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SCHOMBURG Building Product Systems

Technical Data Sheet

ASO®-EZ4-Plus

Art.-No. 2 05528

Rapid setting, water repellent pre-blended dry mortar

Description:
ASO-EZ4-Plus is a fibre reinforced pre-blended mortar for the production of water repellent cementitious screeds and mortars that will take finishes early and offer increased protection against frost damage and efflorescence.

Primary Uses:
As a rapid setting, water repellent mortar bed for laying natural stone, tiles and slabs in exterior and wet areas such as balconies, terraces, loggia, stairwells, swimming pools, damp rooms, laundries and water containers. Screeds produced with ASO-EZ4-Plus can be laid either bonded, unbonded on polythene or floating on insulation or as heated screeds whether as a wearing finish or as a base for tiles, slabs and natural stone.
For installation the general regulations for cementitious screeds DIN 18560 and DIN 18353 apply. The substrate must be able to take the loading according to DIN 1055.
In duty wet areas falling under the wet area classifications (FBK) 0, A02, B0 according to the ZDB-Worksheet [*1], produce screeds with ASO-EZ4-PLUS and the proper SCHOMBURG waterproofing system.
In wet areas under the classifications A2, B and C according to general building codes, such as swimming pools and pool decks and public showers, produce screeds with ASO-EZ4-PLUS and the proper SCHOMBURG waterproofing system.

[*] See advice below

Advantages:
- Water repellent & protects against efflorescence
- High application assurance
- Consistent screed quality
- For interior and exterior areas
- Long working time
- Rapid setting – Foot traffic after 6 hours
- For the early installation of tiles
- Can be heated after 3 days according to technical regulations
- Ready to use, simply add water

Typical Properties:

Basis:	special cement, additives, aggregate
Colour:	grey
Water addition:	1.6 – 2.0 litres / 25 kg ASO-EZ4-Plus (semi-dry consistency - stiff-plastic)
Mix method:	Forced paddle mixer, free fall mixer
Bulk density of fresh mortar:	approx. 2.2 kg/dm³
Classification:	EN 13813 CT-C50-F6-A9
Fire rating:	A1 in accordance with resolution 96/603/EG
Traffic after *):	approx. 6 hours
Fully cured after *):	approx. 7 days
Working time *):	approx. 60 minutes
Application/ substrate temp:	min. approx. +5° C to max. approx. +30 °C

*) Values relate to +23° C and 65% relative humidity. Higher temperatures reduce and lower temperatures lengthen these given times.

Minimum nominal thickness to DIN 18560:

Beneath tiles	40 mm on insulation or separating layer
Beneath parquet, carpet, linoleum or PVC	30 mm on insulation or separating layer
In general	10 mm bonded

ASO®-EZ4-Plus

Product preparation:
For preparation we recommend using the Brinkmann screed boy with a 65 mm hose diameter, or other conventional screed mixers PFT, Putzmeister Mixocret or similar. Pay attention to the water addition and avoid excess water. The working time is approx. 60 minutes at +20° C. Mixing, application and finishing must follow each other swiftly. Only measure out areas that can be completed within this working time. Higher temperatures reduce and lower temperatures lengthen the working time and setting time. With bonded screeds first brush ASOCRET-HB-flex into the mechanically abraded concrete substrate. Lay the screed into the wet slurry coat. The general regulations for cement-based screeds DIN 18560 and 18353 should be followed for screed laying.

Mixing recommendations for mixing and rotary feed machines:
In a conventional mixing machine with rotary feed with a 220 litre mix capacity e.g. Brinkmann screed-boy, PFT, Putzmeister Mixocret or similar mix together a total of 250 kg ASO-EZ4-Plus with 16 – 20 litres water. This relates to a mixer capacity of approx. 80% - which is generally recommended by the equipment manufacturers.
Observe the following procedures:
First half fill the mix vessel with 125kg of ASO-EZ4-Plus and approx. 10 litres water. Then fill with the rest of the 125kg of ASO-EZ4-Plus and 6 – 10 litres of water. Keep to a total mix time of approx. 4 minutes as only then can all components be dispersed and the final consistency achieved.

Mixing recommendations for a free-fall mixer:
First add 4 litres of water, 100kg ASO-EZ4-Plus and a further 2.5 – 4.0 litres of water. Subsequently mix for 5 minutes and adjust the consistency with the addition of water from semi-dry to stiff plastic.

