrete
- To fill bug holes, crevices and cracks on vertical walls and floors, vertical stair repairs and concrete columns
- Pit filler / seam sealer for steel
- Repair of badly eroded manholes, sumps and sewers
- Particularly suited for vertical and overhead repairs where constant dampness is present

COLOR AND GLOSS LEVEL

- Neutral
- White
- Concrete gray

BASIC DATA AT 77°F (25°C)

Data for mixed product	
Number of components	Three
Mass density	9.3 lb/US gal (1.1 kg/l)
Volume solids	100 ± 2%
VOC (Supplied)	EPA Method 24: 0.0 lb/US gal (3.5 g/l)
Theoretical spreading rate	40 ft^2/US gal for 125.0 mils (1.0 m^2/l for 3125 µm)
Dry to touch	50 minutes
Overcoating Interval	Minimum: 6 hours Maximum: 18 hours
Curing time	18 hours
Full cure after	7 days
Shelf life	Part A: at least 12 months when stored cool and dry Part B: at least 12 months when stored cool and dry Part C: at least 12 months when stored cool and dry

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Notes:

- Curing time reflects ready for service time
- If overcoat time is exceeded, abrade and clean surface before recoating
- Listed data for mixed product using standard hardener.

RECOMMENDED SUBSTRATE CONDITIONS AND TEMPERATURES

Concrete

- All surfaces must be sound, clean, free of oil, grease, dirt, mildew, curing compounds, loose and flaking paint, and other foreign substances
- New concrete must cure a minimum of 28 days prior to application
- Prepare in accordance with SSPC SP-13 guidelines

Steel

- Abrasive blast with an angular abrasive to an SSPC SP-10 cleanliness or higher. Achieve a surface profile of 4.0 mils (100 µm)

INSTRUCTIONS FOR USE

- When adding Part C fill/aggregate to mixed Part A and Part B, ratio is 0.6:1 by volume (1.5:1 by weight).

Mixing ratio by volume: Part A to Part B 3.5:1

- Mix Part A and Part B together using a paint paddle or low speed drill mixer for 1 minute
- Add the aggregate slowly and mix for another minute
- Properly mixed material will be a uniform color without light or dark spots
- For recommended application instructions, see working procedure

Note:

- Listed mixing ratio is for standard and rapid cure (RPD) hardener. For fast cure (FC) hardener, Part A to Part B mixing ratio should be 4.86:1 by volume

Application

- Can be applied on vertical surfaces up to 1” (2.5 cm) thick
- Use a clean margin trowel or spatula
- Press the product firmly into place in a wiping motion. Use enough material to overfill the opening
- Can be applied up to 1” (2.5 cm) depths without sagging

Note:

- For application thickness between 1 in. (2.5 cm) and 3 in. (7.6 cm) per coat, standard Part C fill material can be replaced with the XT Part C fill material.

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Pot life

40 minutes at 77°F (25°C)

Note:

- Listed data is for product with standard hardener.

ADDITIONAL DATA

Working time for product with rapid cure (RPD) hardener

- 50 minutes at 50°F (10°C)
- 40 minutes at 77°F (25°C)
- 35 minutes at 90°F (32°C)

Working time for product with fast cure (fc) hardener

- 40 minutes at 50°F (10°C)
- 35 minutes at 77°F (25°C)
- 25 minutes at 90°F (32°C)

Working time for product with standard hardener

- 65 minutes at 50°F (10°C)
- 50 minutes at 77°F (25°C)
- 40 minutes at 90°F (32°C)

Maximum Recoat Time (without sanding) at 77°F (25°C)

- Standard hardener: 18 hours
- Rapid cure (FC) hardener: 10 hours
- Fast cure (FC) hardener: 6 hours

Physical data of cured material	
Characteristic	**Value**
Tensile Strength (ASTM C307)	1,810 psi (12.5 MPa)
Tensile Elongation (ASTM D638)	10%
Compressive Strength (ASTM D695)	6,170 psi (45 MPa)
Bond Strength (ASTM C482)	>1000 psi (>6.9 MPa)
Hardness, Shore D (ASTM D2240)	80
Water Absorption (ASTM C413)	0.3%

Note:

- The value ranges stated in this Product Data Sheet are based on system processing under laboratory conditions. Equipment configurations and/or field application conditions may produce variances in final system values.

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Drying time with rapid cure (RPD) hardener	
Substrate temperature	**Dry to service**
50°F (10°C)	48 hours
77°F (25°C)	10 hours
90°F (32°C)	7 hours

Drying time with fast cure (FC) hardener	
Substrate temperature	**Dry to service**
50°F (10°C)	20 hours
77°F (25°C)	8 hours
90°F (32°C)	4 hours

Drying time with standard hardener	
Substrate temperature	**Dry to service**
50°F (10°C)	72 hours
77°F (25°C)	18 hours
90°F (32°C)	10 hours

Pot life for product with standard hardener	
Mixed product temperature	**Pot life**
50°F (10°C)	10 minutes
77°F (25°C)	8 minutes
90°F (32°C)	5 minutes

Pot life for product with rapid cure (RPD) hardener	
Mixed product temperature	**Pot life**
50°F (10°C)	10 minutes
77°F (25°C)	8 minutes
90°F (32°C)	5 minutes

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Pot life for product with fast cure (FC) hardener	
Mixed product temperature	**Pot life**
50°F (10°C)	10 minutes
77°F (25°C)	8 minutes
90°F (32°C)	5 minutes

DISCLAIMER

- PPG Protective & Marine Coatings does not accept any responsibility or liability for any odor, taste or contamination imparted to the drinking water from the coatings or products retained in the coating

SAFETY PRECAUTIONS

- Read all label and Safety Data Sheet (SDS) information prior to use

WORLDWIDE AVAILABILITY

It is always the aim of PPG Protective & Marine Coatings to supply the same product on a worldwide basis. However, slight modification of the product is sometimes necessary to comply with local or national rules/circumstances. Under these circumstances an alternative product data sheet is used.

REFERENCES

- Information sheet | Explanation of product data sheets

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