



ANALYSIS REPORT

ISSUE DATE 2022091305

Application experiment of WOTAICHEM superplasticizer
On LAB / APPLICATION PERFORMANCE of
WOTAICHEM PCE 6021 & BASF2651; WOTAICHEM SMF 6010 & BASF F-10X

1.1 Experiment: Self-leveling cement formula, (adding different brands of different amounts of superplasticizer measured and compared)

Southern Cement PO.42.5	250
High-alumina cement	90
anhydrite	70
Calcium carbonate	145
40-70/70-100/100-140sand	140/100/190
superplasticizer	AS BELOW
defoamer	1
WOTAICHEM HPMC400	0.8
WOTAICHEM Tartaric acid	1
lithium carbonate	1
WOTAICHEM RDP 5041	10

1.2 The experimental data of WOTAI PCE6021 comparison BASF2651 are as follows:

Grade	dosage	Plastici zation time(s)	Initial fluidity (mm)	Initial spreading time (s)	20min fluidity (mm)	20min Spread time (s)	Loss of mobility/m m	Wet density (g/ml)
BASF2651	0.05%	30	137	35	111	/	26	2.03

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(2023/8/25)	0.1%	30	147	20	135	32	12	2.09
	0.15%	30	152	18	145	19	7	2.08
	0.2%	30	154	16	150	18	4	2.10
	0.25%	30	153	16	155	14	-2	2.05
	0.3%	30	155	14	153	15	2	2.06
	0.35%	30	152	15	156	14	-4	2.03
	0.4%	30	150	16	155	15	-5	2.06
BASF2651 (2010/9/11)	0.05%	30	132	50	103	no	29	2.01
	0.1%	30	147	20	136	27	11	2.06
	0.15%	30	149	17	140	18	9	2.07
	0.2%	30	150	19	146	21	4	2.09
	0.25%	30	153	15	152	15	1	2.10
	0.3%	30	154	18	153	15	1	2.07
	0.35%	30	151	16	153	16	-2	2.07
Wotai PCE6021 (2023/9/15)	0.05%	30	131	60	115	no	16	2.04
	0.1%	30	145	22	140	27	5	2.07

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2.Comparison of concrete formula experiments

Experimental design ratio of concrete	Source of Materials:	The name of the material	1#	3#
	WOTAI	Aalbo 52.5 white cement	100	
		Graded quartz sand	250	
		gravel	400	
	Samples are sent by customers	SMF6010	1.65	/
		F-10X	/	1.5
	WOTAI	water	48	
Test and examine indicators and raw data and results	Reference standards	GB-T50080-2016< Standard > for performance test methods of ordinary concrete mixtures		
	Test conditions	2023/02/03 Application Performance Laboratory: 20±2℃, 60±55R.H.		
	Concrete slump (mm)	Initial value	200	200
	24-hour cube specimen compressive strength (MPa)	Stress resistance average	30.5	28.4
		STDEV	0.99	3.18
	3d Compressive strength of cubic specimens (MPa)	Stress resistance average	42.6	36.4
		STDEV	/	1.41

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3.Comparison of mortar formula experiments

Mortar experimental design ratio	Source of Materials:	The name of the material	1#	2#	3#
	WOTAI	Aalbo 52.5 white cement	100		
		Graded quartz sand	250		
	Samples are sent by customers	SMF6010	1.2	/	/
		F-10X	/	1.2	1.1
	WOTAI	water	35		
Test and examine indicators and raw data and results	Reference standards	GB-T50448-2015< Technical specifications for the application of cement-based grouting materials >			
	Test conditions	2023/02/01Application Performance Laboratory: 20±2℃ , 60±55R.H.			
	Flow scalability (mm)	Initial value	255	270	260
		The value is retained for 30 minutes	170	170	170
	1d flexural and compressive strength (MPa)	Average value of fold resistance	5.2	5.4	4.7
		STDEV	0.15	0.06	0.2
		Stress resistance average	39.4	41.7	41.4
		STDEV	0.07	0.35	0.49
	3d flexural and compressive strength	Average value of fold resistance	5.4	/	5.2

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	(MPa)	STDEV	0.07	/	0.28
		Stress resistance average	49.8	/	49.5
		STDEV	0.57	/	0.78

INSPECTOR: STELLA GAO/

STANDARD: GB-T50448-2015< Technical specifications for the application of cement based grouting materials >

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