

ZAP SCREWLOK® 'SL' TEST DATA CONVERSION - 15M AND 20M

Lab Report Date	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
21-Mar-11	5T3166	5A	BLACK	No. 5	0.31	31,550	101,774	170%	15M	200	140.3	702	175%
31-Mar-11	5T3179	5A	BLACK	No. 5	0.31	32,650	105,323	176%	15M	200	145.2	726	182%
20-Sep-11	5T3520	5A	BLACK	No. 5	0.31	31,780	102,516	171%	15M	200	141.4	707	177%
		5B		No. 5	0.31	30,400	98,065	163%	15M	200	135.2	676	169%
		5C		No. 5	0.31	32,480	104,774	175%	15M	200	144.5	722	181%
20-Sep-11	5T3521	5A	BLACK	No. 5	0.31	32,080	103,484	172%	15M	200	142.7	713	178%
		5B		No. 5	0.31	33,030	106,548	178%	15M	200	146.9	735	184%
22-Sep-11	5T3525	5A	BLACK	No. 5	0.31	31,110	100,355	167%	15M	200	138.4	692	173%
27-Dec-11	5T3609	5A	BLACK	No. 5	0.31	30,730	99,129	165%	15M	200	136.7	683	171%
		5B		No. 5	0.31	30,480	98,323	164%	15M	200	135.6	678	169%
29-Dec-11	5T3614	5A	BLACK	No. 5	0.31	30,420	98,129	164%	15M	200	135.3	677	169%
		5B		No. 5	0.31	31,920	102,968	172%	15M	200	142.0	710	177%
18-Nov-10	6T2421	6A	BLACK	No. 6	0.44	47,690	108,386	181%	20M	300	212.1	707	177%
		6B		No. 6	0.44	45,180	102,682	171%	20M	300	201.0	670	167%
		6C		No. 6	0.44	45,110	102,523	171%	20M	300	200.6	669	167%
20-Apr-11	6T2572	6A	BLACK	No. 6	0.44	42,730	97,114	162%	20M	300	190.1	634	158%
		6B		No. 6	0.44	43,590	99,068	165%	20M	300	193.9	646	162%
20-May-11	6T2612	6A	BLACK	No. 6	0.44	47,850	108,750	181%	20M	300	212.8	709	177%
23-May-11	6T2615	6A	BLACK	No. 6	0.44	47,260	107,409	179%	20M	300	210.2	701	175%
		6B		No. 6	0.44	46,970	106,750	178%	20M	300	208.9	696	174%
16-Aug-11	6T2704	6A	BLACK	No. 6	0.44	46,170	104,932	175%	20M	300	205.4	685	171%
		6B		No. 6	0.44	42,260	96,045	160%	20M	300	188.0	627	157%
4-Oct-11	6T2749	6A	BLACK	No. 6	0.44	46,700	106,136	177%	20M	300	207.7	692	173%
		6B		No. 6	0.44	42,700	97,045	162%	20M	300	189.9	633	158%

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 A 615 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® 'SL' TEST DATA CONVERSION - 25M AND 30M

Lab Report Date	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
11-Oct-11	8T1801	8A	BLACK	No. 8	0.79	82,780	104,785	175%	25M	500	368.2	736	184%
		8B		No. 8	0.79	79,440	100,557	168%	25M	500	353.3	707	177%
14-Oct-11	8T1803	8A	BLACK	No. 8	0.79	82,690	104,671	174%	25M	500	367.8	736	184%
		8B		No. 8	0.79	76,510	96,848	161%	25M	500	340.3	681	170%
		8C		No. 8	0.79	81,440	103,089	172%	25M	500	362.2	724	181%
2-Dec-11	8T1824	8A	BLACK	No. 8	0.79	76,880	97,316	162%	25M	500	342.0	684	171%
		8B		No. 8	0.79	85,230	107,886	180%	25M	500	379.1	758	190%
9-Jan-12	8T1833	8A	BLACK	No. 8	0.79	84,920	107,494	179%	25M	500	377.7	755	189%
		8B		No. 8	0.79	77,520	98,127	164%	25M	500	344.8	690	172%
9-Jan-12	8T1834	8A	BLACK	No. 8	0.79	88,540	112,076	187%	25M	500	393.8	788	197%
24-Jan-12	8T1852	8A	BLACK	No. 8	0.79	83,360	105,519	176%	25M	500	370.8	742	185%
		8B		No. 8	0.79	88,180	111,620	186%	25M	500	392.2	784	196%
31-Jan-12	8T1855	8A	BLACK	No. 8	0.79	85,090	107,709	180%	25M	500	378.5	757	189%
17-Feb-11	9T1245	9A	BLACK	No. 9	1.00	103,260	103,260	172%	30M	700	459.3	656	164%
		9B		No. 9	1.00	104,320	104,320	174%	30M	700	464.0	663	166%
		9C		No. 9	1.00	102,020	102,020	170%	30M	700	453.8	648	162%
10-May-11	9T1289	9A	BLACK	No. 9	1.00	100,100	100,100	167%	30M	700	445.2	636	159%
12-Aug-11	9T1309	9A	BLACK	No. 9	1.00	97,580	97,580	163%	30M	700	434.0	620	155%
		9B		No. 9	1.00	103,770	103,770	173%	30M	700	461.6	659	165%
6-Sep-11	9T1315	9A	BLACK	No. 9	1.00	96,410	96,410	161%	30M	700	428.8	613	153%
		9B		No. 9	1.00	102,780	102,780	171%	30M	700	457.2	653	163%
13-Jan-12	9T1353	9A	BLACK	No. 9	1.00	103,400	103,400	172%	30M	700	459.9	657	164%
		9B		No. 9	1.00	99,780	99,780	166%	30M	700	443.8	634	159%
17-Jan-12	9T1357	9A	BLACK	No. 9	1.00	100,850	100,850	168%	30M	700	448.6	641	160%
18-Jan-12	9T1358	9A	BLACK	No. 9	1.00	99,600	99,600	166%	30M	700	443.0	633	158%
		9B		No. 9	1.00	100,660	100,660	168%	30M	700	447.7	640	160%

