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SCHOMBURG Building Product Systems

**Technical Data Sheet**

# ASO®-EZ6

**Art.-No. 2 05521**

## Rapid screed cement

### Properties:

- Rapid crystalline water binding.
- Rapid setting.
- Long pot life.
- Traffic after approx. 4 - 6 hours.
- Shrinkage compensated.
- Lay tiles after 1 day.
- For interior areas.
- Can be heated after 3 days in accordance with protocol.

### Areas of application:

ASO-EZ6 is a rapid setting cement for producing cement-based screeds that can take floor finishes early and with high strength as a bonded screed, unbonded screed, screed on insulation or as a heated screed which is suitable as a wearing finish or as a substrate for tiles, textile finishes, parquet or PVC. 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 medium duty wet areas falling under the wet area classifications (FBK) 0, A02 according to the ZDB-Worksheet [*1], and also under the classification A2 regarding general building codes, the ready to use ASO-EZ6 screed can be applied if the proper SCHOMBURG waterproofing system is installed.
In heavy duty wet areas, such as classifications B and C according to general building codes, or FBK B0 according to the ZDB-Worksheet [*1], screeds can be produced with either ASO-EZ2 or ASO-EZ4 as long as the proper SCHOMBURG waterproofing system is installed.
[*] See important advice section below.

### Technical Data:

| | |
|---|---|
| Basis: | special cement, additives |
| Colour: | dark grey |
| Mixing ratio: | ASO-EZ6 / aggregate: 1:4 to 1:5 parts by weight |
| Application/substrate temp: | min. approx. +5° C to max. approx. +30 °C |
| Water addition: | dependent on the moisture in the aggregate used, up to max. 40% by weight relating to the ASO-EZ6 addition; values refer to dry aggregate |
| Mix method: | Forced paddle mixer, free fall mixer |
| Bulk density of fresh mortar: | approx. 2.2 kg/dm³ dependent on aggregate used |
| Storage: | 6 months when stored dry and cool in original un-opened packaging. Used opened packaging promptly. |
| Packaging: | 25 kg bags |
| Cleaning: | clean tools and equipment immediately with water |
| Traffic after *): | approx. 4 hours |
| Fully cured after *): | approx. 7 days |
| Pot life *): | approx. 45 minutes |

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

Approx. coverage kg/m² ASO-EZ6:

| | Mixing ratio | Parts by weight |
|---|---|---|
| Screed thickness , cm | 1:4**) | 1:5**) |
| 1 | 4.1 | 3.4 |
| 4 | 16.3 | 13.6 |
| 5 | 20.4 | 17.0 |
| 6 | 24.4 | 20.4 |

**) 1:4 parts by weight relates to approx. 1:2.7 parts by volume. 1:5 parts by weight relates to approx. 1:3.3 parts by volume.

Minimum thickness to DIN 18560:

| | |
|---|---|
| Beneath tiles | 45 mm on insulation or separating layer |
| Beneath parquet, carpet, linoleum or PVC | 35 mm on insulation or separating layer |
| In general | 10 mm bonded |

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**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 moisture content of the aggregate and avoid excess water. The pot life is approx. 45 minutes at +20 °C. Mixing, application and finishing must follow each other swiftly. Only measure out areas that can be completed within this pot life. Higher temperatures reduce and lower temperatures lengthen the pot life and setting time. With bonded screeds firstly 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. Putzmeister Mixocret, mix 200 kg aggregate with 50 kg ASO-EZ6. This relates to a mixer capacity of approx. 80% - which is generally recommended by the equipment manufacturers. Observe the following procedures:
Firstly add half the aggregate of particle size 0/8 to the mixing drum (approx. 15 shovels at 7 kg), approx. 10 litres of water and 50 kg ASO-EZ6. Then, fill the mixing drum with the remaining aggregate (a further 15 shovels at 7 kg dependent on the mixing ratio) and add the remaining water. A total of approx. 10 – 20 litres of water will be needed dependent on the moisture content of the aggregate. The latter value refers to dry aggregate. In general, 0/8 mm aggregate has a moisture content of approx. 4% which means that 200 kg of aggregate already contains 8 litres of water. The total mix time is approx. 2 – 3 minutes.

