

MASTERTOP® 1220

Slip resistant seamless flooring system

DESCRIPTION

MASTERTOP 1220 is a slip resistant, seamless floor, based on an advanced solvent-free epoxy resin system and selected graded aggregates. The degree of slip resistance can be adjusted to suit different service conditions and cleaning requirements. The cured floor provides high resistance to chemical attack and mechanical wear.

MASTERTOP 1220 is one of the floors available of the Polykit system. The Polykit consists of a limited number of standardised components, which allows production of a wide range of epoxy resin floors for different application in a variety of colours.

FIELDS OF APPLICATION

MASTERTOP 1220 is recommended for floors where a good slip resistant surface is essential and where mechanical abrasion and chemical spillage could be a risk of floor damage. It is ideal for floors in:

- automotive, aircraft and engineering facilities
- food and beverage industry
- general production and packaging areas
- wet process and wash down areas
- cosmetic and chemical industries

FEATURES AND BENEFITS

Chemical, abrasion and impact resistant Withstands chemical and mechanical attack. Lower maintenance cost.

Adjustable slip resistance Safe working areas.

Impervious, seam and joint-less Allows floor surface to be maintained in a hygienic state.

Wide colour range Attractive floors, pleasant working environment.

TYPICAL PERFORMANCE DATA

| | |
|---|--|
| 7 days cure @ 20°C using A4,B4,X1 and F1A | |
| Compressive strength(DIN 1164) | : > 60 N/mm ² |
| Flexural strength (DIN 1048) | : 35 N/mm ² |
| Bond strength (DIN ISO 4624) | : > 1.5 N/mm ² |
| Abrasion resistance (DIN 53754) | : 98 mg |
| Modulus of elasticity (DIN 1048) | : 9000 N/mm ² |
| Coeff. of linear expansion (DIN 53752) | : 8 x 10 ⁻⁵ K ⁻¹ |
| Service Temperature | : -20°C to 60°C |
| Application Temperature | : Minimum 10°C : Maximum 35°C |

PROPERTIES

a. Components

| | Supply form | Colour | Density kg/L |
|------------------------|-------------|-----------|--------------|
| MASTERTOP P 601 Part A | liquid | amber | 1.10 |
| MASTERTOP P 601 Part B | liquid | amber | 1.05 |
| A4 | liquid | amber | 1.1 |
| B4 | liquid | amber | 1.0 |
| MASTERTOP X1 | paste | coloured | 2.0 |
| Filler F1A | solid | off white | 2.6 |
| Filler F5 | solid | off white | 2.6 |
| Filler F5A | solid | off white | 2.6 |
| Filler F16 | solid | off white | 2.6 |

b. Mixed systems

| | Components | Mix ratio by weight |
|--------------------------|--------------|---------------------|
| Primer (MASTERTOP P 601) | A:B | 100:27 |
| Broadcast with filler | F1A | 1.5 – 2 |
| Body Coat (A4/B4) | A4:B4:X1:F1A | 5.4:3:0.6:12 |
| Top Coat (A4/B4) | A4:B4:X1:F16 | 5.4:3:0.6:3 |

Pot-life (minutes)

| | @ 10°C | @ 20°C | @ 30°C |
|-----------|--------|--------|--------|
| Primer | 70 | 35 | 20 |
| Body Coat | 120 | 60 | 20 |
| Top Coat | 90 | 45 | 20 |

Curing time (days)

| | @ 10°C | @ 20°C | @ 30°C |
|-----------|--------|--------|--------|
| Primer | 5 | 2 | 1 |
| Body Coat | 7 | 3 | 2 |
| Top Coat | 5 | 2 | 1 |

Maximum permissible relative humidity

| | @ 10°C | at >23°C |
|----------------|--------|----------|
| All components | 75 % | 90 % |

APPLICATION

Surface Preparation

The compressive strength of the substrate shall not be less than 25 N/mm². The concrete slab in contact with the ground must have a vapour barrier installed in compliance with DIN 18195 or equivalent. Suitable substrates should be primed with **MASTERTOP P 601** or suitable primer as recommended by BASF.

