

Approval body for construction products
and types of construction

Bautechnisches Prüfamt

An institution established by the Federal and
Laender Governments



European Technical Assessment

ETA-21/0019
of 11 August 2021

English translation prepared by DIBt - Original version in German language

General Part

Technical Assessment Body issuing the
European Technical Assessment:

Deutsches Institut für Bautechnik

Trade name of the construction product

Betocarb HP

Product family
to which the construction product belongs

Calcium carbonate filler aggregate with additional
characteristics

Manufacturer

Omya GmbH
Siegburger Straße 229c
50679 Köln
DEUTSCHLAND

Manufacturing plant

Eduard Merkle GmbH & Co. KG
Altental 6
89143 Blaubeuren

This European Technical Assessment
contains

4 pages which form an integral part of this assessment

This European Technical Assessment is
issued in accordance with Regulation (EU)
No 305/2011, on the basis of

EAD 260048-00-0301

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Page 2 of 4 | 11 August 2021

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Specific Part

1 Technical description of the product

The calcium carbonate filler aggregate with additional characteristics "Betocarb HP" is a filler aggregate obtained by processing (grinding) natural calcium carbonate for use in concrete. The calcium carbonate filler aggregate possesses the following additional characteristics according to EN 197-1, clause 5.2.6 for limestone (LL):

- CaCO_3 content at least 75 % by mass,
- content of fines $\leq 1,20 \text{ g/100 g}$ and
- total organic content (TOC) $\leq 0,20 \text{ %}$ by mass.

Furthermore, the chloride content complies with EN 197-1, clause 7.3:

- chloride content $\leq 0,10 \text{ %}$ by mass.

2 Specification of the intended use in accordance with the applicable European Assessment Document

The calcium carbonate filler aggregate "Betocarb HP" is a type I addition for concrete conforming to European standard EN 206, i. e. concrete for structures cast in situ, precast structures, and structural precast products for buildings and civil engineering structures. The concrete can be mixed on site, ready-mixed or produced in a plant for precast concrete products.

The calcium carbonate filler aggregate "Betocarb HP" is also intended to be used for self-compacting concrete (SCC).

The verifications and assessment methods on which this European Technical Assessment is based lead to the assumption of a working life of concrete incorporating the calcium carbonate filler aggregate "Betocarb HP" of at least 50 years. The indications given on the working life cannot be interpreted as a guarantee given by the producer, but are to be regarded only as a means for choosing the right products in relation to the expected economically reasonable working life of the works.

3 Performance of the product and references to the methods used for its assessment

Table 1 Mechanical resistance and stability (BWR 1)

Essential characteristic	Performance	
Particle size distribution	Sieve [mm]	Percentage passing by mass
	2	100
	0,125	85-100
	0,063	70-100
Specific surface (Blaine)	4700 ± 300 cm ² /g	
Particle density	2,72 ± 0,10 g/cm ³	
CaCO ₃ content	≥ 75 % by mass	
Content of fines (Clay content)	≤ 1,20 g/100 g	
Total organic content (TOC)	≤ 0,20 % by mass	
MgCO ₃ content	≤ 0,4 % by mass	
Chloride content (Cl ⁻)	≤ 0,10 % by mass	
Sulfate content (SO ₃)	AS _{0,2}	
Total content of sulfur	≤ 1,0 % by mass	
Constituents which alter the rate of setting and hardening of concrete	Passed	
Initial setting time	Control Mix: 160 min Test mix: 150/160/150 min	
Soundness	≤ 10 mm	

4 Assessment and verification of constancy of performance (AVCP) system applied, with reference to its legal base

In accordance with EAD No. 260048-00-0301 the applicable European legal act is: 1999/469/EC(EU).

The system to be applied is: 2+

5 Technical details necessary for the implementation of the AVCP system, as provided for in the applicable EAD

Technical details necessary for the implementation of the AVCP system are laid down in the control plan deposited with Deutsches Institut für Bautechnik.

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beglaubigt:
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