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European Technical Assessment

ETA 23/0286
of 02-06-2023

General Part

Technical Assessment Body issuing the ETA: Kiwa Nederland B.V., Sir Winston Churchillaan 273, 2288 EA Rijswijk, www.kiwa.nl	
Trade name of the construction product	CIPF 42,5 with Iron Silicate Fines
Product family to which the construction product belongs	Cement with industrially produced filler
Manufacturer	Aurubis Bulgaria AD Industrial zone BG – 2070 Pirdop Bulgaria
Manufacturing plant(s)	Aurubis Bulgaria AD Industrial zone BG – 2070 Pirdop Bulgaria
This European Technical Assessment contains	5 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 150043-00-0301



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Specific parts

1 Technical description of the product

The CIPF 42,5 with Iron Silicate Fines is a cement with coal bottom ash consisting of a CEM I 42,5 N from HeidelbergCement AG and iron silicate fines from Aurubis Bulgaria AD.

The content of iron-silicate fines can range between 6 M.-% and 20 M.-%.

Due to the metallurgical process technology, the slag from flash furnace and the converters contains residual copper which is extracted through grinding and flotation. Two products are obtained at slag flotation plant: flotation copper concentrate and flotation product called fayalite or iron-silicate fines. Iron-silicate fines is a powder like material with a high content of iron and silicon dioxide in the form of minerals, mainly fayalite, magnetite, quartz, etc. Some of the iron-silicate fines, as is the case with this European Technical Assessment, is used in the cement industry as a ferrous additive. It can also be used in other areas of construction and as an initial raw material in iron production.

2 Specification of the intended use(s) in accordance with the applicable European Assessment Document (hereinafter EAD)

The CIPF 42,5 with Iron Silicate Fines is a cement for production of concrete, mortar, grouts and other mixes including in particular cast-in-situ and prefabricated structural concrete conforming to EN 206.

The verifications and assessment methods on which this European Technical Assessment is based on lead to the assumption of a working life of the CIPF 42,5 with Iron Silicate Fines for the intended use of 50 years. These provisions are based upon the current state of the art and the available knowledge and experience.

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 Basic Works Requirement 1: Mechanical resistance and stability

Essential characteristic	Relevant clause of the EAD	Declared value	
Standard strength (28 days)	2.2.1	≥ 43,0 N/mm ²	
Early strength (2 days)	2.2.2	≥ 18,5 N/mm ²	
Initial setting time (20 M.-% iron-silicate fines)	2.2.3	195 min	
Soundness (20 M.-% iron-silicate fines)	2.2.4	2,3 mm	
Sulphate content (20 M.-% iron-silicate fines)	2.2.5	2,72 M.-%	
Chloride content (20 M.-% iron-silicate fines)	2.2.6	< 0,07 M.-%	
Cement composition	2.2.7	Clinker	80 - 94 %
		Iron-silicate fines	6 - 20 %
		Limestone	-
		Minor constituents	-
Pozzolanic activity	2.2.8	pass (not relevant for CCBA 42,5)	
Density (20 M.-% iron-silicate fines)	2.2.9	3,32 g/cm ³	
Fineness (Blaine) (20 M.-% iron-silicate fines)	2.2.10	3 074 cm ² /g	
Determination of carbonation resistance of concrete	2.2.11	No performance assessed	
Resistance to Chloride penetration	2.2.12	No performance assessed	
Freeze-thaw resistance without de-icing agent	2.2.13	No performance assessed	

Table 2 Basic Works Requirement 3: Hygiene, Health & Environment

Essential characteristic	Relevant clause of the EAD	Declared value
Content and/or release of dangerous substances	2.2.14	No performance assessed



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

In accordance with EAD 150043-00-0301 the applicable European legal act is: 2010/683/EU.

The System to be applied is: 1+

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 to be laid down in the control plan, in accordance with Section 3.2 of EAD 150043-00-0301. The tasks of the notified body are laid down in Section 3.3 of EAD 150043-00-0301.

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