



DEPARTMENT OF CIVIL ENGINEERING

FACULTY OF ENGINEERING, KING MONGKUT'S INSTITUTE OF TECHNOLOGY

LADKRABANG BANGKOK THAILAND. TEL. 0 - 2326 - 4216

COMPRESSIVE STRENGTH OF MORTAR (ASTM C 109-95)

PROJECT : Test on Properties of "Water Grout GP" Req. No. 52-1045

SAMPLE FROM : Waterstop Product Co.,Ltd. Date of Request 21/10/2009

MIX PROPORTIONS : Water Grout GP , w / (c+x) = 0.16 Date of Test 22/10/2009

Water Grout GP = 6000 g. / Water = 960 cc.

Spec. No.	Compressive Strength of 50-mm. Mortar Cube at different ages (ksc.)					Remark
	1 days	3 days	7 days	14 days	28 days	
	1	388.98	554.37	545.08	587.55	
2	387.48	524.86	573.06	622.69	613.12	
3	422.66	545.14	564.05	622.67	646.75	
Average	399.71	541.46	560.73	610.97	641.66	

Note: 1) CERTIFICATION APPLIES TO TEST SAMPLES ONLY.

2) NO ERASURE OR ALTERATIONS.



TESTED BY

Mr.Sombat Natesawang

CERTIFIED BY:

10/22/09 10:10:00



FLOW OF GROUT (JSCE - F531 - 1993)

PROJECT : Test on Properties of "Water Grout GP" **Req. No.** 52-1045

SAMPLE FROM : Waterstop Product Co.,Ltd. **Date of Request** 21/10/200

TEST SPECIMEN : Water Grout GP , w / (c+x) = 0.16 **Date of Test** 22/10/200

Water Grout GP = 6000 g. / Water = 960 cc.

TEST APPARATUS : The Flow of Grout Apparatus : The Flow Cone of size 69.5 mm. in diameter x 385 mm. in height and the discharge tube of size 16 mm. in diameter, Ring Stand and Stop Watch are used for testing

Test No.	W/C Ratio	Observed Time (minutes)	J14-Funnel Flow Time (second)				Remark
			1	2	3	Average	
1	0.16	0	8.47	8.45	8.47	8.46	
2	0.16	10	11.19	11.10	11.15	11.15	
3	0.16	20	11.75	11.78	11.76	11.76	
4	0.16	30	12.68	12.60	12.65	12.64	
5	0.16	40	14.34	14.38	14.40	14.37	

Note: 1) CERTIFICATION APPLIES TO TEST SAMPLES ONLY.

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Mr.Sombat Natesawang

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ศาสตราจารย์ ดร.สมบัติ นทีสาราง



TIME OF SETTING OF CEMENT PLATE BY VICAT NEEDLE (ASTM C 191-99)

PROJECT : Test on Properties of "Water Grout GP" Req. No. 52-1045

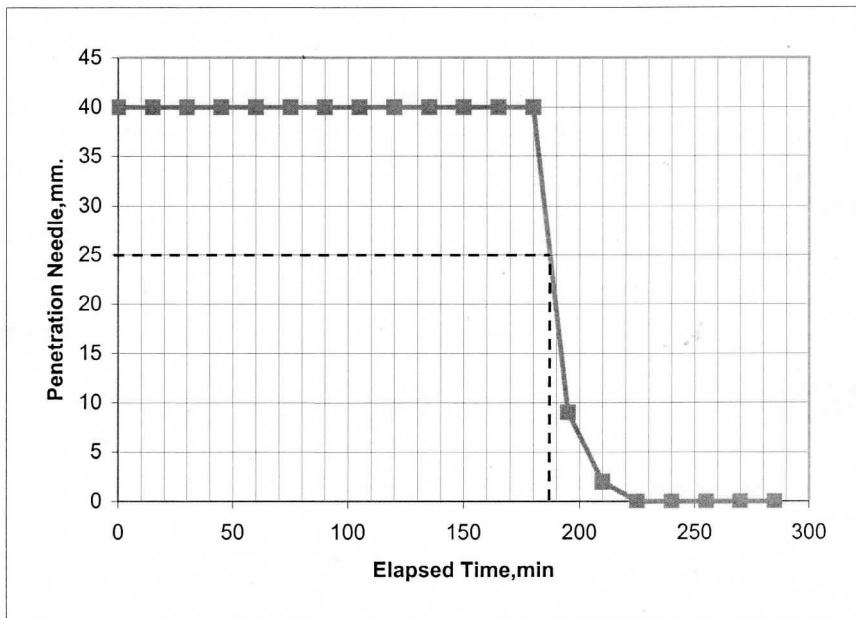
SAMPLE FROM : Waterstop Product Co.,Ltd. Date of Request 21/10/2009

TEST SPECIMEN : Water Grout GP , w / (c+x) = 0.16 Date of Test 19/10/2009

Water Grout GP = 6000 g. / Water = 960 cc.

TEST APPARATUS : Vicat Apparatus

Elapsed Time (min)	Penetration of Needle (mm.)
0	40
15	40
30	40
45	40
60	40
75	40
90	40
105	40
120	40
135	40
150	40
165	40
180	40
195	9
210	2
225	0
240	0
255	0
270	0
285	0



Initial Setting Time = 187 min
 Final Setting Time = 225 min

Note: 1) CERTIFICATION APPLIES TO TEST SAMPLES ONLY.
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