The moisture content of the substrate shall not be higher than 6% throughout. The temperature of the substrate



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must be at least 3°C above the current dew point temperature.

Surfaces must be structurally sound, clean, and free from loose particles, oil, grease, and all other contaminants. Remove oil, grease and wax contaminants by scrubbing with industrial grade detergent or degreasing compounds followed by mechanical cleaning. Cement laitance, loose particles, mould release agents, curing membranes and other contaminants must be removed from the surface by shot blasting, Blastrac[®], scarifying or grit-blasting followed by vacuum cleaning.

After pre-treatment of the substrate, the bond strength of the substrate must be at least 1.5 N/mm². For filling up surface irregularities such as blowholes, cracks, honeycombs, etc., please consult BASF Construction Chemicals sales representative.

Protect walls and columns against resin splashes using masking tape and plastic sheeting.

PRIMER

Mixing

Use a low speed electric drill fitted with a paint mixer or a wing type paddle. Mix one unit of MASTERTOP P 601 Part A with one unit of MASTERTOP P 601 Part B and mix for at least 3 minutes or until the mix is homogeneous and free of streaks.

Placing

Immediately after mixing, pour the material onto the substrate and spread the mixed material using a squeegee or paint roller. The primary purpose of this primer coat is to seal the substrate completely and avoid air-bubbles formation in the placement of the Body Coat.

When the primer is still wet, broadcast with F1A lightly in the event of delay in subsequent steps. Remove excess F1A.

On very porous substrates, a scratch primer will be preferred, please consult BASF Construction Chemicals sales representative for details.

BODY COAT

Mixing

Use a low speed electric drill fitted with a paint mixer or a wing type paddle. Mix one unit of A4 resin with a pack of MASTERTOP X1 until the colour is uniform then add one unit of B4 hardener and mix for at least 3 minutes or until the mix is uniform and free of streaks. Continue to mix and add one bag of F1A filler until a homogeneous mix is obtained.

Placing

Depending on the substrate condition, apply 1.7 to 2.0 kg/m² (not less than 1.5mm of the mix, using a notched trowel or a normal steel trowel.

Broad casting of Filler

The Body Coat should be left to settle for at least 2 to 5 minutes, prior to broadcasting.

F5 filler is broadcast to saturation onto the wet Body Coat (rainfall pattern). This will give a higher slip resistance but is coarser in appearance.

F5A filler is finer particle size broadcast filler to give a finer appearance compared to F5.

After overnight curing, remove excess aggregate with an industrial vacuum cleaner. Give the floor a light scraping with the edge of the trowel or a light sanding to remove rough spots and loosely bonded aggregate.

Note: If maximum wear and tear is required, the application of a second Body Coat is recommended in order to achieve the required thickness. Please refer to Estimating Data.

In some cases where the areas are subjected to less traffic, a Body Coat may not be required.

TOP COAT

Before application of Top Coat, remove all excess broadcast fillers with steel trowel to ensure proper adhesion of the subsequent coat.

Mixing

Use a low speed electric drill fitted with a paint mixer or a wing type paddle. Mix one unit of A4 resin with one pack of MASTERTOP X1 and 3 kg of F16 until the mix is uniform. Then add one unit of B4 hardener and mix for at least 3 minutes or until the mix is consistent and free of streaks.

Placing

Immediately after mixing, pour the material onto the Body Coat. Spread the mixed material using a squeegee. The amount of material applied determines the smoothness of the finish. Back roll with short hair mohair roller. Depending on the finish required, a second roller coat might be required.

Following the application of the **MASTERTOP 1220**, protect coated area for at least 24 hours from spillage, dust, insects, small animals, traffic, rain, moisture, etc.

CLEANING

Clean tools and equipment first with paper towels or rags, then wipe using a solvent such acetone or methyl-iso-butyl ketone before the resin system hardens.

