Deutsches Institut für Bautechnik

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Bautechnisches Prüfamt

An institution established by the Federal and Laender Governments

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General Part

Technical Assessment Body issuing the European Technical Assessment:	Deutsches Institut für Bautechnik
Trade name of the construction product	Betofill Betofill plus
Product family to which the construction product belongs	Calcium carbonate filler aggregate with additional characteristics
Manufacturer	Rheinkalk GmbH Am Kalkstein 1 42489 Wülfrath DEUTSCHLAND
Manufacturing plant	Rheinkalk GmbH Werk Flandersbach Am Kalkstein 1 42489 Wülfrath
This European Technical Assessment contains	4 pages.
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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Specific part

1 Technical description of the product

The calcium carbonate filler aggregates with additional characteristics "Betofill" and "Betofill plus" are filler aggregates obtained by processing (grinding) natural calcium carbonate for use in concrete. The calcium carbonate filler aggregates possess 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 ≤ 1,20 g/100 g and
- total organic content (TOC) ≤ 0,20 % by mass.

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

- chloride content ≤ 0,10 % by mass.

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

The calcium carbonate filler aggregates "Betofill" and "Betofill plus" are type I additions 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 aggregates "Betofill" and "Betofill plus" are 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 aggregates "Betofill" and "Betofill plus" 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)	"Betofill" "Betofill plus"	3800 ± 500 cm²/g 4200 ± 500 cm²/g
Particle density		2,70 ± 0,10 g/cm³
$CaCO_3$ 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		No performance assessed
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		No performance assessed
Soundness		No performance assessed

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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