

BET-EKS

Ready-mix repair mortar with compensated shrinkage, suitable for the repair of horizontal concrete surfaces

In compliance with EN 1504-3 Class R4

FIELD OF APPLICATION

BET-EKS is used for structural repairs of highly exposed concrete and reinforced concrete elements, for the repair of horizontal surfaces (deck slabs) on bridges, tunnels and high-rise buildings, for reparation of expansion joints on bridges, for reparation of hydro-technical objects, etc.

PROPERTIES

- One-component, cement based material;
- High strength characteristics;
- Excellent abrasion resistance;
- High elasticity module;
- Compensated shrinkage caused by cement setting;
- Resistant to atmospheric influences;
- Easy to prepare and apply;
- Excellent adhesion to concrete substrate;

TECHNICAL FEATURES

Property	Method	Declared values
Appearance	-	Grey powder
Water/material ratio	-	0,12-0,14
Maximal size of aggregate	-	5 mm
Specific density	EN 12190	2250-2350 kg/m ³
Adhesive bond	EN 1542	≥ 2 MPa
Compressive strength		
after 1 day	EN 12190	≥20 MPa
after 28 days		≥50 MPa
Flexural strength		
after 1 day	EN 12190	≥1 MPa
after 28 days		≥8 MPa
Shrinkage	EN 12617-4	0,6-0,9 mm/m` (at + 20 °C/65 relative humidity for 56 days)

METHODOLOGY FOR APPLICATION

SUBSTRATE PREPARATION

Substrate on which BET-EKS is applied must be clean, firm, all unstable sections must be removed, as well as residues of dust and oil. Concrete substrate must be saturated with water. Surface temperature on which material is applied must be between 5°C and 30°C.

In case of reparation of reinforced concrete structures, exposed steel reinforcement and anchors must be cleaned of corrosion, paint residues, and oil (using steel brush or sand-blasting).

APPLICATION

BET-EKS is mixed with required quantity of water, for one bag of material (25 kg) required quantity of water is 3.0 to 3.5 liters. Mixing is carried out with slow mixer for mortar (<500 rot/min), or in a portable concrete mixer ("funderka"), until complete homogenization (min. 3 minutes).

The fresh BET-EKS mix has a consistency similar to S3 class for concrete (Slump = 100–150 mm). If needed, a higher consistency can be achieved by adding a superplasticizer additive.

The mixture is applied to a pre-prepared concrete substrate saturated with water or poured into formwork. Depending on the layer thickness, it can be compacted using needle vibrator or a vibrating screed.

The open working time for BET-EKS ranges from 30 to 60 minutes, depending on ambient temperature. During the first few days, the applied material should be protected from high temperatures (above 30°C), direct sunlight, and wind. It should be "cured" with water or other appropriate curing methods. It is recommended to use BET-EKS for grouting of sections with thickness from 1.0 cm to 10.0 cm

When applying BET-EKS in fields with a larger area, it is recommended to divide the surface into sections of up to 5 m² using construction joints. Additionally, proper curing of the applied material is critical for large areas to ensure optimal performance.

CONSUMPTION

2100 kg BET-EKS are used for preparation of 1m³.

CLEANING

Tools and equipment are cleaned with water immediately after their use.

PACKAGING

Bags: 25 kg

STORAGE

In the original closed packaging, in dry premises at temperature between 5°C and 35°C, protected from direct sunlight. Shelf life: 12 months.

Health hazards: BET-EKS does not contain toxic materials. Nevertheless, avoid contact of the product with skin and eyes and avoid swallowing. In case of contact with skin or eyes, rinse it immediately with clean running water. If swallowed, seek medical assistance. Additional information are provided in the Safety Data Sheet of the product.

Fire: BET-EKS is non-flammable.

Cleaning and disposal: Loose residues of BET-EKS should be cleaned with water. Old and used packaging should be disposed of in accordance with local rules and regulations for that type of waste. Additional information are provided in the Safety Data Sheet of the product.