ESTIMATING DATA

For thickness of 2.0 to 2.5 mm (One Body Coat only)

| System | Product | kg/m ² | Thickness mm |
|---------------------------|-------------------|-------------------|--------------|
| Primer | MASTERTOP P 601 | 0.2 - 0.4 | 0.2 - 0.3 |
| 1 st Body Coat | A4:B4:X1:F1A | 1.7 - 2.0 | 1.0 - 1.2 |
| Broadcast filler | Filler F5 / F5A # | 3.0 - 4.0 | 1.0 - 1.5 |
| Top Coat | A4:B4:X1:F16 | 0.4 - 0.6 | 0.3 - 0.4 |

F5 for coarse finish

F5A for finer appearance compared to F5



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For thickness of 3.0 to 4.0 mm (Two Body Coats)

| System | Product | kg/m ² | Thickness mm |
|---------------------------|-------------------|-------------------|--------------|
| Primer | MASTERTOP P 601 | 0.2 - 0.4 | 0.2 - 0.3 |
| 1 st Body Coat | A4:B4:X1:F1A | 1.7 - 2.0 | 1.0 - 1.2 |
| Broadcast filler | Filler F5 | 3.0 - 4.0 | 1.0 - 1.5 |
| 2 nd Body Coat | A4:B4:X1:F1A | 1.7 - 2.0 | 1.0 - 1.2 |
| Broadcast filler | Filler F5 / F5A # | 3.0 - 4.0 | 1.0 - 1.5 |
| Top Coat | A4:B4:X1:F16 | 0.4 - 0.6 | 0.3 - 0.4 |

For thickness of 1.0 to 1.5 mm (No Body Coat)

| System | Product | kg/m ² | Thickness mm |
|------------------|-------------------|-------------------|--------------|
| Primer | MASTERTOP P 601 | 0.4 - 0.6 | 0.3 - 0.4 |
| Broadcast filler | Filler F5 / F5A # | 3.0 - 4.0 | 1.0 - 1.5 |
| Top Coat | A4:B4:X1:F16 | 0.4 - 0.6 | 0.3 - 0.4 |

F5 for coarse finish
F5A for finer appearance compared to F5

PACKAGING

| | |
|-----------------|---------------------------|
| A4 Resin | 5.4 kg/pail |
| B4 Hardener | 3.0 kg/can |
| MASTERTOP P 601 | 30.0 kg/set |
| MASTERTOP X1 | 0.6 kg/pack |
| Filler F1A | 12.0 kg/bag and 15 kg/bag |

| | |
|------------|-------------|
| Filler F5 | 25.0 kg/bag |
| Filler F5A | 25.0 kg/bag |
| Filler F16 | 25.0 kg/bag |

SHELF LIFE

All components in **MASTERTOP 1220** can be kept for 12 months from date of manufacture, if stored in original unopened packaging, in a dry enclosed place without exposing to direct sunlight and at temperatures between 15 to 35°C.

PRECAUTIONS

MASTERTOP 1220 contains certain chemicals which can cause skin irritation if exposed and respiratory reaction if inhaled. Wear gloves, masks and use hand barrier cream while handling the product. Wash thoroughly after handling.

Should skin contact occur, wash immediately with soap and water or an effective hand cleaner.

In case of accidental eye contact, wash with copious quantity of water and immediately seek medical advice. If ingested, do not induce vomiting. Consult a doctor immediately.

Vapours of solvents used for cleaning can be irritating. It is therefore recommended that cleaning be done in well-ventilated areas.

Fire: Keep away from sources of ignition. Do not smoke whilst handling the product.

Flash point: 110°C.

For detailed Health, Safety and Environmental Recommendations, please consult and follow all the instructions on the product Material Safety Data Sheet.

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STATEMENT OF RESPONSIBILITY

The technical information and application advice given in this **BASF Construction Chemicals** publication are based on the present state of our best scientific and practical knowledge. As the information herein is of a general nature, no assumption can be made as to a product's suitability for a particular use or application and no warranty as to its accuracy, reliability or completeness either expressed or implied is given other than those required by law. The user is responsible for checking the suitability of products for their intended use. **BASF Construction Chemicals data sheets are updated on a regular basis and it is the user's responsibility to obtain the most recent issue.**

NOTE

Field service where provided does not constitute supervisory responsibility. Suggestions made by **BASF** either orally or in writing may be followed, modified or rejected by the owner, engineer or contractor since they, and not **BASF Construction Chemicals**, are responsible for carrying out procedures appropriate to a specific application.

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