

Test certificate

Type and designation of the material:	Portland cement CEM I 52,5 N Milke®classic
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Origin or manufacturer:	HeidelbergCement AG, Zementwerk Milke / Geseke 59590 Geseke
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Period of analysis:	01.02.2010 to 31.03.2010
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Binder test according to DIN 1164/18506/EN 196/EN 197/EN 413/EN 459 and according to internal test instructions:

Grinding fineness residue 630 µm	%	Loss on ignition	1,8	%	
Grinding fineness residue 200 µm	%	insoluble residue	0,8	%	
Grinding fineness residue 90 µm	0,3	%	SiO ₂	23,5	%
Grinding fineness residue 63 µm	%	Al ₂ O ₃	3,9	%	
Blaine value	3455	cm ² /g	Fe ₂ O ₃	1,4	%
Spec. gravity		g/cm ³	CaO	65,0	%
Bulk density		kg/dm ³	MgO	0,8	%
Water requirement (NST)	27,6	%	SO ₃	2,7	%
Start of setting	205	Min.	K ₂ O	0,7	%
End of setting	235	Min.	Na ₂ O	0,2	%
False setting - w/b		cm	Cl	< 0,1	%
Water for mortar		%	Brightness	37,9	%
Slump		mm			

Strenghts:

Flexural tensile strengths in MPa after				
	1 day	2 days		28 days
	3,4	5,2		9,6

Compressive strengths in MPa after				
	1 day	2 days		28 days
	13,0	24,5		63,9

Remark:
The above-mentioned values are mean values, which are subject to the usual production fluctuations.