Protect the screed from drying out too quickly e.g. from heat or drafts. Screeds are ready to receive tiled finishes after 3 days with a water addition of 1.7 litres per 25kg ASO-EZ4-Plus, an ambient and substrate temperature of +23° C, a relative humidity of 50% and a thickness of 5 cm.
Confirmation should be sought by measuring the moisture content with a carbide hygrometer.

Storage & Shelf Life:
12 months when stored dry in the original unopened packaging. Use opened packaging promptly.

Estimating & Supply:

Consumption:	approx. 20kg ASO-EZ4-Plus per m^2 / cm screed thickness
Packaging:	25 kg bags

Cleaning of Tools:
Clean tools and equipment immediately with water.

Important advice:
- By high temperatures, direct sunlight and drafts, protect the screed from water loss during drying. To ensure ideal hydration of cement, the screed can be protected during the curing phase e.g. with plastic sheeting or with continuous light misting.
- Instead of using ASOCRET-HB-flex, an alternative slurry bonding coat can be produced using ASOPLAST-MZ diluted 1:1 with water and a screed mortar composed of 25kg ASO-EZ4-Plus and 5 kg ASO-EZ4.
- Please refer to the technical data sheets for the products mentioned above.
- When too short a mix time is selected or the material is not mixed intensively enough then the dispersion of all components is not guaranteed. Early installation of floor finishes and high strength is no longer given.
- The determination of the screed's readiness to receive floor finishes should be carried out using a carbide hygrometer. Keep to the limiting values (see table 1).
- Lower temperatures, high humidity and thick screeds delay the setting, drying and achievement of readiness for laying finishes (see also the BEB data

ASO®-EZ4-Plus

Important advice table 1:

Maximum moisture content of the screed determined with a carbide hygrometer

Floor finish		Heated	Unheated
Vapour impervious finishes		1.8 %	2.0 %
Textile finishes	Vapour barrier	1.8 %	2.5 %
	Vapour permeable	2.0 %	3.0 %
Parquet		1.8 %	2.0 %
Laminate flooring		1.8 %	2.0 %
Ceramic tiles, natural stone/ concrete slabs	Sand: cement fixing	2.0 %	2.0 %
	Adhesive fixing	2.0 %	2.0 %

The measurements with the carbide hygrometer are to be carried out in accordance with the current working instructions of the FBH-AD from the technical information "coordination of cut out areas for heated floor constructions".

sheet "climatic requirements for the drying of screeds"). Trials have shown that at lower temperatures (+5° C to +12° C) the binding of the water proceeds at a strongly delayed rate so that the readiness to receive floor finishes is achieved later.

- Water that bleeds to the surface indicates too much water (more than 2 litres of water per 25 kg ASO-EZ4-Plus).
- ASO-EZ4-Plus can bind up to approx. 8% of its weight of water in a crystalline way. Anything above this level has to evaporate and consequently delays the readiness to receive finishes.
- Where rising dampness is present a functioning damp proof membrane is necessary prior to the installation of the screed.
- Ventilation is necessary on the building site. The interior and floor temperature must be a minimum of +5° C during installation and for one week afterwards. De-humidifiers may not be used in the first 3 days.
- Do not add any cement or other binders.
- Perimeter, bay, construction and movement joints are to be carried through or incorporated in the designated position and composed of suitable material e.g. edging strip. Crack control joints are to be cut into the top third of the installed screed.
- Do not add any additives or other materials.
- The relevant current regulations are to be observed. E.g. DIN 18157, DIN 18352, DIN 18560, DIN EN 13813, DIN 1055

The BEB data sheets distributed by the National Association for Screeds and Finishes.
The technical information "coordination of cut out areas for heated floor constructions".
The ZDB data sheets distributed by the Technical Association of the German Tile Industry.

[*1] Advice for the installation of waterproofing combined with ceramic tiles in interior and exterior areas (August 2000).
[*2] Mechanically heavy-duty ceramic floor finishes.
[*3] Movement joints in tiled finishes.
[*5] Ceramic tiles, slabs, natural stone and concrete blocks on cement-based screeds over insulation.
[*6] Ceramic tiles, slabs, natural stone and concrete blocks on heated cement-based floor constructions.
[*7] Tiled finishes on the exterior of buildings.

Please observe a valid European safety data sheet!

GISCODE: ZP1