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 A 615 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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ZAP SCREWLOK® 'SL' TEST DATA CONVERSION - 35M

Lab Report Date	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
27-Jul-11	11T2338	11A	BLACK	No. 11	1.56	157,129	100,724	168%	35M	1000	698.9	699	175%
22-Sep-11	11T2382	11A	BLACK	No. 11	1.56	150,350	96,378	161%	35M	1000	668.8	669	167%
		11B		No. 11	1.56	148,540	95,218	159%	35M	1000	660.7	661	165%
28-Nov-11	11T2509	11A	BLACK	No. 11	1.56	167,560	107,410	179%	35M	1000	745.3	745	186%
		11B		No. 11	1.56	166,940	107,013	178%	35M	1000	742.6	743	186%
29-Nov-11	11T2483	11A	BLACK	No. 11	1.56	159,990	102,558	171%	35M	1000	711.6	712	178%
21-Dec-11	11T2509	11A	BLACK	No. 11	1.56	157,650	101,058	168%	35M	1000	701.2	701	175%
		11B		No. 11	1.56	160,760	103,051	172%	35M	1000	715.1	715	179%
21-Dec-11	11T2510	11A	BLACK	No. 11	1.56	150,159	96,256	160%	35M	1000	667.9	668	167%
		11B		No. 11	1.56	152,200	97,564	163%	35M	1000	677.0	677	169%
		11C		No. 11	1.56	145,089	93,006	155%	35M	1000	645.4	645	161%
1-Aug-12	11T2647	11A	BLACK	No. 11	1.56	167,850	107,596	179%	35M	1000	746.6	747	187%
		11B		No. 11	1.56	158,920	101,872	170%	35M	1000	706.9	707	177%
17-Sep-12	11T2958	11A	BLACK	No. 11	1.56	148,099	94,935	158%	35M	1000	658.7	659	165%
		11B		No. 11	1.56	168,480	108,000	180%	35M	1000	749.4	749	187%
14-Feb-13	11T2753	11A	BLACK	No. 11	1.56	149,440	95,795	160%	35M	1000	664.7	665	166%
		11B		No. 11	1.56	156,980	100,628	168%	35M	1000	698.2	698	175%
11-Apr-13	11T2800	11A	BLACK	No. 11	1.56	146,801	94,103	157%	35M	1000	653.0	653	163%
15-Nov-13	11T2944	11A	BLACK	No. 11	1.56	160,680	103,000	172%	35M	1000	714.7	715	179%
		11B		No. 11	1.56	154,259	98,884	165%	35M	1000	686.1	686	172%
13-Dec-13	11T2958	11A	BLACK	No. 11	1.56	148,099	94,935	158%	35M	1000	658.7	659	165%
		11B		No. 11	1.56	168,480	108,000	180%	35M	1000	749.4	749	187%
20-Jan-14	11T2975	11A	BLACK	No. 11	1.56	145,642	93,360	156%	35M	1000	647.8	648	162%
		11B		No. 11	1.56	145,021	92,962	155%	35M	1000	645.1	645	161%

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 A 615 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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ZAP SCREWLOK® 'SL' SYSTEM TEST DATA CONVERSION - 45M AND 55M

Lab Report Date	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
3-Aug-12	14T712	14A	BLACK	No. 14	2.25	218,381	97,058	162%	45M	1500	971.4	648	162%
17-Apr-13	14T765	14A	BLACK	No. 14	2.25	206,750	91,889	153%	45M	1500	919.6	613	153%
		14B		No. 14	2.25	219,200	97,422	162%	45M	1500	975.0	650	162%
20-Jan-14	14T805	14A	BLACK	No. 14	2.25	224,120	99,609	166%	45M	1500	996.9	665	166%
29-Jan-14	14T807	14A	BLACK	No. 14	2.25	222,399	98,844	165%	45M	1500	989.2	659	165%
15-Nov-10	18T429	18A	BLACK	No. 18	4.00	367,728	91,932	153%	55M	2500	1635.7	654	164%
8-Mar-11	18T443	18A	BLACK	No. 18	4.00	377,168	94,292	157%	55M	2500	1677.6	671	168%
17-Jan-12	18T464	18A	BLACK	No. 18	4.00	373,312	93,328	156%	55M	2500	1660.5	664	166%
1-Aug-12	18T536	18A	BLACK	No. 18	4.00	431,420	107,855	180%	55M	2500	1919.0	768	192%
		18B		No. 18	4.00	366,808	91,702	153%	55M	2500	1631.6	653	163%
13-Aug-13	18T537	18A	BLACK	No. 18	4.00	402,792	100,698	168%	55M	2500	1791.6	717	179%
29-Jan-14	18T562	18A	BLACK	No. 18	4.00	398,088	99,522	166%	55M	2500	1770.7	708	177%

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 A 615 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
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