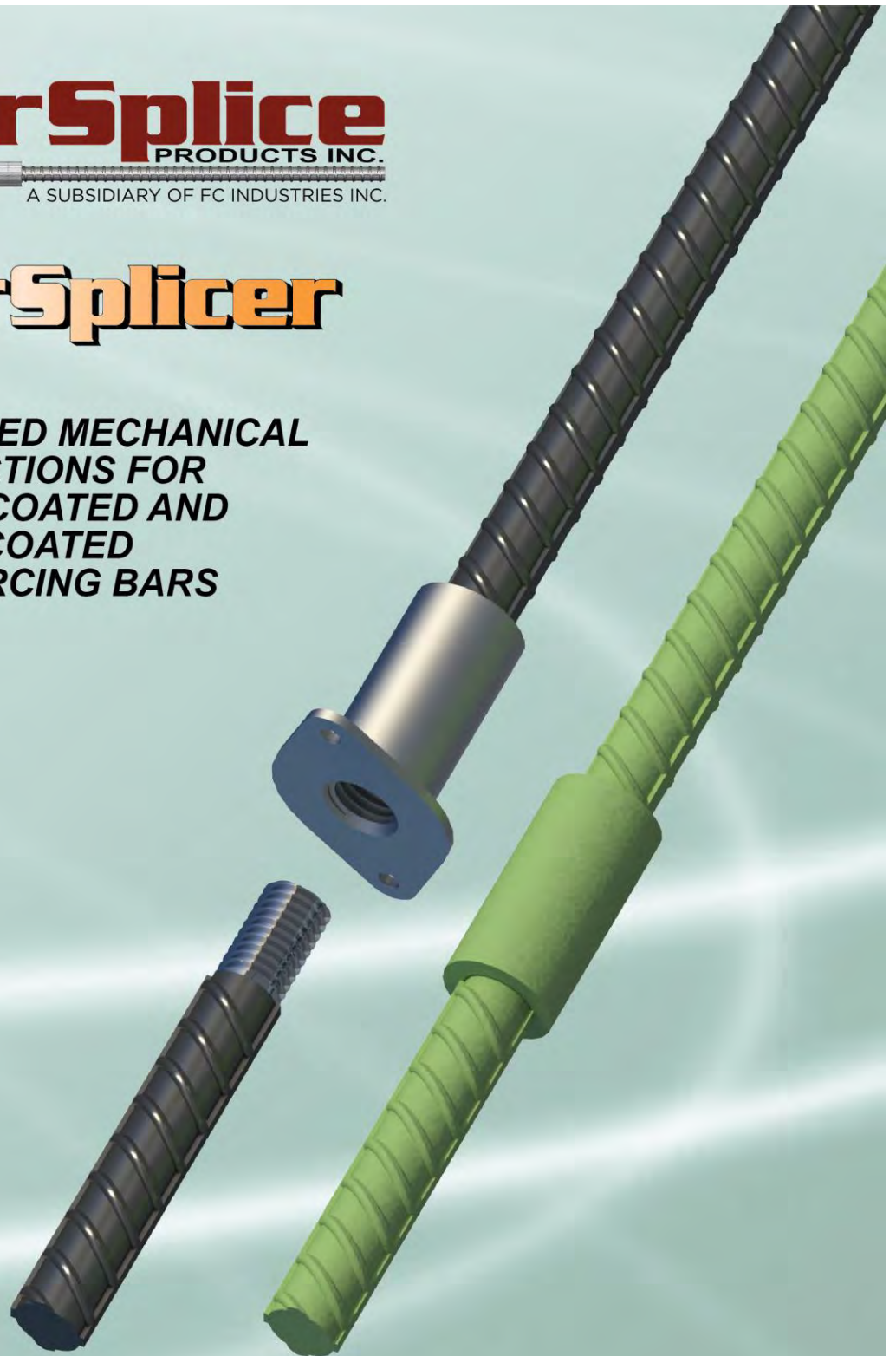


## BarSplicer

**THREADED MECHANICAL  
CONNECTIONS FOR  
FOR UNCOATED AND  
EPOXY COATED  
REINFORCING BARS**



## PERFORMANCE TEST DATA

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## **INTRODUCTION**

Barsplice Products, Inc. have conducted a series of tests on threaded dowel bar mechanical connections, sizes No. 4 through No. 11. The tests have been conducted on uncoated and epoxy coated Barsplicer couplers. 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 "Standard Test Methods and Definitions for Mechanical Testing of Steel Products", ASTM A370. The testing was performed to exceed the strength requirements of ACI (American Concrete Institute) 318-14, Chapter 25 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 Barsplicer tension testing described above are summarized in Table 1 and represented in Chart 1.

