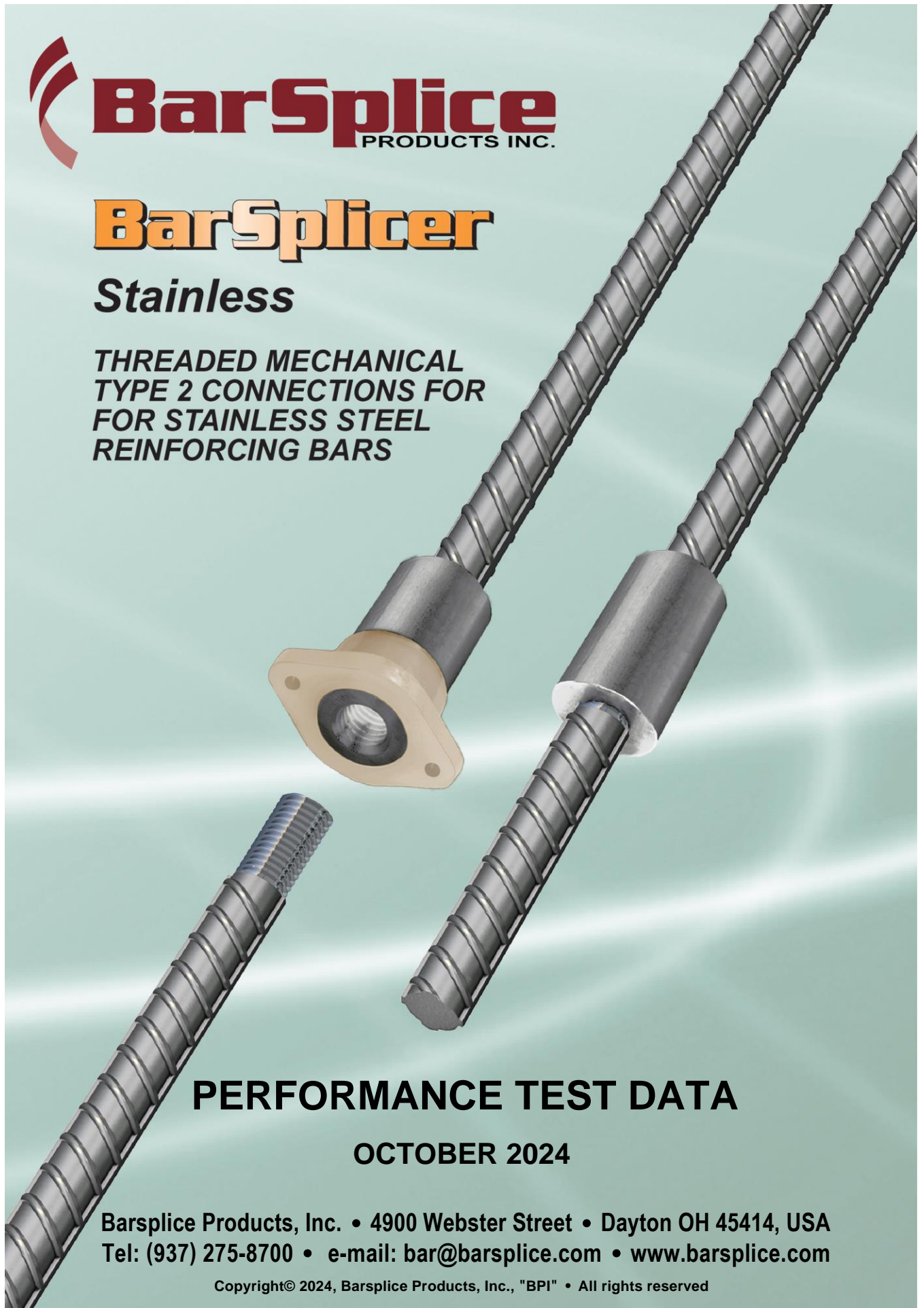




BarSplicer

Stainless

**THREADED MECHANICAL
TYPE 2 CONNECTIONS FOR
FOR STAINLESS STEEL
REINFORCING BARS**



PERFORMANCE TEST DATA

OCTOBER 2024

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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. 9 on stainless steel Barsplicer couplers. Both Barsplicer Stainless systems, standard Type 303 and Duplex Type 2205, were tested. 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 75 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 A955, Grade 75, either 2304 (UNS S32304) or 2205 (UNS S31803/S32205).

