

MARBOS Pavement bedding mortar

NBM 4 D

Trass-containing, water-permeable laying/bedding mortar for pavement and plate surfaces made of concrete, natural stone and especially for ceramic coverings.



Application areas:



Water-permeable, hydraulically hardening, plastic-modified laying/bedding mortar.

For water-permeable laying of concrete pavements, plates and discoloration-free natural stones as well as especially for ceramic coverings. Processable as thick-bed mortar and mono-grain cement screed.

Suitable for load classes up to and including Bk 3.2 according to RStO 12.

Suitable for use category N1 to N3 according to ZTV Wegebau.

N1: Walkable, surfaces pavements not intended for motor vehicles and comparable uses outside of road traffic areas (e.g. terraces, garden paths, paths in home garden areas, seating areas in parks).

N2: Pavements for vehicles up to 3.5 t permissible total weight outside of road traffic areas (e.g. garage entrances, car parking spaces, paths in green areas). Note: not suitable for vehicles with high point loads, e.g. industrial trucks, forklifts, lift trucks, lifting platforms.

N3: Trafficable surface pavements like load category 2, but with occasional traffic of vehicles up to 20 t permissible total weight with wheel loads ≤ 5 t outside of road traffic areas (e.g. care, maintenance and rescue routes as well as fire department, garage and building access roads).

Bedding mortar according to FGSV data sheet for surface pavements with paved and slabbed surfaces in bonded application M FPgeb.

- For indoors and outdoors

Properties:

- Single-component
- Mineral
- Plastic-modified
- Trass-modified
- Low shrinkage and low residual stress
- High early and final strength
- High freeze/thaw resistance
- Water permeable
- Prevents discolorations and efflorescences

Material basis:

- Cement - DIN EN 197
- Selected aggregates - DIN EN 13139/12620
- Admixtures and additives to improve processing properties

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Technical Data:	Consistency	earth-moist
	Largest grain size	4 mm
	Mixing water per 1 kg	ca. 0,08
	Mixing water per 25 kg	ca. 2 Liter
	Mixing ratio per 25 kg with mixing liquid S2	ca. 1,6 l water plus 0,4 kg mixing liquid S2
	Processing temperature	+ 5° C to +30 °C (Air, object and material)
	Processing time	ca. 90 minutes
	Open time	ca. 30 minutes
	Layer thickness compacted (ca. 1 cm slump/ from 7 cm multilayer)	5 cm For traffic, apply a bonded base course. 10 cm - For traffic and unbound base course (according to ZTV Wegebau, agree sepa- rately)
	Ready for laying	after ca. 3 days
	Compressive strength	≥ 35 N/mm ²
	Bending tensile strength	≥ 5 N/mm ²
	Bonding bridge to be used	Pavement binder PFB GaLaVarioFlex GVF
	Bending tensile strength According to FGSV ALP Pgeb*	ca. 1,5 N/mm ²
	Water permeability value	2,5 x 10 ⁻⁴ m/s
	Capillary absorption behaviour (According to DNV-RL plaster and tile corners: ≤ 5 wt.-%)	ca. 1,0 wt.-%
	Resistance against frost-thaw- stresses according to FGSV ALP Pgeb*	passed
	E-Modul (dynamic)	ca. 35,0 GPa
E-Modul (static)	ca. 29,4 GPa	

Substrate preparation:

The subsoil, subgrade and base course must be suitable for the expected loads and sufficiently permeable to water.

For dense base layers (e.g. concrete), additional drainage (drainage sheet with grid mesh lamination, e.g. Gutjahr Aqua-Drain® EK) with sealing underneath the bedding is required.

In this case, the jointing must be impermeable to water. When used as a drainage screed: For rapid water drainage, use drainage sheets and maintain a minimum slope of 1.5%.

For adhesive bonding, the underside of the covering is fully treated with our bonding bridge and the covering is tapped into the fresh bedding mortar.

An appropriately dimensioned flex strip must be attached to vertical components in order to avoid internal stresses. Movement joints from the substructure must be transferred to the superstructure. Depending on the size and geometry of the surface, movement joints must be included.

