

# METZ 12PHF

## CARBON FILLED FURANE COMPOUND



### DESCRIPTION:

Metz 12PHF is a three part phenolic modified furane resin based bedding and jointing compound which is resistant to a wide range of chemicals, including hydrofluoric acid.

### FEATURES AND BENEFITS:

- **Superior Chemical Resistance**  
Resistant to a wide range of chemicals including acids, alkalis, salts, fats and oils. Refer Metz Chemical Resistance Chart.
- **Excellent Solvent Resistance**  
Ideal for use when exposed to strong solvents.
- **Hydrofluoric Acid Exposure**  
Metz 12PHF resists attack by hydrofluoric acid.
- **High Performance at Elevated Temperatures**  
May be used at temperatures of up to 230°C.
- **Impermeable**  
Prevents ingress of aggressive liquids.

### RECOMMENDED:

Recommended for bedding and grouting carbon bricks and tiles.

- Flooring
- Reaction Vessels
- Towers
- Bunds
- Acid Tanks
- Pits
- Drains

### NOT RECOMMENDED:

- For use in direct contact with concrete or metal. Consult Metz for recommended membrane.
- For areas subject to immersion in strong oxidizing acids (e.g. nitric, chromic, concentrated sulphuric acid. Refer Metz 7KE, Metz Sauereisen 65, Metz 14VE or Metz 6NF).
- For areas subject to strong chemicals after limited curing times.
- For installations where dry surfaces cannot be achieved.

### PHYSICAL PROPERTIES: (Typical Values)

|                        |                             |
|------------------------|-----------------------------|
| Temperature Limit:     | 230°C                       |
| Compressive Strength:  | 55MPa                       |
| Modulus of Elasticity: | 10,000 MPa                  |
| Bond Strength          | 7MPa                        |
| Tensile Strength       | 7.5MPa                      |
| Shrinkage              | 0.18%                       |
| Density:               | 1.40-1.45 g/cm <sup>3</sup> |
| Colour:                | Black                       |

### COVERAGE: Theoretical quantities (allow for wastage)

|   |               |
|---|---------------|
| For fully bedding and jointing (nominal 3mm joint) standard 75mm thick acid brick | 0.26 kg/brick |
| For bonding bricks in independent brick wall (105mm thick)                        | 0.17 kg/brick |
| For fully bedding and jointing tiles 240 x 115 x 30mm (6mm joint)                 | 11.6 kg/sq.m. |
| For jointing tiles only 240 x 115 (6mm x 20mm joint)                              | 2.4 kg/sq.m.  |

### APPLICATION TEMPERATURE:

The recommended temperature range for application is 15°C to 30°C.

At temperatures below 15°C, curing may be inhibited and final technical properties may be affected.

At temperatures above 30°C consistency and setting rates may be affected.

If necessary consult Metz.



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### INSTRUCTIONS FOR USE

#### 1. Temperature of Working Area

Maintain a temperature of between 15°C and 30°C on the Metz components, brick or tile and substrate during mixing and application. Air temperature in the area where Metz 12PHF is to be applied should also be between 15°C and 30°C. At temperatures below 15°C, the material will not cure properly. Consult Metz if temperature cannot be maintained above 15°C.

At temperatures above 30°C initial set will take place too rapidly. This difficulty can be overcome by mixing in a cooler area, or by cooling the mixing equipment with ice water, and by cooling the Metz components.

#### 2. Surface Preparation

All surfaces must be clean and completely dry. Metz 12PHF will not adhere to concrete or metal surfaces. These surfaces must first be coated with a membrane. Consult Metz for recommendations.

#### 3. Mixing

##### a) Equipment

Mechanical mixing is recommended. A low speed dough mixer or a heavy duty drill with a suitable mixing paddle can be used. Small quantities can be mixed by hand, using a trowel or spatula.

##### b) Mixing Proportions

|              | By Weight | By Volume |
|--------------|-----------|-----------|
| 12P Liquid   | 2.5       | 1.4       |
| 12P Hardener | 1.0       | 1.0       |
| 12PHF Powder | 3.0       | 1.8       |

#### NOTE:

The powder proportion may be adjusted to suit conditions ( $\pm 10\%$ ).

##### c) Mixing Procedure

Thoroughly mix liquid and hardener together first. Apply powder gradually and mix thoroughly. Do not leave mixed material in thick mass as this will greatly accelerate its setting. Spread freshly mixed material thinly in shallow tray.

##### d) Pot Life

30 minutes at 20°C.

##### e) Clean Up

Use METZ Cleaner, acetone or MEK.

##### f) Ensure you have the latest mixing instructions, refer [www.metz.net.au](http://www.metz.net.au) for latest data sheet version.

#### 4. Installation

##### a) Application

Apply by trowel. Apply approximately 3mm of Metz 12PHF to membrane or to brick course. Butter one side and end of brick with Metz 12PHF. Tap brick into place with joints of minimum width (3 to 4.5mm).

Ensure full bonding of bricks with minimum voids. Strike off excess material with trowel before it begins setting.

When jointing bricks or tiles on floors, ensure joints are flush with tile surface.

##### b) Setting Time at 20°C

5 hours

##### c) Physical Curing Time at 20°C

3 to 4 days

(complete chemical cure 4-6 weeks)

#### 5. Storage

Store in a cool, dry environment for a minimum shelf life of 6 months.

#### 6. Standard Pack Sizes

12PHF Liquid 20kg pail, 225kg drum, 1000kg IBC

1PHF Hardener 15kg pail

12PHF Powder 15kg bag

#### 7. Safety Precautions

##### a) Liquid

Avoid all contact with skin and eyes.

Use chemical goggles, PVC gloves and barrier cream.

##### b) Powder:

Use dust respirator, PVC gloves, barrier cream and chemical goggles.

##### c) Cleaner:

Inflammable. Ensure adequate ventilation.

For full safety precautions, refer to the Material Safety Data Sheet for each component.

Always ensure you have the latest data sheet version, refer [www.metz.net.au](http://www.metz.net.au)

- The customer must comply strictly with the instructions contained in this product data sheet. Metz is not responsible for any advice or variations to this data sheet which are not confirmed in writing.
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