

Test certificate

Type and designation of the material:	Portland cement CEM I 52,5 R (sp) Milke® plus
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Origin or manufacturer:	HeidelbergCement AG, Zementwerk Milke / Geseke 59590 Geseke
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Period of analysis:	yearly average 2010
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Binder test according to DIN 1164/EN 196/EN 197/EN 413/EN 459 and according to internal test instructions:

Grinding fineness residue 630 µm		%	Loss on ignition	1,3	%
Grinding fineness residue 200 µm	0,0	%	insoluble residue	0,8	%
Grinding fineness residue 90 µm	0,0	%	SiO ₂	23,0	%
Grinding fineness residue 63 µm		%	Al ₂ O ₃	3,9	%
Fineness	6850	cm ² /g	Fe ₂ O ₃	1,4	%
Spec. gravity		g/cm ³	CaO	65,2	%
Bulk density		kg/dm ³	MgO	0,8	%
Water requirement (NST)	39,0	%	SO ₃	3,4	%
Start of setting	125	Min.	K ₂ O	0,7	%
End of setting	180	Min.	Na ₂ O	0,2	%
False setting - w/b		cm	Cl	< 0,1	%
Water for mortar		%	Brightness	46,4	%
Slump		mm			

Strengths:

Flexural tensile strengths in MPa after				
	1 day	2 days		28 days
	7,0	8,3		9,3

Compressive strengths in MPa after				
	1 day	2 days		28 days
	38,9	52,4		73,3

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