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Working:	<p>Mix in a clean mixing vessel with a suitable stirrer carefully and lump-free with clean tap water, allow to mature briefly and stir again.</p> <p>Always process whole packages. Mechanical processing is performed using a continuous or compulsory mixer.</p> <p>Check the consistency using the snowball test.</p> <p>Process the mixed mortar immediately.</p> <p>Do not add any other additives. Do not mix with other substances.</p> <p>Apply and compact the bedding mortar manually.</p> <p>With dimensionally accurate pavement, pull-off gauges can be used to achieve the desired layer thickness. A multi-layer bedding is produced fresh in fresh.</p> <p>The top layer is laid fresh in fresh with the bonding slurry.</p> <p>Plate coverings can alternatively also be laid on a sufficiently hardened bedding. MARBOS GaLaVarioFlex GVF should then be used as an adhesive mortar.</p> <p>The joint areas must not be closed by the adhesion promoter. On water-impermeable substrates, we recommend a water-impermeable jointing. For jointing, we recommend our pavement joint mortars.</p>
Post-treatment:	<p>Protect the installed bedding mortar against drying out too quickly by suitable measures, such as damp cloths, bags, etc.</p>
Material consumption:	<ul style="list-style-type: none"> • Ca. 17 kg/m²/cm layer thickness
Packaging:	<ul style="list-style-type: none"> • 25 kg paper sack – 42 pieces per pallet • Siloware / Big Bag
Storage:	<ul style="list-style-type: none"> • Protected from weather, cool and dry on wooden racks. • Unopened containers if stored properly 12 months from date of manufacture. • Low chromate according to directive No. 1907/2006 (REACH) – GISCODE ZP 1.
Waste management:	<p>Hardened product remainders to be wasted as common rubble under code no. 17 09 04.</p>
Cleaning:	<p>Immediately clean containers, tools, etc. with water. Cleaning is only possible by mechanical means once the product has hardened</p>
Safety note:	<ul style="list-style-type: none"> • Keep out of the reach of children • Additional information: see safety data sheet.
Note:	<ul style="list-style-type: none"> • The technical data relates to +20 °C and 50 % rel. humidity. Lower temperatures extend the specified values, higher temperatures shorten them. • While the product is setting, protect it against direct sunshine, draughts, frost, driving rain as well as excessively high (> 30 °C) and excessively low (< 5 °C) temperatures • Do not stir hardening mortar again with water. • For the work to be performed, the relevant recommendations, guidelines, standards and regulations as well as the generally recognized rules of technology must be observed. • We recommend in particular to observe the following regulations: DIN 18318 (ATV) - Paved surfaces and plate coverings, edgings, ZTV-Wegebau additional technical contract conditions for the construction of paths and squares outside of road traffic areas, FGSV 618-2 data sheet for surface reinforcement with paved surfaces and plate coverings in bonded design M FPgeb R2.* FGSV 618-3.

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Note:	<ul style="list-style-type: none">• Working instructions for carrying out tests for paved and plate coverings in bonded design ALP Pgeb W1.• Due to compaction, a slump of ca. 1 cm is to be expected.• In cases of doubt, create trial areas.	
Test certificates/ Approvals:	Our products are externally monitored by the Materialprüfungsamt Nordrhein-Westfalen (MPA NRW).	
Quality Control:	Subject to continuous internal and external monitoring. Production and WPK are certified according to DIN EN ISO 9001.	

During execution of work the relevant recommendations and guidelines, rules and standards, relevant technical instruction leaflets as well as the acknowledged rules of architecture and engineering have to be regarded. We do not have any influence on different weather/substrate and object conditions. Our written and spoken application/technological recommendations handed out to customers and craftsmen respectively are without obligation and do not constitute any contractual legal relationship and no lateral duty of a sales contract. All indications and recommendations of technical data sheets refer to standard purpose of use. With the publication of this technical instruction sheet, the previous ones lose their validity. This is a translation. Please refer in any case of misunderstanding the relevant German technical data sheet. Ed. 10.04.2024