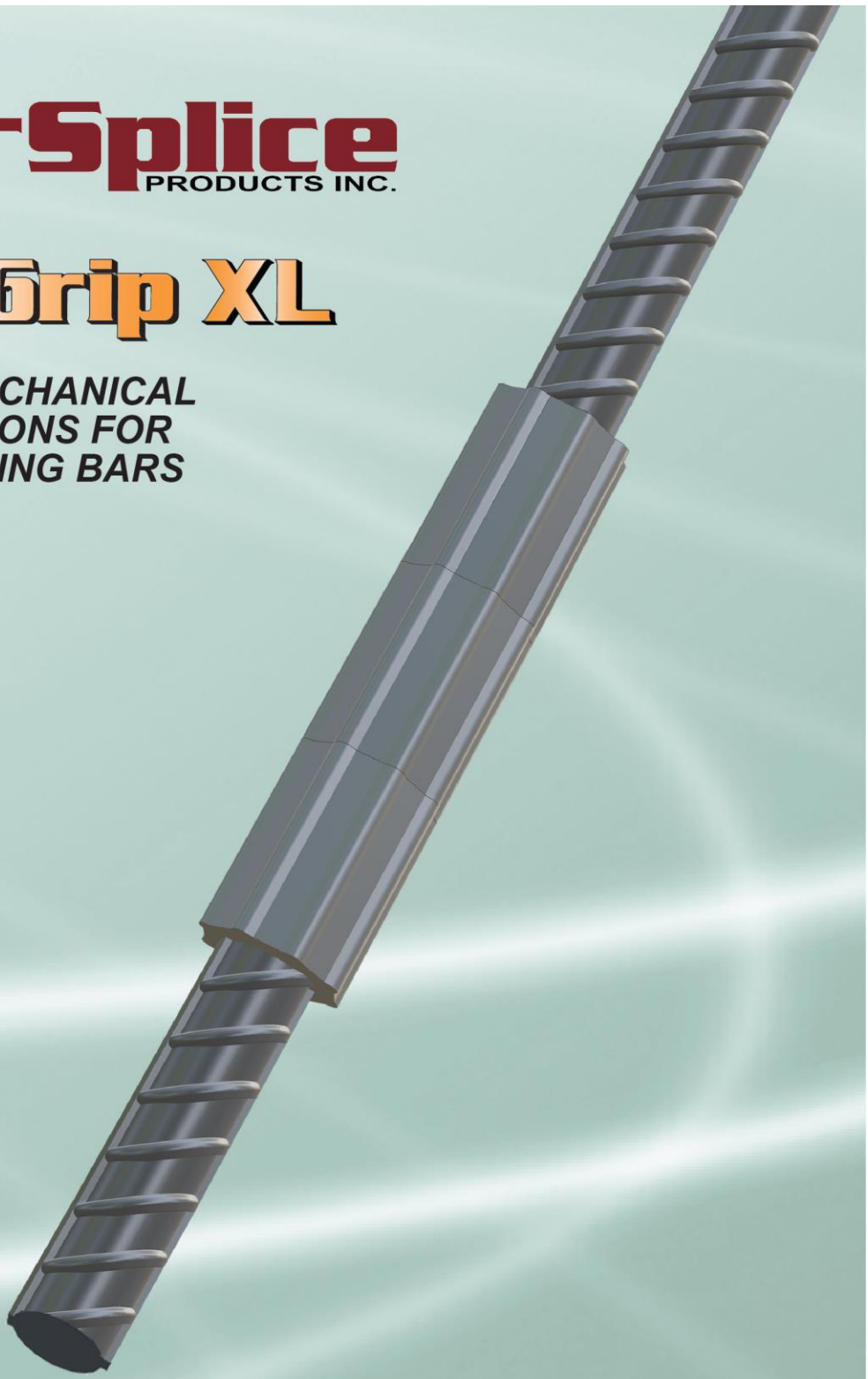
BarSplice PRODUCTS INC.

BarGrip XL

TYPE 2 MECHANICAL CONNECTIONS FOR REINFORCING BARS



PERFORMANCE TEST DATA

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INTRODUCTION

Barsplice Products, Inc. (BPI) have conducted a series of tests on reinforcing bar mechanical splices, sizes No. 3 through No. 18. The tests have been conducted on BPI® BarGrip XL Mechanical Splices. The purpose of the testing is to ensure that products are manufactured to the quality standards of BPI's ISO 9001 Quality System and are capable of exceeding strength requirements of various Building Codes.

TENSILE TEST PROCEDURE

Test specimens were loaded monotonically in tension to failure to determine the capability of the splice system. The tests were conducted in accordance with ASTM A370, "Standard Test Methods and Definitions for Mechanical Testing of Steel Products" and ASTM A1034, " Standard Test Methods for Testing Mechanical Splices for Steel Reinforcing Bars." The testing was performed to exceed the strength requirements of ACI (American Concrete Institute) 318-19, Chapter 25 and Chapter 18 using Grade 60 reinforcing bar.

