

Chicora Foundation Gas Displacement Mortar Analysis Data Sheet

Name: Fort Motte Jail, Calhoun Co. **Sample No.:** 2005-7
Date: 8/19/05 **Origin of Sample:** Bedding mortar rear doorway of jail

Visual Description of sample (color, texture, hardness, inclusions, etc.):
 Many inclusions, some white probably lime chunks; somewhat friable; very pale brown (10YR8/2)

Mortar Analysis

Original weight of powdered sample (in g)	5.65
Weight of filter paper (in g)	2.20
Weight of filter paper + dry fines (in g)	2.32
Weight dry fines (in g)	0.12
Weight of dry sand (in g)	4.29
Gas Displacement (in ml)	65.00
Weight of lime (in g)	0.29
% of sand	75.93
% of fines	2.12
% of lime	5.17
% of acid solubles	16.78

Observations (dissolution of binder, color of liquid, reaction):
 Somewhat reactive; brownish yellow liquid; long reaction, but turning less aggressive

Characterization of Sand:

Microscopic Examination:
 Well rounded to sub-angular; well sorted; mostly clear quartz, but some mica or similar material present

	wt. / % finer than	wt (gm)	%
	4.75mm	0.00	0
	2.36mm	0.02	0.4662
	1.18mm	0.27	6.293706
	600µm	0.57	13.28671
	300µm	1.62	37.76224
	150µm	1.36	31.70163
	75µm	0.39	9.090909
	53µm	0.06	1.398601
	38µm	0.00	0
Total sand weight		4.29	

Munsell Color(s) of Sand: very pale brown (10YR8/3)

