

# 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 <sup>2</sup> /US gal for 125.0 mils (1.0 m <sup>2</sup> /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

Notes:

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- 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.

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## 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

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### 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)

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## INSTRUCTIONS FOR USE

### Mix as packaged

- 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

### Notes:

- Use of Part C is optional, add as required to achieve consistency for desired applications
- Part C not required when used as a pit filler/seam sealer on steel
- When adding Part C to mixed Part A and Part B, ratio is 0.6:1 by volume (1.5:1 by weight)

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### 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 standard hardener**

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

**Working time for product with medium cure (MC) 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)

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

- Standard hardener: 18 hours
- Medium cure (MC) 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 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

## Drying time with medium cure (MC) 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

## Pot life for product with standard hardener

Mixed product temperature	Pot life
50°F (10°C)	45 minutes
77°F (25°C)	40 minutes
90°F (32°C)	15 minutes

## Pot life for product with medium cure (MC) hardener

Mixed product temperature	Pot life
50°F (10°C)	45 minutes
77°F (25°C)	30 minutes
90°F (32°C)	10 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

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- 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
- Guide | PPG NOVAGUARD 5090 | Application guidelines

## WARRANTY

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