

1.103 CIVIL ENGINEERING MATERIALS LABORATORY (1-2-3)

CONCRETE I: EARLY AGE BEHAVIOR

DATA SHEET (1 of 2)

All dimensions in as indicated Group No. A Date 2/15/04

**Average Specimen Mold Properties:**

Diameter: 102.7 mm 104.35 mm 103.74 mm Average \_\_\_\_\_  
Height: 8.125 in 8.125 in 8.125 in Average \_\_\_\_\_  
Mass: 140 gm 140 gm 139 gm 140 gm Average \_\_\_\_\_

**MIX NO. 1**

Target Water to Cement ratio 0.5

Target Mass Water 11.2 lb Tare Mass 0 Tare plus Water 11.2 lb  
Target Mass Cement 22.4 lb Tare Mass 0 Tare plus Cement 22.4 lb  
Target Coarse Agg 52.2 lb Tare Mass 0 Tare plus Agg 52.2 lb  
Target Mass Sand 45.0 lb Tare Mass 0 Tare plus Sand 45.0 lb  
Slump 0.75 in Description of cohesiveness small amount of bleeding, good finish

Specimen1: Identification # A B1 S1 Mass Mold plus Specimen 4.068 kg  
Specimen2: Identification # A B1 S2 Mass Mold plus Specimen 4.067 kg  
Specimen3: Identification # \_\_\_\_\_ Mass Mold plus Specimen \_\_\_\_\_

**MIX NO. 2**

Target Water to Cement ratio 0.6 Tare & Parent Mix Mass 86.7 lb Tare Mass 0

Target % Incr. 3.22 Mass Water 2.8 lb Tare Mass 0 Tare plus Water 2.8 lb  
Target % Incr. 2.52 Mass Cement 2.2 lb Tare Mass 0 Tare plus Cement 2.2 lb  
Target % Incr. 5.89 Mass Agg 5.1 lb Tare Mass 0 Tare plus Agg 5.1 lb  
Target % Incr. 0.0 Mass Sand \_\_\_\_\_ Tare Mass 0 Tare plus Sand \_\_\_\_\_  
Slump 6.5 in Description of cohesiveness Slightly wet, good finish

Specimen1: Identification # A B2 S1 Mass Mold plus Specimen 4.090 kg  
Specimen2: Identification # A B2 S2 Mass Mold plus Specimen 4.075 kg  
Specimen3: Identification # \_\_\_\_\_ Mass Mold plus Specimen \_\_\_\_\_

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DATA SHEET (2 of 2)

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**MIX NO. 3** Target Water to Cement ratio 0.5 Target % Superplasticizer 0.18  
Tare & Parent Mix Mass 43.5 lbs Tare Mass 0  
Target Mass Superplasticizer 35.5 gm Tare Mass 0 Tare plus Superplasticizer 35.5 gm  
Slump 6.75 in Description of cohesiveness Bleeding excessively, liquid on surface

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Specimen1: Identification # A B3 S1 Mass Mold plus Specimen 4.116 kg  
Specimen2: Identification # A B3 S2 Mass Mold plus Specimen 4.127 kg  
Specimen3: Identification # \_\_\_\_\_ Mass Mold plus Specimen \_\_\_\_\_

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**MIX NO. 4** Target Water cement ratio 0.42  
Target Mass Water 9.3 lb Tare Mass 0 Tare plus Water 9.3 lb  
Target Mass Cement 22.1 lb Tare Mass 0 Tare plus Cement 22.1 lb  
Target Coarse Agg 43.5 lb Tare Mass 0 Tare plus Agg 43. lb  
Target Mass Sand 33.5 lb Tare Mass 0 Tare plus Sand 33.5 lb  
Slump 1.375 in Description of cohesiveness Hard to mix, good finish, holds air, no separation

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Specimen1: Identification # A B4 S1 Mass Mold plus Specimen 4.157 kg  
Specimen2: Identification # A B4 S2 Mass Mold plus Specimen 4.143 kg  
Specimen3: Identification # \_\_\_\_\_ Mass Mold plus Specimen \_\_\_\_\_

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**MIX NO. 5** Target Water to Cement ratio 0.42 Target % Superplasticizer 0.20  
Tare & Parent Mix Mass 44.3 lb Tare Mass 0  
Target Mass Superplasticizer 40.3 gm Tare Mass 0 Tare plus Superplasticizer 40.3gm  
Slump 7 plus Description of cohesiveness much too wet, free water on surface, bleeding at base

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Specimen1: Identification # A B5 S1 Mass Mold plus Specimen 4.135 kg  
Specimen2: Identification # A B5 S2 Mass Mold plus Specimen 4.133 kg  
Specimen3: Identification # \_\_\_\_\_ Mass Mold plus Specimen \_\_\_\_\_

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