Mapeflex Blackfill BHP

Hot-poured, UV-resistant, modified-bitumen, joint sealant

WHERE TO USE

Mapeflex Blackfill BHP is used in civil, industrial and hydraulic concrete constructions for sealing horizontal movement and construction joints. It is also used as a filler for surface cracks in concrete slabs before installation of bituminous waterproofing.

Some application examples

Sealing horizontal movement and construction joints in:

- concrete slabs, kerbs and pavements.
- water-excluding sub-structures.
- junctions between concrete and asphalt.
- panel joints in roofing protective screeds.

TECHNICAL CHARACTERISTICS

Mapeflex Blackfill BHP is a single-component, 100% solids, thermoplastic, modified bitumen compound applied by hot pouring for sealing horizontal joints in concrete.

Mapeflex Blackfill BHP is UV-resistant, has a high softening point and will not flow under direct sunlight. It is resistant to water, saline solutions, mild acids and alkalis. It is not resistant to solvents, oils and greases.

RECOMMENDATIONS

- Do not use **Mapeflex Blackfill BHP** on surfaces which are wet or very damp.
- Do not use **Mapeflex Blackfill BHP** at areas which are subject to spillage of solvents, fuels and oils.
- Do not use **Mapeflex Blackfill BHP** to form joint sealants exceeding 50 mm deep. The standard recommended joint depth is 25 mm.
- **Mapeflex Blackfill BHP** may be used for joints up to 30 mm wide at trafficable areas, and up to 65 mm wide for non-trafficable areas.
- For water-retaining and water-excluding structures, install waterstops from the **Idrostop** range before sealing the joints with **Mapeflex Blackfill BHP**.
- **Mapeflex Blackfill BHP** may be used on slabs with gradients up to 1:20.
- Use proper heating equipment only and work in well-ventilated areas.
- Do not melt **Mapeflex Blackfill BHP** by localised heating at the bottom of metal containers. Start heating from the upper side and apply heat equally to all sides.
- The primer, **Primer B50** is highly flammable. Work in well-ventilated areas and do not allow smoking or open flames in the vicinity.
- Do not use **Mapeflex Blackfill BHP** if the surface is heavily contaminated with oil or solvents. Clean the surface thoroughly and consult Mapei Technical Service.

APPLICATION PROCEDURE

Preparing the substrate

The surface of the concrete must be dry, clean and free of dirt, dust, oils and any contaminant which may affect adhesion. Remove cement laitance and any deposits by grit blasting or by rigorous wire brushing and blow out all remaining loose dust with dry, oil-free, compressed air just before priming. Non-porous substrates must be clean and dry. Metal surfaces should be warmed to promote good adhesion of the sealant.

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Application of Primer
Apply **Primer B50** to porous substrates such as concrete, paving bricks and stones with a small brush and allow to reach touch-dry condition. Immediately apply **Mapeflex Blackfill BHP**.

Priming is not normally required on non-porous substrates. However, they must be clean, dry and free from any contaminant which may affect adhesion.

Preparation of the product
Use a heating vessel equipped with an oil jacket, stirrer and thermometer to heat **Mapeflex Blackfill BHP** to the right pouring temperature of between 180°C and 200°C. Cut small pieces of the compound and melt them in the heating vessel, adding more pieces as required while stirring continuously. Ensure all pieces of the compound are fully molten and stop heating when the target pouring temperature is reached. Avoid heating above 230°C.

Application of the product
For good adhesion, make sure the temperature of **Mapeflex Blackfill BHP** does not fall below 130°C at the time of pouring. The sealant material may be applied to its full depth in one pour, making allowance for approximately 10% shrinkage on cooling to room temperature.

Flame torch heating may be applied to soften applied sealant for levelling purposes, making sure not to burn the material through localised heating.

For treatment of surface cracks, open V-shaped grooves 25 mm wide and 15 mm deep along the crack line prior to surface preparation and priming.

CONSUMPTION
Mapeflex Blackfill BHP: Approximately 1.1 kg per litre. Therefore, the quantity of sealant required per metre in kgs = [(width, mm x depth, mm)/1,000] x 1.1

Primer B50 : Approximately 1 litre per 50 kgs of **Mapeflex Blackfill BHP**. (The actual consumption depends on the joint configuration and the porosity of the substrate.)

CLEANING
Empty containers immediately after use. Hardened materials can be scrapped off mechanically and cleaned with kerosene or other strong solvents.

PACKAGING
Mapeflex Blackfill BHP is available in 20 kg pails
Primer B50 is available in 1 litre tins

STORAGE
Mapeflex Blackfill BHP can be stored for 24 months in unopened containers in a dry place at temperatures between +10°C and +40°C.

PRODUCT FOR PROFESSIONAL USE.

SAFETY INSTRUCTIONS FOR PREPARATION AND APPLICATION
Mapeflex Blackfill BHP may irritate the skin, eyes and respiratory track. When applying the product, we recommend the use of protective gloves and goggles and to take the usual precautions for handling chemical products. We recommend working in well ventilated areas when applying the product. In case of poor ventilation, we recommend wearing the mask. If the product comes into contact with the eyes or skin, wash immediately with plenty of clean water and seek medical attention.
For further and complete information about the safe use of our product please refer to our latest version of the Material Safety Data sheet.

PRODUCT FOR PROFESSIONAL USE

WARNING
Although the technical details and recommendations contained in this product data sheet correspond to the best of our knowledge and experience, all the above information must, in every case, be taken as merely indicative and subject to confirmation after long-term practical application; for this reason, anyone who intends to use the product must ensure beforehand that it is suitable for the envisaged application. In every case, the user alone is fully responsible for any consequences deriving from the use of the product.

Please refer to the current version of the Technical Data Sheet, available from our website www.mapei.com

All relevant references for the product are available upon request and from www.mapei.com

TECHNICAL DATA (typical values)	
PRODUCT IDENTITY	
Appearance:	hardened blocks
Characteristic:	thermoplastic
Colour:	black
Density (g/cm^3):	1.10 – 1.15
Solubility in water:	insoluble
Solids content (%):	100%
APPLICATION DATA	
Recommended application temperature range (°C):	+10 to +40
Pouring temperature range (°C):	+180 to +200
Shrinkage, cooling from +150°C to room temperature (%):	approx. 10
Maximum localized heating duration when re-heating cooled material (s):	10
FINAL PERFORMANCES	
Movement accomodation factor (%):	10 (total)
Softening point (ASTM D36)(°C):	80-100
Penetration, at 25°C, 100gm, 5 seconds (ASTM D5)(0.1mm):	15-35
Specific heat capacity (J/kg.°C):	approximately 2,000

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