

# MONOLITH EH



6A

MINERAL FLOOR SYSTEMS

BETOSAN

## Mineral material for abrasion resistant floor layers

### 1. Product characteristics

Highly liquefied floor material for floor finishes of extremely heavy duty industrial floors with low abrasion. The spread coating is manufactured on the basis of cement, abrasion resistant filling agent, special admixtures and fiber dispersed reinforcement. Meets the requirements of EN 13813.

- applied manually or mechanically
- suitable for both local and general repairs of old damaged concrete floors
- frost resistant, suitable for both interior and exterior
- very good mechanical properties, extremely low abrasion and high impact strength
- enhanced chemical resistance
- perfect adhesion to base
- under normal temperature (20 °C) the surface is ascendable after 24 hour, ready for light load after 48 hours and for heavy load after 4 days

### 2. Use

**MONOLITH EH** is intended for fabrication of floor finishes of heavy duty floors of lay-by areas, local roads, car parks, etc. It is also practical for bottoms of tanks, water reservoirs and catch basins. The layer applied on the load-bearing concrete base is min. 12mm thick.

### 3. Physical and mechanical parameters

#### Requirements / results according to EN 13813

Properties	Declared value or class <sup>1)</sup>
Reaction to fire	class A1 <sub>fl</sub>
Abrasion resistance (Böhme)	class A3
Adhesion	class B2.0
Compressive strength	class C70
Tensile bending strength	class F7

#### Physical and mechanical parameters <sup>1)</sup>

Color		non-standard grey
Tensile bending strength (MPa) <sup>2)</sup>	7 days	> 5.5
	28 days	> 9.0
Compressive strength (MPa) <sup>2)</sup>	7 days	> 45.0
	28 days	> 70.0
Abrasion according to Böhme (cm <sup>3</sup> /50 cm <sup>2</sup> )		< 3
Water-tightness		V12
Frost resistance		T100
Adhesion to base (MPa)		> 2.0
Coefficient of thermal expansion (K <sup>-1</sup> )		(12.0 ± 0.5) × 10 <sup>-6</sup>

1) Probative tests under laboratory conditions.

2) Mechanical strengths for the amount of water at the lower limit of the given range.

**4. Test certificates** The product is certified according to Act No. 22/1997 Coll. and Regulation (EU) No 305/2011 of the European Parliament and of the Council (CPR). Continuous independent production quality control is provided by AZL 1687 LABBET®. Supervision of quality management, environmental and OSH systems is performed by Certification Body No. 3029.

### 5. Instruction for preparation and application

**Base.** The base shall be formed by sufficiently compacted concrete, which, according to the type of external load, corresponds minimally with quality class on the level C20/25. Tensile strength of surface layers of the base shall be minimally on the level 1.5 MPa. Dirt and dust shall be completely removed from the base before application. The base shall be pre-treated by preparation of high-pressure water jet, sand blasting or so called shot peening. Before application, humidification of the surface of the base shall be properly and continually performed for minimally 120 minutes. Local damages shall be repaired by **MONOCRETE PPE**. It is practical to consult with the manufacturer or appropriate expert suitability of the base for **MONOLITH EH** application. Quality of anchoring to

the base is extremely important for the resulting effect especially concerning its durability. Mechanical anchoring of the **MONOLITH EH** layer e.g. by the **ARMOBET 40/40/2** reinforcement mesh grid shot-fired to the base is recommended in heavy-duty operations.

**Preparation of mix.** The mix is a single-component and is mixed with water only. Slow-speed pan concrete mixer should be used for preparation. In case of preparation of small amount, the mix can be prepared with a propeller mixer driven by an appropriate electric drilling machine. Add  $3.0 \pm 0.4$  l of water to 25 kg of mix (1 bag). While using medium batch of water consistence of the mix measured by settlement of cone should range from 120 mm to 160 mm which corresponds with S3 degree according to Czech standard ČSN EN 206. This liquid mix has no so-called self-levelling properties.

Neither **temperature of base** nor temperature of ambient air shall be below  $+ 5$  °C and above  $+ 30$  °C.

