

**Electrical Indicators of Permeability Report
 Florida Department of Transportation
 State Materials Office
 Corrosion Research Laboratory**

Lab #: 1686 (Non-QPL Testing)

Date: 1/9/08

Mix Name: Cook Grout

Sample Dimensions: 4x8"

Mix Description: CP Jacket Filler

Cylinder

Cast Date: 9/18/06

Test Date: 10/16/06

Age: 28 Days

Technician Name: Steven Sauls

TEST RESULTS	
Chloride Concentration (Lbs/yd³)	0.215
RCP (coulombs)	10833
Surface Resistivity (Kohm-cm)	5.5

RCP, Surface Resistivity Permeability				
Chloride Ion Permeability	RCP Test Charged Passed (coulombs)	Surface Resistivity Test		
		4 X 8 Cylinder (Kohm-cm) a=1.5 k=1.8 (Measured)	6 X 12 Cylinder (KOhm-cm) a=1.5 k=1.41 (Measured)	Semi-Infinite Slab (Real)
High	>4,000	< 12	< 9.5	< 6.7
Moderate	2,000-4,000	12 - 21	9.5 - 16.5	6.7 - 11.7
Low	1,000-2,000	21 - 37	16.5 - 29	11.7 - 20.6
Very Low	100-1,000	37 - 254	29 - 199	20.6 - 141.1
Negligible	<100	> 254	> 199	> 141.1

FDOT - STATE MATERIALS OFFICE
Test Data:: CP Jackets Cook Grout
Non-QPL Testing

Dec-06

Compressive Strength (2"x2" Cubes) ASTM 109

Age	Sample #	Ultimate Load (lb)	Strength (psi)	Avg. Strength (psi)
1 Day	1	8990	2323	
	2	9470	2447	2422
	3	9660	2496	
7 Day	1	19330	4995	
	2	18400	4755	4956
	3	19810	5119	
28 Day	1	23400	6047	
	2	25480	6584	6525
	3	26870	6943	

Bond Strength

ASTM 1583-04

Age	Sample #	Ultimate Load (lb)	Diameter (in)	Strength (psi)	Avg. Strength (psi)
7 Day	1	1650	2.02	515	
	2	1600	2.02	502	511
	3	1650	2.02	515	

Compressive Strength (4"x8" Cubes)

Sample #	Ultimate Load (lb)	Strength (psi)	Avg. Strength (psi)
1	55800	4440	
2	57400	4568	4464
3	55100	4385	

Splitting Tensile Strength (4"x8" cylinders) ASTM C 496

Age	Sample #	Ultimate Load (lb)	Length (in)	Ultimate Strength (psi)	Avg. Strength (psi)
1 Day	1	8066	8.00	160	
	2	8451	8.01	168	161
	3	7786	8.04	154	
7 Day	1	12986	8.06	256	
	2	15809	8.03	314	271
	3	12181	8.02	242	
28 Day	1	24854	8.01	494	
	2	25200	8.02	500	505
	3	26222	8.00	522	

Thermal Expansion ASTM C531

Sample #	Initial 73°F	210°F	Final 73°F	Coefficient of Expansion (1/F°)
1	10.0149	10.0258	10.0149	7.94E-06
2	9.9595	9.9702	9.9595	7.84E-06
3	9.9242	9.9348	9.9241	7.83E-06
Average Coefficient of Expansion (1/F°)				7.87E-06

Absorption ASTM C413

Sample #	Initial Weight (g)	Final Weight (g)	Absorption %
1	242.738	256.274	5.5764
2	245.872	259.256	5.4435
3	243.157	257.168	5.7621
Average Absorption (%)			5.5940