

Shield Plus



MICSHIELD®

Polymer-modified, Cement-based, Deformable Tile Adhesive with Improved Additional Characteristics for Porcelain Tiles and Natural Stone
(Formerly known as Shieldfix 116)

Description

Shield Plus is a polymer-modified, cement-based, thin-set tile adhesive, supplied ready to use as a pre-bagged dry powder that requires the addition of clean water on site. **Shield Plus** is modified with improved characteristics, making it ideally designed for porcelain and large format tiles as well as natural stones. Available in white and grey colors.

Uses

- Bonding porcelain, large format tiles, and natural stone on cement-based substrates such as concrete, plaster, and screeds.
- Suitable for use in swimming pools, shower areas, and other continuously submerged environments.
- Can be used with underfloor heating system.
- Wet areas such as toilets and kitchens.
- Suitable for fixing lightweight blocks, eco-concrete, and foam concrete wall panels.
- For wall and floor applications, indoor and outdoor uses.
- Suitable for ceiling application with ceiling supports.
- Recommended for natural stone and porcelain tiles.
- Suitable for deformable substrates.
- Ideal for heavy-duty applications.

Characteristics / Advantages

- High workability with extended open time.
- Durable.
- Superior adhesion strength and flexibility.
- Non-sagging characteristics, suitable for vertical applications.
- Tile-over-tile application.
- Low VOC.
- Low shrinkage with high durability.

Standard Compliance

- EN 12004-1:2017 Class C2 TE S1
- ISO 13007-1:2010 Class C2 TE S1
- GOST R 56387:2018 Class C2 TE S1

Packaging

Shield Plus is supplied in 20 and 25-kg packs.

Shelf Life and Storage

Shield Plus has a shelf life of 12 months when stored in its original unopened packaging in cool and dry conditions, protected from direct sunlight, heat, and moisture. Shelf life may be reduced if the recommended storage conditions are not followed.

Typical Properties

Appearance / Color	Grey / white powder
Bulk Density	1.35 ± 0.05 g/ml
Consistency of mixed material	Very Pasty
Mixed Density (@ 23°C)	1.50 ± 0.10 g/ml
Solid Content	100%
Pot Life (@ 23°C)	7 – 8 hours
Open Time	≥ 30 minutes
pH	13
Adjustability Time (@ 23°C)	45 – 60 minutes
Ready to Light Foot Traffic	≥ 24 hours
Ready for Grouting	Walls: 8 hours Floors: 24 hours
Ready for Water Immersion	14 days
Application Temperature	+5°C to +40°C
Tensile Adhesion (Initial, After Heat Ageing After Water Immersion, After Freeze/ Thaw Cycles) (EN 12004-2, 8.3)	≥ 1.00 MPa
Tensile Adhesion Strength After Open Time (EN 12004-2, 8.1)	≥ 0.50 MPa after 30 minutes
Slip (EN 12004-2, 8.2)	≤ 0.5 mm
VOC (ASTM D2369)	≤ 10 g/L (LEED)
Temperature Resistance	- 20 to +70 °C

Safety Instructions

Shield Plus contains hydraulic cement and may cause irritation to the skin or eyes. Refer to the most recent Material Safety Data Sheet for information and advice on the safe handling, storage, and disposal of the product.



Application Instructions

1. Surface Preparation

The substrate must be sufficiently cured to avoid any shrinkage cracks, and clean from dust, oils, dirt, curing compounds, etc. The substrate should be dampened, and excess water removed prior to application.

2. Mixing

Pour into a suitable container 6.0 – 6.5 liters of clean water for each 25 kg bag of **Shield Plus** or (24 – 26%) by weight.

Add the **Shield Plus** powder to the water and mix using a low-speed mixing drill fitted with a suitable mixing paddle, mix for 2 – 3 minutes until a smooth, even, lump-free consistency is achieved. Allow the mixed material to stand for 2 – 5 minutes, then re-stir slightly with no extra water to be added to the mix.

3. Application

Apply the adhesive using the flat side of the notched trowel, hold it at a 45° angle and spread the adhesive evenly to obtain good coverage. Then using the notched side of the trowel, comb the adhesive, to obtain an even setting bed. Cover the surface uniformly with sufficient adhesive without bare spots and press the tiles firmly into the adhesive to ensure a minimum wet film thickness of 2 mm between the tile and the substrate after the tile has been placed. Apply adhesive only in areas that will be covered with tiles before the adhesive films over. Remove any adhesive that films over and apply fresh adhesive.

During use, occasionally remix the adhesive. Additional water or fresh materials shall not be added after initial mixing. The adhesive shall not be used after the initial set.

4. Tile Fixing

Press the tile into the freshly combed adhesive, ensuring adhesive contact with the tile. Maintain joint alignment and spacing and keep an adequate joint depth open for grouting.

The general recommended bed thickness is 2 – 10 mm, depending on the type of tiles that are being laid. It is recommended to periodically remove and check a tile to ensure proper adhesive coverage.

5. Cleaning

All mixing equipment and application tools should be cleaned immediately with clean water. Hardened material should be mechanically removed.

Consumption and Coverage (For 25 kg packs)

Yield: ~ 20 Liters

Consumption: 3.60 – 3.75 kg/m²/3 mm thickness

Coverage: 6.60 – 7.00 m²/25 kg bag/3 mm thickness

Limitations

- Do not apply the product if the ambient temperature is less than 5°C.
- Certain tile types, such as natural stone, are porous in nature and may discolor. We recommend that the compatibility of the adhesive with the tiles should always be confirmed with a trial test area.
- Hot weather practices should be adopted during application and curing if the temperature is above 35°C. In hot conditions, store the material in a cool environment prior to mixing and use chilled mixing water.

Technical Support

Refer to technical information, method statement, or contact technical support team for any inquiry.

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