### **SUMMARY**

(1) Tension test specimens exceeded the Type 1 strength requirements of ACI 318-14, Chapter 25, namely 125% x specified yield strength of Grade 60 rebar or 75,000 psi.

**TABLE 1: BARSPLICER TENSILE TEST RESULTS**

BAR SIZE	BAR TYPE	TEST LAB ID # & REF #		PEAK STRENGTH	
				MAX STRESS (psi)	% GR. 60 SPEC. YIELD
No. 4	BLACK	4T1413	4A	94,450	157%
			4B	97,450	162%
		4T1446	4A	93,300	156%
			4B	90,650	151%
		4T2590	4A	98,200	164%
			4B	106,900	178%
	EPOXY	4T1071	4A	102,450	171%
			4B	104,500	174%
		4T1300	4A	97,500	163%
			4B	96,650	161%
		4T2853	4A	91,300	152%
			4B	93,150	155%
No. 5	BLACK	5T3565	5A	99,194	165%
			5B	94,258	157%
		5T3602	5A	95,645	159%
			5B	97,806	163%
		5T8180	5A	96,323	161%
			5B	94,774	158%
	EPOXY	5T3419	5A	92,355	154%
			5B	91,194	152%
		5T3551	5A	95,903	160%
			5B	96,355	161%
		5T8594	5A	92,000	153%
			5B	91,452	152%
No. 6	BLACK	6T2715	6A	101,591	169%
			6B	96,409	161%
		6T4663	6A	97,409	162%
			6B	96,227	160%
		6T4992 (A706)	6A	91,614	153%
			6B	92,045	153%
	EPOXY	6T2550	6A	95,909	160%
			6B	94,795	158%
		6T2700	6A	96,159	160%
			6B	91,364	152%
		6T5296	6A	92,750	155%
			6B	93,114	155%

BAR SIZE	BAR TYPE	TEST LAB ID # & REF #		PEAK STRENGTH	
				MAX STRESS (psi)	% GR. 60 SPEC. YIELD
No. 7	BLACK	7T1285	7A	98,783	165%
			7B	96,283	160%
		7T1227	7A	97,500	163%
			7B	96,067	160%
		7T1297	7A	92,817	155%
			7B	91,867	153%
	EPOXY	7T471	7A	87,150	145%
			7B	86,450	144%
		7T1114	7A	93,450	156%
			7B	99,767	166%
		7T2366	7A	91,034	152%
			7B	95,189	159%
No. 8	BLACK	8T1780	8A	96,228	160%
			8B	94,962	158%
		8T1782	8A	98,127	164%
			8B	97,203	162%
		8T3118	8A	93,530	156%
			8B	94,028	157%
	EPOXY	8T2947	8A	95,206	159%
			8B	94,973	158%
		8T3445	8A	100,403	167%
			8B	101,897	170%
		8T3586 (A706)	8A	87,605	146%
			8B	87,942	147%
No. 9	BLACK	9T1139	9A	92,130	154%
			9B	93,480	156%
		9T1238	9A	97,500	163%
			9B	96,530	161%
		9T1594	9A	93,720	156%
			9B	91,680	153%
	EPOXY	9T875	9A	93,600	156%
			9B	93,120	155%
		9T879	9A	97,440	162%
			9B	91,080	152%
		9T898	9A	97,830	163%
			7B	95,020	158%

**TABLE 1: BARSPLICER TENSILE TEST RESULTS**

BAR SIZE	BAR TYPE	TEST LAB ID # & REF #		PEAK STRENGTH			
				MAX STRESS (psi)	% GR. 60 SPEC. YIELD		
No. 10	BLACK	10T1090	10A	92,717	155%		
			10B	90,496	151%		
		10T1201	10A	96,354	161%		
			10B	96,685	161%		
		10T1574	10A	93,354	156%		
			10B	91,102	152%		
	EPOXY	10T817	10A	95,331	159%		
			10B	93,992	157%		
		10T1550	10A	91,953	153%		
		10T1624	10A	94,819	158%		
		10T1625	10A	93,465	156%		
		10T1721	10A	96,142	160%		
		No. 11	BLACK	11T1439	11A	90,712	151%
					11B	94,833	158%
11T2193	11A			88,391	147%		
	11B			89,103	149%		
11T3339	11A			97,577	163%		
11T3649	11A			88,358	147%		
EPOXY	11T1382		11A	85,981	143%		
	11T1389		11B	86,224	144%		
	11T1483		11A	87,276	145%		
	11T1669		11A	84,359	141%		
11B		85,308	142%				
11T3332	11A	95,115	159%				

**CHART 1: BARSPLICER TENSILE TEST RESULTS**