**Workability** of the product is 50 - 60 minutes under 20 °C.

Before **application of the mix** it is necessary to pre-treat the surface (see above), then to apply the adhesive bridge and repair the base, if any of the last two steps needed. The floor finish is spread on the given section from the transport vehicle and vibrated by a vibrating bar running on levelled runners. It is also possible to spread the mix by a "bar" and then vibrate it by a so-called floating vibration bar. No additional water shall be worked up into the surface.

It is desirable to divide the continuously applied layer of **MONOLITH EH** into square areas, 4x4 m, by contraction (shrinkage) joints. It is necessary to cut them through within 24 hours after application. All expansion joints existing in the base shall be unconditionally executed even in the applied layer. Cracks emerged in the base shall be repaired before **MONOLITH EH** application.

**Surface treatment.** Applied **MONOLITH EH** layer shall be treated immediately after initial setting to avoid extremely quick drying caused especially by direct exposure to sun, draught and wind effects. Intensive treatment shall be carried out 3 days following the application at least. Optimal treatment means to cover the surface with permanently moistened geotextiles. It is also necessary to avoid un-equal drying.

## 6. Specific consumption

Specific consumption of dry material amounts to  $1.9 \text{ kg/m}^2$  at 1 mm of layer thickness.

## 7. Packing and storage

The product is packed into 25 kg PE-lined paper bags. The product must be efficiently protected against moisture during transportation and storage. The shelf life of the product in original undamaged packing is 6 months. After the expiration of min. shelf life, which is stated on the packaging, ingredients are not fully effective at reducing chromium VI below 2 ppm.

## 8. Health protection at work

Handling **MONOLITH EH** does not require any extraordinary hygienic precautions. The product contains alkalis and therefore any contamination of mainly eyes or mucous membrane must be prevented. Health and labor safety rules applicable to work with cement or lime mortars are to be adhered to.

Issued MSDS meets the requirements of EC-Regulation 1907/2006, Article 31.

Because the product meets the criteria for classification as hazardous, it is necessary to provide the recipient or carriers with MSDS.

In countries where regulation REACH (par. 33.1): EU regulation on chemicals and their safe use (REACH: EC 1907/2006) is valid, professional users and distributors must be provided with following information automatically and without request:

*This product is subject to Regulation (EC) No. 1907/2006 (REACH). It does not contain any substances that could be released from product under normal or reasonably foreseeable conditions of use. Therefore, there are no registration requirements for substances in articles within the meaning of Article 7.1 of the Regulation.*

*Based on our current knowledge, this product does not contain SVHC (substances of very high concern) from candidate list published by the European Chemicals Agency in concentrations above 0.1% (w / w).*

## 9. Waste disposal


During disposal of contaminated packages or clearing debris from product, it is necessary to follow the Act No. 185/2001 Coll. on waste, as amended.

## 10. Important notice

All information mentioned above, especially advice for processing and application of our products, is based on our knowledge from the development of chemical products and on years of experience with applications in practice at standard conditions, and proper storage and use. Due to the differing conditions during processing, high count of products, varying nature and modifications of base and other external influences, the procedure based on the information provided or on other written or oral recommendations, may not always ensure satisfactory working results. BETOSAN s.r.o. assumes no liability for provided advice or recommendation. The applicator must prove that he submitted complete information on time and in writing which is necessary for a proper detailed assessment by BETOSAN s.r.o. The applicator must test the suitability of the products for the intended application. Proprietary rights of third parties, above all, must be taken into account. All received orders are subject to our current "General sales and delivery conditions". Please always make sure that you follow the most recent issue of the Technical Data Sheet. It is available, along with other information, at our Technical Department or at [www.betosan.cz](http://www.betosan.cz).



## 11. CE marking

 1301	
<b>BETOSAN s.r.o.</b> Na Dolinách 28, 147 00 Praha 4	
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6A-6/072013	
EN 13813:2002 CT-C70-F7-B2,0-A3	
<b>MONOLITH EH</b> Mineral material for abrasion resistant floor layers	
Reaction to fire	class A1 <sub>fl</sub>
Release of corrosive substances	cement material
Water permeability	NPD
Water vapor permeability	NPD
Compressive strength (Class)	class C70
Tensile bending strength (Class)	class F7
Abrasion resistance (Class)	class A3
Sound isolation	NPD
Sound absorption	NPD
Tepelný odpor	NPD
Thermal resistance	NPD
Chemical resistance	class B2,0

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