



Initial Report: REP-VELOSIT-17-001

Sample Identification:

Sample ID: Control mix Vs Control mix with VELOSIT CA 113

Customer Name: VELOSIT

Sample observation:

No abnormal findings

Concrete Analysis Result:

Control Lab Mix - Batch Weight Calculation		
Ingredients	Trial wt	
	per M3	
Cement	470	Kg
Silica Fume	80	Kg
Water Total	148.5	Kg
Aggregates Size 1	400	Kg
Aggregates Size 2	555	Kg
Sand	695	Kg
Admixture Master Gelnum ACE 3383 BASF	5.50	Kg

Control-Lab MIX+ CA 113 - Batch Weight Calculation		
Ingredients	Trial wt	
	per M3	
Cement	470	Kg
Silica Fume	80.0	Kg
Water Total	148.5	Kg
Aggregates Size 1	400	Kg
Aggregates Size 2	555	Kg
Sand	695	Kg
Admixture Master Gelnum ACE 3383 BASF	5.50	Kg
VELOSIT CA 113	3.85	Kg

Workability (Slump Flow Test) (mm)	Sample Code	MEA-18-1936	MEA-18-1937	Analysis Method
	Sample ID	Control Mix	Control Mix with CA 113	
	Initial (min)/Cm	22.5	21.5	According to ASTM C143
	After (30 min)/Cm	22.5	21.5	

Fresh Concrete tests	Sample Code	MEA-18-1936	MEA-18-1937	Analysis Method
	Sample ID	Control Mix	Control Mix with CA 113	
	Bulk density Kg/m3	2403	2409	ASTM C 29
	Initial Setting/hrs	9:20	10:45	ASTM C 403
	Air Content/%	2.2	1.8	ASTM C 231



ANALYSIS CERTIFICATE

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	Sample Code	MEA-18-1936	Average	MEA-18-1937	Average	Analysis Method
	Sample ID	Control Mix		Control Mix with CA 113		
Heat Curing @ 50°C (Compressive Strength Test) (MPa)	10 Hrs	22.6	22.1	18.7	18.3	DIN EN 12390-3 2002
		21.7		18.7		
		22.1		17.4		
	12 Hrs	28.6	28.8	23.5	23.7	
		29.7		23.6		
		28.0		23.9		
	16 Hrs	37.9	37.3	33.6	33.3	
		37.2		33.2		
		36.9		33.0		

	Sample Code	MEA-18-1936	Average	MEA-18-1937	Average	Analysis Method
	Sample ID	Control Mix		Control Mix with CA 113		
(Compressive Strength Test) (MPa)	7 DAY	58.9	59.0	53.6	54.0	DIN EN 12390-3 2002
		59.8		54.1		
		58.2		54.3		
	28DAY	77.3	77.3	76.4	77.8	
		78.2		79.0		
		76.4		78.1		
	56 DAY	84.5	83.3	84.1	83.9	
		82.0		84.0		
		83.1		83.5		
	90 DAY					

	Sample Code	MEA-18-1936	Average	MEA-18-1937	Average	Analysis Method
	Sample ID	Control Mix		Control Mix with CA 113		
(Tensile Splitting Test) (MPa)	14 day	3.73	3.66	3.55	3.36	EN-12390-6
		3.66		3.36		
		3.60		3.16		
	28 day	5.87	5.46	5.55	5.72	
		4.87		5.88		
		5.65		5.73		



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	Sample Code	Unit	MEA-18-1936	Average	MEA-18-1937	Average	Analysis Method
	Sample ID		Control Mix		Control Mix with CA 113		
Water Absorption	14 days	%	1.55	1.58	1.62	1.56	ASTM C642
			1.62		1.52		
			1.58		1.54		
	28 days	%	1.42	1.46	1.38	1.42	
			1.38		1.43		
			1.47		1.44		

	Sample Code	Unit	MEA-18-1936	Average	MEA-18-1937	Average	Analysis Method
	Sample ID		Control Mix		Control Mix with CA 113		
Water Permeability	14 days	%	15	15	16	15	EN 12390-8
			16		14		
			15		15		
	28 days	%	12.0	12.5	11.0	11.5	
			13.0		12.0		
			12.5		11.5		
	56 days	%	11	11.3	9.5	10.2	
			12.0		10.0		
			11.0		11		
	90 days	%					

Chemical analysis	Sample Code	MEA-18-1936	MEA-18-1937
	Sample ID	Control Mix	Control Mix with CA 113
	Chloride Content %	0.034	0.031
	Sulfate Content %	0.83	0.73



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	Age	Unit	MEA-18-1936	Average	MEA-18-1937	Average	Analysis Method
			Control Mix		Control Mix with CA 113		
Chloride Penetration	14 days	coulombs	528	526	526	500	ASTM C1202
			524		501		
			526		473		
	28 days	coulombs	228	249.6	228	250.3	
			256		273		
			265		250.0		
	56 days	coulombs	152	151.3	132	135	
			153		135		
			149		138		
	90 days	coulombs					

Analysis by:

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