**Mixing recommendations for a free-fall mixer:**
Recommended mix ratio 1:3 by volume (relates to approx. 1:4.5 parts by weight); add approx. 3 litres water, approx. 60 kg of the aggregate (0 – 8 mm diameter, approx. 8 shovels) and pre-mix with 25 kg of ASO-EZ6 for approx. 1 minute. Subsequently add the remaining aggregate of approx. 40 kg (0 – 8 mm diameter, approx. 6 shovels) and mix for 1 - 2 minutes. Adjust the consistency with 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 1 day when a mix ratio of 1:4 parts by weight has been used with dry aggregate, to DIN 4226 with a particle size distribution between A8 – B8 nearer B8 with a consistent particle distribution, with a water addition of 20 litres per 50 kg ASO-EZ6 at an ambient and substrate temperature of +23 °C and 50% relative humidity and laid 5 cm thick. Confirmation should be sought by measuring the moisture content with a carbide hygrometer. Where screeds with a particular screed quality in accordance with DIN EN 13813 are required, then trial areas will be necessary. These should be carried out before commencing work.

**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 1 part by volume ASO-EZ6 and 2 parts by volume aggregate of particle size 0 – 4 or 0 – 8 mm diameter.
- For use in areas where the aggregate quality is inadequate or where storing the mortar components is not possible or desired then the pre-blended mortars ASO-EZ6-Plus, ASO-EZ4-Plus and ASO-EZ2-Plus are available.
- The determination of the screed's readiness to receive floor finishes should be carried out using a carbide hygrometer. Keep to the following limiting values:

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**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 with heated floor construction".

- 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 laying of floor finishes and high strength is no longer given.
- Lower temperatures, high humidity and thick screeds delay the setting, drying and achievement of readiness for laying finishes (also see the BEB data sheet "climatic requirements for the drying of screeds"). Trials have shown that at lower temperatures (+5 °C to +10 °C) the binding of the water proceeds heavily delayed so that the readiness to receive floor finishes is achieved after 2 days.
- Water that bleeds to the surface indicates too much water or aggregate (more than 3.3:1 by volume relating to 5:1 parts by weight), an incorrect particle size distribution or insufficient mixing. This results in a sandy surface.
- The quality of the aggregate is a determining factor in the properties of the screed produced with it. Aggregate to DIN 4226 with a consistent particle size distribution between A and B nearer to B to DIN 1045 should be used. Where aggregates with different particle size distributions are used then the binder demand may increase. Aggregates with a particle size distribution between B and C to DIN 1045 require higher levels of ASO-EZ6. Which particle size distribution for which screed thickness should be extracted from the following table:

| Particle size | Minimum thickness | Maximum thickness |
|---|---|---|
| 0 - 4 mm | 10 mm | 30 mm |
| 0 - 8 mm | 25 mm | 80 mm |
| 0 - 16 mm | 50 mm | 160 mm |

- ASO-EZ6 can from a crystalline bond with up to 40% of its weight in water. Quantities above this must evaporate and therefore delay the screed's readiness to receive finishes.
- If the surface of the screed cannot be sufficiently tightened during rubbing off then this indicates that too low a fines content was used in the aggregate. Here larger amounts of ASO-EZ6 are needed to replace the missing fines.
- A functioning damp proof membrane is necessary where rising damp is present in the substrate, prior to laying screeds.
- Where necessary add reinforcement with CRACKBLOCKER (24 mm). Corrosion protection for metallic mesh is not given.

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- 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 mix with other cements or 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.
- Do not add any additives.
- Follow the data sheets for the products mentioned above.
- The relevant current regulations are to be observed. E.g. DIN 18157, DIN 18352, DIN 18560, DIN 13813, DIN 1055, DIN 1045, DIN 4226, the technical information ""coordination of cut out areas with heated floor construction", the ZDB data sheets distributed by the Technical Association of the German Tile Industry.
  The BEB data sheets distributed by the National Association for Screeds and Finishes.

[*1] Advice for the installation of waterproofing combined with ceramic tiles in interior and exterior areas (August 2000).
[*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 screeds.
[*7] Tiled finishes on the exterior of buildings.

Please observe a valid European safety data sheet!

GISCODE: ZP1