

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

CONCRETE I: EARLY AGE BEHAVIOR

DATA SHEET (1 of 2)

All dimensions in english Group No. B Date 2/17/04

Average Specimen Mold Properties:

Diameter: 4 in Average _____
Height: 8 in Average _____
Mass: 163 gm 154 gm 158 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 0.50 in Description of cohesiveness no bleeding, good finish, flat surface, no separation

Specimen1: Identification # B M1 S1 Mass Mold plus Specimen 4.193 kg
Specimen2: Identification # B M1 S2 Mass Mold plus Specimen 4.104 kg
Specimen3: Identification # _____ Mass Mold plus Specimen _____

MIX NO. 2

Target Water to Cement ratio 0.6 Tare & Parent Mix Mass 75.65 lb Tare Mass 0

Target % Incr. 3.22 Mass Water 2.43 lb Tare Mass 0 Tare plus Water 2.43 lb
Target % Incr. 2.52 Mass Cement 1.90 lb Tare Mass 0 Tare plus Cement 1.90 lb
Target % Incr. 5.89 Mass Agg 4.45 lb Tare Mass 0 Tare plus Agg 4.45 lb
Target % Incr. 0.0 Mass Sand _____ Tare Mass 0 Tare plus Sand _____
Slump 7 in Description of cohesiveness Slightly wet, good finish, no bleeding

Specimen1: Identification # B M2 S1 Mass Mold plus Specimen 4.101 kg
Specimen2: Identification # B M2 S2 Mass Mold plus Specimen 4.093 kg
Specimen3: Identification # _____ Mass Mold plus Specimen _____

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DATA SHEET (2 of 2)

MIX NO. 3 Target Water to Cement ratio 0.5 Target % Superplasticizer 0.09
Tare & Parent Mix Mass 36.75 lbs Tare Mass 0
Target Mass Superplasticizer .033 lbs Tare Mass 0 Tare plus Superplasticizer 72.8 gm
Slump 9.25 in Description of cohesiveness Bleeding excessively, liquid on surface, problem!!

Specimen1: Identification # B M3 S1 Mass Mold plus Specimen 4.193 kg
Specimen2: Identification # B M3 S2 Mass Mold plus Specimen 4.120 kg
Specimen3: Identification # _____ Mass Mold plus Specimen _____

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 0.75 in Description of cohesiveness Hard to mix, holds air, good finish, no separation

Specimen1: Identification # B M4 S1 Mass Mold plus Specimen 4.195 kg
Specimen2: Identification # B M4 S2 Mass Mold plus Specimen 4.192 kg
Specimen3: Identification # _____ Mass Mold plus Specimen _____

MIX NO. 5 Target Water to Cement ratio 0.42 Target % Superplasticizer 0.10
Tare & Parent Mix Mass 40.0 lb Tare Mass 0
Target Mass Superplasticizer .040 lbs Tare Mass 0 Tare plus Superplasticizer 88.1 gm
Slump 10.5plus Description of cohesiveness much too wet, free water on surface, bleeding at base

Specimen1: Identification # B M5 S1 Mass Mold plus Specimen 4.246 kg
Specimen2: Identification # B M5 S2 Mass Mold plus Specimen 4.200 kg
Specimen3: Identification # _____ Mass Mold plus Specimen _____
