

# DENSOTOP Q, S, EH



6A

Mineral dry shake hardeners for abrasion resistant surface finishes of industrial concrete floors

## 1. Product characteristics

- meets the requirements of EN 13813
- single-component dry powder composition
- high content of abrasion resistant fillings and components
- the surface has high abrasion resistance, its dustproof and non-slip
- properly worked-up dry shake provides aesthetically desirable look of the floor surface
- enhances chemical resistance of the floor
- the floor surface is colored in the material

## 2. Use

**DENSOTOP** mineral dry shakes are intended for surface finishing of industrial concrete floors during concrete placement. **DENSOTOP Q** is suitable for light up to medium heavy-duty floors where required resistance against abrasion is characterized by value below  $7 \text{ cm}^3/50 \text{ cm}^3$  tested according to Böhm.

**DENSOTOP S** is intended for medium heavy-duty floors where required resistance against abrasion is characterized by value below  $5 \text{ cm}^3/50 \text{ cm}^3$  tested according to Böhm. **DENSOTOP EH** is intended for extremely heavy-duty floors. Its abrasion is characterized by value below  $2.5 \text{ cm}^3 /50 \text{ cm}^3$  tested according to Böhm. All of them are mineral dry shakes intended for surface finishing of freshly laid concrete floors. In addition to the enhanced abrasion resistance it provides the floors with enhanced corrosion resistance, toughness, etc. They have aesthetically desirable appearance as well. The floors are completely dustproof and non-slip.

## 3. Product composition

**DENSOTOP Q, S** and **EH** mineral dry shakes are manufactured on the basis of high quality fine ground Port-land cement and abrasion resistant filling agents having precisely set granulometry on the basis of silicon and aluminum oxides and carbides. Besides, the mineral dry shakes contains other specific components and additives enhancing compactness and toughness of the floor structure and improving workability of the dry shake.

Besides the standard grey, the product is supplied in red, green and brown colors. The dry shakes are also supplied on individual order in any shade chosen according to the sampler of alkali resistant pigments of the BAYER Company. The product contains no toxic components and is in-combustible. Content of water-soluble chlorides is lower than 0.01%.

## 4. Test certificates

Meets the requirements of EN 13813.

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. Product batching

Dry shakes are batched according to the degree of load the floor is exposed to and ranges from 3 to 5 kg per  $1 \text{ m}^2$  of the floor according to the TABLE I.

**TABLE I Recommended batching of the dry shake in dependence on the expected degree of load the floor will be exposed to**

load	light <sup>+) </sup>	medium <sup>+) </sup>	heavy <sup>+) </sup>
<b>DENSOTOP Q</b>	4 kg/m <sup>2</sup>	5 kg/m <sup>2</sup>	*
<b>DENSOTOP S</b>	3 kg/m <sup>2</sup>	4÷5 kg/m <sup>2</sup>	*
<b>DENSOTOP EH</b>	*	3 kg/m <sup>2</sup>	4÷5 kg/m <sup>2</sup>

\*) Application is not recommended for the given degree of load

+) light = abrasion  $\geq 5 \text{ cm}^3/50\text{cm}^2$ , medium = abrasion  $5\div 2.5 \text{ cm}^3/50\text{cm}^2$ , heavy = abrasion  $\leq 2.5 \text{ cm}^3/50\text{cm}^2$

BETOSAN MINERAL FLOOR SYSTEMS

**Degree of load based on prevailing mechanical load, DIN 18 560, Volume 7, Table 1**

Degree of load	Transport, conveyance equipment Type of tires 1)	Load caused by production process and pedestrian traffic, examples:
I (heavy)	Steel and polyamide	Working, hauling and skidding of metal elements, unloading of goods by metal pitchfork, pedestrian traffic of more than 1,000 persons a day
II (medium)	Polyurethane - elastomer and rubber	Hauling and skidding of wood, paper rolls and plastic elements, pedestrian traffic from 100 to 1,000 persons a day
III (light)	Elastic and air-lock tires	Assemblies on work benches, pedestrian traffic of less than 100 persons a day

1) Clean tires only, hard substances, dirt and impurities cleaved to tires increase load

**6. Physical and mechanical parameters****Requirements / results according to EN 13813**

Properties	Declared value or class		
	DENSOTOP Q	DENSOTOP S	DENSOTOP EH
Reaction to fire (Class)	A1 <sub>fl</sub>	A1 <sub>fl</sub>	A1 <sub>fl</sub>
Compressive strength (Class)	C60	C70	C70
Tensile bending strength (Class)	F7	F7	F7
Abrasion resistance (Class)	A9	A6	A3

**7. Packing and storage**

The dry shakes are supplied as dry single-component pulverized products packed into 25kg paper bags with PE lining. **DENSOTOP Q, S, EH** must be efficiently protected against moisture during transportation and storage. The shelf life of the product in original undamaged packing is 3 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. Application**

Preparation and application follows applicable technological instruction for processing of **DENSOTOP** dry shakes.

**9. Health protection at work**

Handling **DENSOTOP Q, S a 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. In case of eye contamination it is necessary to rinse out eyes with clean water and immediately seek out medical aid. In case of accidental swallowing it is necessary to immediately cause vomiting and immediately seek out medical aid. In case of afflicted skin it is necessary to wash thoroughly the irritated skin with warmish water and soap and treat it by a suitable reparative cream. 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. Pro-

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			
07			
	6A-1Q/072013	6A-1S/072013	6A-1EH/072013
EN 13813:2002			
	CT-C60-F7-A9	CT-C70-F7-A6	CT-C70-F7-A3
	<b>DENSOTOP Q</b> floor dry shake	<b>DENSOTOP S</b> floor dry shake	<b>DENSOTOP EH</b> floor dry shake
Reaction to fire (Class)	A1 <sub>fl</sub>	A1 <sub>fl</sub>	A1 <sub>fl</sub>
Release of corrosive substances	cement material		
Water permeability	NPD	NPD	NPD
Water vapor permeability	NPD	NPD	NPD
Compressive strength (Class)	C60	C70	C70
Tensile bending strength (Class)	F7	F7	F7
Abrasion resistance (Class)	A9	A6	A3
Sound isolation	NPD	NPD	NPD
Sound absorption	NPD	NPD	NPD
Thermal resistance	NPD	NPD	NPD
Chemical resistance	NPD	NPD	NPD

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