

ZAP SCREWLOK® TYPE 2 SYSTEM TEST DATA CONVERSION - 15M AND 20M (GRADE 400)

Lab Report & Reference No.		Bar Type	ASTM Bar Size Designation	ASTM Bar area in ²	Max Load lb	Max Stress psi	Developed Stress %fy ASTM Gr 60 (metric Gr 420)	Equivalent CSA Designation	CSA Bar Area mm ²	Max Load kN	Equivalent Max Stress CSA Gr 400 N/mm ²	Equivalent Developed Stress %fy CSA Gr 400
5T4568	5A	Black	No. 5	0.31	34,090	109,968	183%	15M	200	151.6	758	190%
	5B		No. 5	0.31	34,590	111,581	186%	15M	200	153.9	769	192%
5T7929	5A	Black	No. 5	0.31	32,880	106,065	177%	15M	200	146.3	731	183%
	5B		No. 5	0.31	32,770	105,710	176%	15M	200	145.8	729	182%
5T8742	5A	Black	No. 5	0.31	31,370	101,194	169%	15M	200	139.5	698	174%
	5B		No. 5	0.31	32,040	103,355	172%	15M	200	142.5	713	178%
5T7770	5A	Epoxy	No. 5	0.31	32,210	103,903	173%	15M	200	143.3	716	179%
	5B		No. 5	0.31	32,870	106,032	177%	15M	200	146.2	731	183%
5T7927 A706	5A	Epoxy	No. 5	0.31	31,810	102,613	171%	15M	200	141.5	707	177%
	5B		No. 5	0.31	31,850	102,742	171%	15M	200	141.7	708	177%
6T3578	6A	Black	No. 6	0.44	50,060	113,773	190%	20M	300	222.7	742	186%
	6B		No. 6	0.44	51,390	116,795	195%	20M	300	228.6	762	190%
6T5452	6A	Black	No. 6	0.44	46,240	105,091	175%	20M	300	205.7	686	171%
	6B		No. 6	0.44	45,960	104,455	174%	20M	300	204.4	681	170%
6T5555	6A	Black	No. 6	0.44	47,300	107,500	179%	20M	300	210.4	701	175%
	6B		No. 6	0.44	48,990	111,341	186%	20M	300	217.9	726	182%
6T5451	6A	Epoxy	No. 6	0.44	45,870	104,250	174%	20M	300	204.0	680	170%
	6B		No. 6	0.44	45,470	103,341	172%	20M	300	202.3	674	169%
6T5754	6A	Epoxy	No. 6	0.44	45,310	102,977	172%	20M	300	201.5	672	168%
	6B		No. 6	0.44	45,690	103,841	173%	20M	300	203.2	677	169%

NOTES

Test results are from routine testing of each heat lot of arriving coupler material, per Barsplice Products, Inc. ISO Quality System. Reinforcing Bars, per ASTM A615 (or *A706) Grade 60, have a specified yield, fy = 60,000 psi (420 N/mm²). See Lab reports for stress versus displacement curves (stress versus cross-head position). Load rates per ASTM A 370. ASTM = American Society for Testing and Materials
CSA = Canadian Standards Association

ZAP SCREWLOK® TYPE 2 SYSTEM TEST DATA CONVERSION - 25M AND 30M (GRADE 400)

Lab Report & Reference No.		Bar Type	ASTM Bar Size Designation	ASTM Bar area in ²	Max Load lb	Max Stress psi	Developed Stress %fy ASTM Gr 60 (metric Gr 420)	Equivalent CSA Designation	CSA Bar Area mm ²	Max Load kN	Equivalent Max Stress CSA Gr 400 N/mm ²	Equivalent Developed Stress %fy CSA Gr 400
8T3613	8A	Black	No. 8	0.79	87,411	110,647	184%	25M	500	388.8	778	194%
	8B		No. 8	0.79	87,846	111,197	185%	25M	500	390.7	781	195%
8T3709	8A	Black	No. 8	0.79	89,490	113,278	189%	25M	500	398.0	796	199%
	8B		No. 8	0.79	84,581	107,064	178%	25M	500	376.2	752	188%
8T3719	8A	Black	No. 8	0.79	86,003	108,865	181%	25M	500	382.5	765	191%
	8B		No. 8	0.79	86,894	109,992	183%	25M	500	386.5	773	193%
8T2651	8A	Epoxy	No. 8	0.79	82,640	104,608	174%	25M	500	367.6	735	184%
	8B		No. 8	0.79	84,280	106,684	178%	25M	500	374.9	750	187%
8T3500	8A	Epoxy	No. 8	0.79	80,273	101,612	169%	25M	500	357.1	714	179%
	8B		No. 8	0.79	78,810	99,760	166%	25M	500	350.5	701	175%
9T2019 A706	9A	Black	No. 9	1.00	101,970	101,970	170%	30M	700	453.6	648	162%
	9B		No. 9	1.00	101,320	101,320	169%	30M	700	450.7	644	161%
9T2363	9A	Black	No. 9	1.00	109,836	109,836	183%	30M	700	488.6	698	174%
	9B		No. 9	1.00	108,621	108,621	181%	30M	700	483.1	690	173%
9T2394	9A	Black	No. 9	1.00	111,787	111,787	186%	30M	700	497.2	710	178%
	9B		No. 9	1.00	116,548	116,548	194%	30M	700	518.4	741	185%
9T2169	9A	Epoxy	No. 9	1.00	106,640	106,640	178%	30M	700	474.3	678	169%
	9B		No. 9	1.00	105,420	105,420	176%	30M	700	468.9	670	167%
9T2289	9A	Epoxy	No. 9	1.00	117,776	117,776	196%	30M	700	523.9	748	187%
	9B		No. 9	1.00	117,063	117,063	195%	30M	700	520.7	744	186%

