

Summary of Splitting Tensile Strength Testing

Based on the ASTM C-330 tests performed at F&R the splitting tensile ratio for Stalite lightweight aggregate concrete with a compressive strength of 4840 psi to 5410 psi reported was $7.3\sqrt{f_c}$. Additional lab testing was performed at Carolina Stalite Companies Gold Hill Laboratory in October of 2005. The results of these splitting tensile tests are listed below. The results indicate a splitting tensile strength for the analyzed mixes of $7.4\sqrt{f_c}$.

Lab test	F'c	F't	F't/SqRt F'c
10/15/05	2615	452.3	8.8
10/15/05	2615	371.9	7.3
10/15/05	2615	349.8	6.8
10/15/05	3514	454.7	7.7
10/15/05	3514	500.5	8.4
10/15/05	3514	445.2	7.5
10/15/05	3514	374.6	6.3
10/15/05	3514	416.3	7.0
Average		438.3	7.4
Stdev			0.9

Lab test	F'c	F't	F't/SqRt F'c
8/29/00	5290	577.0	7.9
8/29/00	5330	518.0	7.1
8/29/00	5410	525.0	7.1
8/29/00	5290	497.0	6.8
8/29/00	5330	514.0	7.0
8/29/00	5410	497.0	6.8
7/29/02	4840	460.0	6.6
7/29/02	4840	470.0	6.8
7/29/02	4840	450.0	6.5
7/29/02	4840	480.0	6.9
7/29/02	4840	480.0	6.9
7/29/02	4840	480.0	6.9
7/29/02	4840	490.0	7.0
7/29/02	4840	480.0	6.9
4/7/04	5070	530.0	7.4
4/7/04	5070	530.0	7.4
4/7/04	5070	450.0	6.3
4/7/04	5070	440.0	6.2
4/7/04	5070	520.0	7.3
4/7/04	5070	570.0	8.0
4/7/04	5070	530.0	7.4
4/7/04	5070	515.0	7.2

Average		522.5	7.3
Stdev			0.7

