

**ABSOLUTE VOLUME CALCULATION SHEET**

PROJECT / CUSTOMER: Midwest Cellular  
 APPLICATION: permeable cellular  
 MIX NUMBER: \_\_\_\_\_  
 DATE: 7/16/2007

Design Density	25	pcf
Base Mix Density	106.9	pcf
Factor	1.862	
Expansion Factor	4.277	yd / yd place

**BASE MIX**

Materials	Spe. Gra.	Density (pcf)	Weight (lb) Ratio	Volume (ft^3)	lb / yd^3	Base Comp. (Vol. / ft^3)	Base additives	Description of Additives
Water	1.00	62.4	550	8.81	1024	16.41		
Cement	3.15	196.6	667	3.39	1242	6.32		
Fly Ash	2.33	145.4	333	2.29	620	4.27		
Sand	2.65	165.4	0	0.00	0	0.00		
<b>TOTALS</b>			1550	14.50	2887	27.00	0.00	

**BASE MIX WITH FOAM**

Materials	Expanded Weight (lb)	Base Composite Volume	Additives after Foam (oz.)	Description of Additives
Water	240	3.84	0.0	0.00
Cement	290	1.48	0.0	0.00
Fly Ash	145	1.00	0.0	0.00
Sand	0	0.00	0.0	0.00
Sub-Total	675.0	6.3	0.0	
Foam		20.7		
<b>TOTALS</b>		27.0		

  

Grout out	1.24	cfm
Nozzle Need	4.06	cfm
Set water	0.98	gpm

Sample Id.	Compressive (psi)	Age (days)	Date Tested
<b>24 pcf</b>	65.0	28.0	
<b>30 pcf</b>	145.0	28.0	
<b>35 pcf</b>	220.0	28.0	