NOTES

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ZAP SCREWLOK® TYPE 2 SYSTEM TEST DATA CONVERSION - 35M AND 45M (GRADE 400)

Lab Report & Reference No.		Bar Type	ASTM Bar Size Designation	ASTM Bar area in ²	Max Load lb	Max Stress psi	Developed Stress %fy ASTM Gr 60 (metric Gr 420)	Equivalent CSA Designation	CSA Bar Area mm ²	Max Load kN	Equivalent Max Stress CSA Gr 400 N/mm ²	Equivalent Developed Stress %fy CSA Gr 400
11T3620 A706	11A	Black	No. 11	1.56	150,660	96,577	161%	35M	1000	670.1	670	168%
	11B		No. 11	1.56	150,810	96,673	161%	35M	1000	670.8	671	168%
11T4022	11A	Black	No. 11	1.56	172,703	110,707	185%	35M	1000	768.2	768	192%
	11B		No. 11	1.56	171,499	109,935	183%	35M	1000	762.8	763	191%
11T4207	11A	Black	No. 11	1.56	173,318	111,101	185%	35M	1000	770.9	771	193%
	11B		No. 11	1.56	176,706	113,273	189%	35M	1000	786.0	786	196%
11T3894	11A	Epoxy	No. 11	1.56	163,820	105,013	175%	35M	1000	728.7	729	182%
	11B		No. 11	1.56	159,320	102,128	170%	35M	1000	708.7	709	177%
11T4211	11A	Epoxy	No. 11	1.56	173,307	111,094	185%	35M	1000	770.9	771	193%
	11B		No. 11	1.56	170,982	109,604	183%	35M	1000	760.5	761	190%
14T1197 A706	14A	Black	No. 14	2.25	219,051	97,356	162%	45M	1500	974.3	650	162%
	14B		No. 14	2.25	225,041	100,018	167%	45M	1500	1001.0	667	167%
14T1352	14A	Black	No. 14	2.25	229,696	102,087	170%	45M	1500	1021.7	681	170%
	14B		No. 14	2.25	228,429	101,524	169%	45M	1500	1016.1	677	169%
14T1384	14A	Black	No. 14	2.25	233,440	103,751	173%	45M	1500	1038.3	692	173%
	14B		No. 14	2.25	228,159	101,404	169%	45M	1500	1014.9	677	169%
14T1087	14A	Epoxy	No. 14	2.25	217,717	96,763	161%	45M	1500	968.4	646	161%
	14B		No. 14	2.25	221,002	98,223	164%	45M	1500	983.0	655	164%
14T1205	14A	Epoxy	No. 14	2.25	231,764	103,006	172%	45M	1500	1030.9	687	172%
	14B		No. 14	2.25	234,124	104,055	173%	45M	1500	1041.4	694	174%

NOTES

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ZAP SCREWLOK® TYPE 2 SYSTEM TEST DATA CONVERSION - 55M (GRADE 400)

Lab Report & Reference No.		Bar Type	ASTM Bar Size Designation	ASTM Bar area in ²	Max Load lb	Max Stress psi	Developed Stress %fy ASTM Gr 60 (metric Gr 420)	Equivalent CSA Designation	CSA Bar Area mm ²	Max Load kN	Equivalent Max Stress CSA Gr 400 N/mm ²	Equivalent Developed Stress %fy CSA Gr 400
18T498	18A	Black	No. 18	4.00	417,512	104,378	174%	55M	2500	1857.1	743	186%
	18B		No. 18	4.00	406,180	101,545	169%	55M	2500	1806.7	723	181%
18T915	18A	Black	No. 18	4.00	412,376	103,094	172%	55M	2500	1834.2	734	183%
	18B		No. 18	4.00	409,764	102,441	171%	55M	2500	1822.6	729	182%
18T917	18A	Black	No. 18	4.00	413,336	103,334	172%	55M	2500	1838.5	735	184%
	18B		No. 18	4.00	410,300	102,575	171%	55M	2500	1825.0	730	183%
18T499	18A	Epoxy	No. 18	4.00	422,780	105,695	176%	55M	2500	1880.5	752	188%
18T846	18A	Epoxy	No. 18	4.00	395,296	98,824	165%	55M	2500	1758.3	703	176%
18T846	18A	Epoxy	No. 18	4.00	382,920	95,730	160%	55M	2500	1703.2	681	170%
	18B		No. 18	4.00	395,296	98,824	165%	55M	2500	1758.3	703	176%
18T866	18A	Epoxy	No. 18	4.00	405,620	101,405	169%	55M	2500	1804.2	722	180%
	18B		No. 18	4.00	403,808	100,952	168%	55M	2500	1796.1	718	180%

NOTES

Test results are from routine testing of each heat lot of arriving coupler material, per Barsplice Products, Inc. ISO Quality System.

Reinforcing Bars, per ASTM A615 (or *A706) Grade 60, have a specified yield, fy = 60,000 psi (420 N/mm²).

See Lab reports for stress versus displacement curves (stress versus cross-head position).

Load rates per ASTM A 370.

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