Appendix B

Summary of Papers Used for Determining Peak Surface Parameters

Table B.1: Summary of papers used for determining peak surface parameters.

Paper	Triaxial Loading Type	Lateral Loading Magnitude (as % of f'_c)	Concrete Strength (ksi)	Specimen Shape	Specimen Size (inches)	Water-Cement Ratio	Notes
Ahmad and Shah (1982)	Passive Confinement (Steel rebar/wire)	0.1% - 1%	3.8 - 9.5	Cylinder	3 x 6	0.45 - 0.60	included mixes: two lightweight, one normal weight
Ansari and Li (1998), Li and Ansari (1999), Li and Ansari (2000)	Triaxial pressure vessel	18% - 93%	6.9 - 15.6	Cylinder	3 x 6, 4 x 8	0.26 - 0.46	included mixes: two high strength, one normal strength
Attard and Setunge (1996), Attard and Setunge (1994)	Triaxial pressure vessel	0.4% - 25%	8.4 - 19.1	Cylinder	4 x 8	0.26 - 0.45	included mixes: four high strength, one normal strength; three different coarse aggregates
Balmer (1949)	Triaxial pressure vessel	25% - 700%	3.6 - 4.0	Cylinder	6 x 12	0.58	one mix tested at 35 and 97 days
Bellamy (1961)	Triaxial pressure vessel	28% - 129%	3.8 - 4.9	Cylinders (solid and hollow)	6 x 12	0.55	hollow cylinders failed at inner surface, thus a biaxial failure state

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Calixto (2002)	Biaxial	5% - 30%	10.8	Plate	5 x 5 x 0.5	0.28	
Candappa et al. (2001), Candappa et al. (1999)	Triaxial pressure vessel	4% - 30%	6.1 - 15.0	Cylinder	4 x 8	0.30 - 0.63	included mixes: three high strength, one normal strength
Chinn and Zimmerman (1965)	Triaxial pressure vessel	49% - 1714%	3.4 - 10.3	Cylinder	6 x 12	0.30 - 0.53	included mixes: two high strength, one normal strength
Chuan-zhi et al. (1987)	True triaxial	6% - 343%	1.1 - 2.1	Cube	4 x 4 x 4	0.72	two different coarse aggregates
Cordon and Gillespie (1963)	Triaxial pressure vessel	5% - 113%	1.8 - 7.4	Cylinder	6 x 12	0.40 - 0.70	two different maximum aggregate sizes for each water-cement ratio
Duke and Davis (1944)	Triaxial pressure vessel	2% - 26%	5.7 - 6.6	Cylinder	8 x 16	0.48	comparison of saturated to partially dry specimens

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Imran and Pantazopoulou (1996)	Triaxial pressure vessel	4% - 91%	4.2 - 10.6	Cylinder	2.125 x 4.25	0.40 - 0.75	comparison of saturated to oven dried specimens, and of various load paths
Kupfer et al. (1969), Kupfer and Gerstle (1973)	Biaxial	26% - 118%	2.8 - 8.6	Plate	7.9 x 7.9 x 2.0	0.43 - 1.20	
Lan and Guo (1997)	True triaxial	8% - 350%	2.2 - 3.8	Cube	2.78 x 2.78 x 2.78	0.71	comparison of different triaxial load paths
Launay and Gachon (1972a), Launay and Gachon (1972b)	True triaxial	20% - 564%	5.2	Cube	2.76 x 2.76 x 2.76	0.53	
Mills and Zimmerman (1970)	True triaxial	2% - 314%	3.3 - 5.2	Cube	2.25 x 2.25 x 2.25	0.49 - 0.66	
Richart et al. (1928)	Triaxial pressure vessel	7% - 571%	1.1 - 3.7	Cylinder	4 x 8, 4 x 22	0.64 - 1.25	

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Richart et al. (1929)	Passive (Steel rebar/wire)	6% - 71%	2.1	Cylinder	10 x 40	0.87	
Rosenthal and Glucklich (1970)	Triaxial pressure vessel	31% - 222%	2.8 - 6.9	Cylinder (hollow)	12 x 14	0.63 - 0.94	hollow cylinders failed at inner surface, thus a biaxial failure state
Sfer et al. (2002)	Triaxial pressure vessel	4% - 183%	4.8 - 5.6	Cylinder	6 x 12	0.57	
Toutanji (1999)	Passive (Fiber composite sheets)	24% - 57%	4.5	Cylinder	3 x 12	0.5	