All monotonic tension tests were carried out on a 600 kip Forney universal testing machine, or a 900 kip MTS universal test machine, located at the Barsplice manufacturing facility. Current calibration certificates for the test machine(s) are on file.

The reinforcing steel used in these tests conforms to the requirements of ASTM A615, Grade 60 and ASTM A706, Grade 60.

TEST RESULTS

Results of the BPI® BarGrip XL tension testing described above are summarized in Table 1 and represented in Chart 1.

SUMMARY

Tension test specimens exceeded the Type 1 strength requirements of ACI 318-19, Chapter 25, namely 125% x specified yield strength of Grade 60 rebar or 75,000 psi.

Tension test specimens exceeded the Type 2 strength requirements of ACI 318-19, Chapter 18, namely the specified tensile strength of ASTM A615 and A706 Grade 60 bar, specifically 80,000 psi, which is equivalent to 133% x specified yield.

TABLE 1: BARGRIP XL TENSILE TEST RESULTS

BAR SIZE	TEST LAB ID # & REF #		PEAK STRENGTH MAX STRESS (psi)	PEAK STRENGTH % GR. 60 SPEC. YIELD
No. 3	3T34	3A	112,550	188%
		3B	113,000	188%
	3T111	3A	112,550	188%
		3B	113,950	190%
	3T136	3A	112,500	188%
		3B	112,500	188%
No. 4	4T306	4A	111,371	186%
		4B	109,706	183%
	4T2430	4A	114,350	191%
		4B	113,150	189%
	4T2481	4A	112,500	188%
		4B	112,900	188%
No. 5	5T4339	5A	107,839	180%
		5B	108,484	181%
	5T4511	5A	117,968	197%
		5B	119,968	200%
	5T5460	5A	110,710	185%
		5B	111,226	185%
	5T7886	5A	107,032	178%
		5B	106,774	178%
No. 6	6T830	6A	112,844	188%
		6B	113,513	189%
	6T2003	6A	115,568	193%
		6B	112,159	187%
	6T3546	6A	118,364	197%
		6B	117,773	196%
	6T4288	6A	109,795	183%
		6B	111,545	186%
No. 7	7T475	7A	107,417	179%
		7B	112,283	187%
	7T573	7A	112,017	187%
		7B	111,683	186%
	7T1583	7A	115,450	192%
		7B	114,117	190%
	7T1997	7A	105,067	175%
		7B	105,333	176%

BAR SIZE	TEST LAB ID # & REF #		PEAK STRENGTH MAX STRESS (psi)	PEAK STRENGTH % GR. 60 SPEC. YIELD
No. 8	8T2043	8A	113,911	190%
		8B	110,051	183%
	8T3398	8A	108,715	181%
		8B	109,052	182%
	8T3549	8A	103,912	173%
		8B	105,473	176%
	8T3666	8A	112,407	187%
		8B	114,044	190%
No. 9	9T317	9A	107,986	180%
	9T422*	9B	94,064	157%
	9T423*	9B	94,227	157%
	9T1859	9A	110,780	185%
		9B	111,420	186%
	9T2256	9A	108,695	181%
		9B	109,165	182%
	9T2389	9A	112,885	188%
		9B	113,516	189%
No. 10	10T449	10A	113,423	189%
		10B	104,350	174%
	10T557	10A	108,063	180%
		10B	106,299	177%
	10T2038*	10A	100,740	168%
	10T2138	10A	106,014	177%
		10B	107,633	179%
	10T2177	10A	105,794	176%
		10B	104,824	175%
No. 11	11T560*	11A	92,834	155%
		11B	93,212	155%
	11T2730	11A	107,321	179%
	11T3766	11A	106,164	177%
		11B	105,871	176%
	11T3855	11A	109,459	182%
		11B	108,855	181%
	11T4034	11A	111,630	186%
		11B	110,165	184%

* Test conducted on ASTM A706 reinforcement bar

TABLE 1: BARGRIP XL TENSILE TEST RESULTS (CONTINUED)

BAR SIZE	TEST LAB ID # & REF #		PEAK STRENGTH MAX STRESS (psi)	PEAK STRENGTH % GR. 60 SPEC. YIELD
No. 14	14T256	14A	105,702	176%
		14B	105,240	175%
	14T285*	14A	96,333	161%
		14B	96,640	161%
	14T455	14A	110,716	185%
	14T1002	14A	102,484	171%
		14B	103,129	172%

* Test conducted on ASTM A706 reinforcement bar

BAR SIZE	TEST LAB ID # & REF #		PEAK STRENGTH MAX STRESS (psi)	PEAK STRENGTH % GR. 60 SPEC. YIELD
No. 18	18T174*	18A	95,041	158%
		18B	98,006	163%
	18T186*	18A	97,431	162%
	18T389	18A	104,850	175%
		18B	105,625	176%
	18T524	18A	111,915	187%
	18T729	18A	107,500	179%
		18B	106,888	178%

CHART 1: BARGRIP XL TENSILE TEST RESULTS