TEST RESULTS

Results of the Barsplicer Stainless 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 75 rebar or 93,750 psi.

Tension test specimens exceeded the Type 2 strength requirements of ACI 318-19, Chapter 18, namely the specified tensile strength of ASTM A955 Grade 75 bar, specifically 100,000 psi, which is equivalent to 133% x specified yield.

TABLE 1: BARSPLICER STAINLESS TENSILE TEST RESULTS

BAR SIZE	CPLR TYPE	A955 BAR TYPE	TEST LAB ID # & REF #		PEAK STRENGTH	
					MAX STRESS (psi)	% GR. 75 SPEC. YIELD
No. 4	Type 303	2304	4T1819	4A	118,050	157%
				4A	113,100	151%
			4T2541	4B	113,950	152%
				4A	110,750	148%
			4T2552	4B	110,650	148%
				4A	118,000	157%
			4T3475	4B	117,700	157%
				4A	112,550	150%
	4T4031	4B	109,650	146%		
		Duplex 2205	2205	4T4194	4B	125,825
4T4195	4B			128,403	171%	
No. 5	Type 303	2304	5T7022	5A	121,000	161%
				5B	119,387	159%
			5T9852	5A	112,226	150%
				5B	111,452	149%
			5T13058	5A	116,059	155%
			5T13070	5A	119,341	159%
			5T13444	5A	114,502	153%
				5B	116,155	155%
	2205	5T9986	5A	110,065	147%	
			5B	111,548	149%	
	Duplex 2205	2205	5T9860	5A	111,806	149%
				5B	110,968	148%
5T11209			5B	120,899	161%	
5T11210			5B	120,479	161%	
5T12867			5A	122,498	163%	
5T13717			5A	119,154	159%	

BAR SIZE	CPLR TYPE	A955 BAR TYPE	TEST LAB ID # & REF #		PEAK STRENGTH		
					MAX STRESS (psi)	% GR. 75 SPEC. YIELD	
No. 6	Type 303	2304	6T6882	6A	121,886	163%	
				6B	120,455	161%	
			6T8287	6A	120,159	160%	
				6B	120,000	160%	
			6T9172	6A	116,153	155%	
				6B	115,167	154%	
			2205	6T6384	6A	118,338	158%
					6B	114,759	153%
	Duplex 2205	2205	2304	6T6571	6A	113,135	151%
				6B	121,410	162%	
6T7363			6A	120,627	161%		
			6A	109,500	146%		
No. 7	Duplex 2205	2205	6T8870	6A	111,068	148%	
			303	2304	7T1296	7A	110,383
No. 8	Type 303	2304	7T3616	7B	116,124	155%	
				7C	115,185	154%	
			7T3667	7A	119,275	159%	
				7A	119,275	159%	
	Duplex 2205	2205	8T4284	8A	109,677	146%	
				8A	109,486	146%	
No. 9	Type 303	2304	8T5505	8B	110,239	147%	
				8A	107,216	143%	
			8T4615	8B	107,652	144%	
				8A	109,500	146%	
	Duplex 2205	2205	8T4633	8B	109,225	146%	
				8B	109,103	145%	
			8T4519	8C	109,461	146%	
				8A	119,878	160%	
Type 303	2304	9T3013	9A	108,388	145%		
		2205	9T2695	9A	113,634	152%	

CHART 1: BARSPLICER STAINLESS TENSILE TEST RESULTS

