Blast furnace cement
CEM III/B 42,5 N-LH/SR CE LA BENOR
March 2024

IJMUIDEN

Standards and certificates

Cement type	Certificate	Standard	Certificate
CEM III/B 42,5 N-LH/SR	CE	EN 197-1	0956-CPR-1102.1067
CEM III/B 42,5 N-LH/SR	KOMO	BRL 2601	1102-1067-21
CEM III/B 42,5 N-LH/SR CE LA BENOR	BENOR	NBN B12, PTV 603	CEP/4443/0331

Declared composition

	Declared performance CE[2]	Performance BENOR[5]	Standard
Common cements (subfamilies), constituents and composition	CEM III/B		EN 197-1
Principal constituents		K31 S68	CEN TR 196-4

Additions in % of the cement	Units	Average Values 12 months
Setting time regulator	%	3,65
Grinding agent	%	0,040
Reducing agent *	%	0

Chemical and mineralogical properties

	Units	Test method	Declared performance CE[2]	Performance BENOR[5]	Average Values 12 months [1]	Values as guideline[4]
CaO	%	EN 196-2	-			46,4
SiO_2	%	EN 196-2	-			29,8
Al_2O_3	%	EN 196-2	-			10,2
Fe_2O_3	%	EN 196-2	-			1,4
SO_3	%	EN 196-2	Pass		2,7	
Insoluble residue	%	EN 196-2	Pass		1,5	
Loss on ignition	%	EN 196-2	Pass		1,4	
Chlorides	%	EN 196-2	Pass		0,06	
C_3A	%	EN 196-2				
Chromium (VI)*	%	EN 196-10				< 0,0002
Na_2O-equivalent	%	EN 196-2		LA (≤ 1,30)		
Sulphides	%	EN-196-2				

* In accordance with the Regulation EC 1907/2006 (Reach), the soluble chromium (VI) content is limited to a maximum of 0.0002%. The chromium (VI) content is determined in accordance with EN 196-10.

Design value for the purpose of CUR-Aanbeveling 89 (ASR)

Na_2O-equivalent[5]	0,85 %

Mechanical characteristics

The cement's compressive strength, measured on of standardised mortar, is determined in accordance with EN 196-1.

	Units	Declared performance CE[2]	Performance BENOR[5]	Average Values 12 months [1]	Values as guideline[4]
Compressive strength at 1 day	MPa				
Compressive strength at 2 days	MPa	Pass		11,9	
Compressive strength at 7 days	MPa				29,2
Compressive strength at 28 days	MPa	Pass		52,7	

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Physical characteristics

	Test method	Units	Declared performance CE[2]	Performance BENOR[3]	Average Values 12 months [1]	Values as guideline[4]
Lightness L	CIE Lab	%				
Normal consistency with water	EN 196-3	%				27,3
Initial setting time	EN 196-3	Min.	Pass		213	
Final setting time	EN 196-3	Min.		≤ 720	267	
Soundness	EN 196-3	mm	Pass		0	
Specific surface (Blaine)	EN 196-6	cm^2/g				4480
Sieving oversize of 200 µm	EN 196-6	%		≤ 3,0	0	
Heat of hydration - 7d	EN 196-11	J/g	Pass		234	
Heat of hydration on Q41	EN 196-9	J/g				
Heat of hydration on Q120	EN 196-9	J/g				
Mass density - Absolute	EN 196-6	kg/m^3				2980
Mass density - Apparent		kg/m^3				1060
C-value	NEN 5970					1,45

Specific suitability for the use according NBN B15-001

	BENOR[3]
Exposure class	All classes
Environmental class (non-reinforced concrete)	All classes
Environmental class (reinforced + prestressed	All classes

Production and packaging

This cement is available in the following packaging :

	Ship bulk	Lorry bulk	Bag
IJMUIDEN	V	V	-

Grinding Facility :

Storage : Cf plan Silos

The plant is certified

ISO 9001	ISO 14001	ISO 45001	CSC GOLD

Declaration of performance compliant to CPR(EU) n° 305/2011
0956-CPR-1102.1067
Website: www.heidelbergmaterials-benelux.com

(1) Performance expressed in average values of the self-checking results of the last 12 months of the previous year. This value is verified by the inspection body.
(2) Properties from the Declaration of Performance (DoP).
(3) Properties from BENOR Certification
(4) The values given above are average values provided as a guideline.
(5) The design value is based on the average of the previous year plus 2 x the standard deviation