









































## 14a - Sample Problem - ITS Sheet Level 2S 2 (Surface C) rev1

Job Mix No.: 0 # Blows/Gyrations: \_\_\_\_\_ % Binder: 5.8

Specimen No.	1 - Dry	2 - Dry	3 - Wet	4 - Wet
Diameter, in (150.0 mm)	150.0	150.0	150.0	150.0
Thickness:(95.0 ± 5.0 mm)	95.00	95.00	95.00	95.00
Dry wt., gms.	3500.2	3507.3	3503.4	3500.5
H <sub>2</sub> O wt., gm.	2007.0	2002.0	2005.0	2003.0
SSD wt., gm.	3530.0	3545.0	3540.0	3539.0
Volume (SSD - H <sub>2</sub> O)				
Bulk Sp. Gr. (Dry/Vol)				
Maximum Sp. Gr.	2.454	2.454	2.454	2.454
% Air Voids ((Max-Bulk)/Max*100)				
Volume of Air Voids				
Peak Load (dry), lbs.	3425	3525	-----	-----
Dry TS, psi			-----	-----
Calculated SSD wt. for 70% sat. = (0.7)(Vol. Air Voids) + Dry wt.				
Calculated SSD wt. for 80% sat. = (0.8)(Vol. Air Voids) + Dry wt.				
After 20 in. Hg. vacuum saturation in 77 °F water				
SSD wt., gm.			3585.0	3580.0
Water Pickup, gms. SSD wt. - Dry wt.				
% Saturation =(Water Pickup/Volume of Air Voids) * 100				
After 24 hrs. soak in 140 °F water + 2 hrs. in 77 °F water				
Peak Load (wet), lbs.			3325	3330
Wet TS, psi				
Tensile Strength Ratio Calculations				
Average Wet Tesile Strength, psi. (Min. - 65 psi)				
Average Dry Tesile Strength, psi.				
Tensile Strength Ratio(TSR) = Wet TS/ Dry TS * 100% (Min. - 85 %)				

$$\text{Tensile Strength} = \frac{(2 \times \text{Peak Load})}{(3.14 \times \text{Diameter} \times \text{Thickness})} \quad 1" = 25.4\text{mm}$$