



Element Materials Technology
 51229 Century Court
 Wixom, MI
 48393-2074 USA

P 248 960 4900
 F 248 960 4970
 T 888 786 7555
 info.wixom@element.com
 element.com

Contact: Dick Galbally
 Tool Components, Inc.
 812 Boxwood Ct.
 BRIGHTON, MI 48116

TEST CERTIFICATE — EAR-CONTROLLED DATA

P.O. No.: 10525
 Report No.: TOO002-18-05-79021-1R1
 Date Received: 5/29/2018
 Report Date: 6/6/2018

Report Delivered Via: rgalbally@vecturasales.com
 Attachments: None

Work Requested: Report Revised 07-02-2018: Corrected spelling of specimen IDs.
 Tensile testing of E-Z Lok threaded inserts.

Mechanical Test Results

Test Method	ASTM E8/E8M-16a
Testing Note	Inserts tested using customer supplied test bolts. For each set of specimens, the test bolt broke.
Test Speed (in/min)	0.375

Specimen	Peak Load (lbf)
6-32 E-Z Lok/ Aluminum block	A 1,750
	B 1,740
	C 1,660
10-32 E-Z Lok/ Aluminum block	A 3,870
	B 3,860
	C 3,880
8-32 E-Z Lok/ Aluminum block	A 2,560
	B 2,680
	C 2,670
1/4-20 E-Z Lok/ Aluminum block	A 4,980
	B 5,140
	C 5,170
5/16-18 E- Z Lok/ Aluminum block	A 8,570
	B 8,590
	C 8,800
3/8-16 E- Z Lok/ Aluminum block	A 12,510
	B 12,710
	C 12,710
7/16-14 E- Z Lok/ Aluminum block	A 18,320
	B 18,190
	C 18,030

Respectfully submitted

Nicholas Piowar
 Technical Services Representative, (248) 560-4013

The test report shall not be reproduced except in full, without the written approval of Element Materials Technology; The results relate only to the items tested; The recording of false, fictitious, or fraudulent statements or entries on the report may be punished as a felony under federal law. Our policy is to retain components and sample remnants for 90 days from the report date, after which time they will be discarded. If you would like to make alternate arrangements for disposition of the material, please let us know. This project shall be governed exclusively by the General Terms and Conditions of Sale and Performance of Testing Services by Element Materials Technology a Kentucky business corporation d.d. 12/02/2011. In no event shall Element be liable for any consequential, special or indirect loss or any damages above the cost of the work.



Element Materials Technology
 51229 Century Court
 Wixom, MI
 48393-2074 USA

P 248 960 4900
 F 248 960 4970
 T 888 786 7555
 info.wixom@element.com
 element.com

Report No.: TO0002-18-05-79021-1 **TEST CERTIFICATE — EAR-CONTROLLED DATA**

Mechanical Test Results

Test Method	ASTM E8/E8M-16a
Testing Note	Inserts tested using customer supplied test bolts. For each set of specimens, the test bolt broke.
Test Speed (in/min)	0.375

Specimen		Peak Load (lbf)
1/2-13 E- Z Lok/ Aluminum block	A	23,690
	B	23,580
	C	23,870
5/8-11 E- Z Lok/ Aluminum block	A	37,150
	B	37,430
	C	37,100

This document contains technical data whose export and re-export/ retransfer is subject to control by the U.S. Department of Commerce under the Export Administration Act and the Export Administration Regulations. The Department of Commerce's prior written approval may be required for the export or re-export/retransfer of such technical data to any foreign person, foreign entity or foreign organization whether in the United States or abroad.

Respectfully submitted

Nicholas Piowar

Technical Services Representative, (248) 560-4013

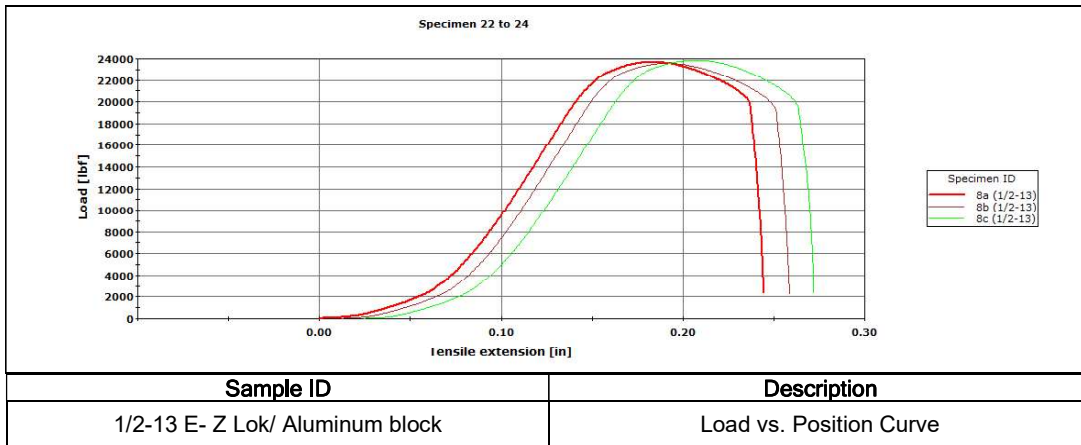
The test report shall not be reproduced except in full, without the written approval of Element Materials Technology; The results relate only to the items tested; The recording of false, fictitious, or fraudulent statements or entries on the report may be punished as a felony under federal law. Our policy is to retain components and sample remnants for 90 days from the report date, after which time they will be discarded. If you would like to make alternate arrangements for disposition of the material, please let us know. This project shall be governed exclusively by the General Terms and Conditions of Sale and Performance of Testing Services by Element Materials Technology a Kentucky business corporation d.d. 12/02/2011. In no event shall Element be liable for any consequential, special or indirect loss or any damages above the cost of the work.



Element Materials Technology
 51229 Century Court
 Wixom, MI
 48393-2074 USA

P 248 960 4900
 F 248 960 4970
 T 888 786 7555
 info.wixom@element.com
 element.com

Report No.: TO0002-18-05-79021-1 **TEST CERTIFICATE — EAR-CONTROLLED DATA**



Respectfully submitted

Nicholas Piowar

Technical Services Representative, (248) 560-4013

The test report shall not be reproduced except in full, without the written approval of Element Materials Technology; The results relate only to the items tested; The recording of false, fictitious, or fraudulent statements or entries on the report may be punished as a felony under federal law. Our policy is to retain components and sample remnants for 90 days from the report date, after which time they will be discarded. If you would like to make alternate arrangements for disposition of the material, please let us know. This project shall be governed exclusively by the General Terms and Conditions of Sale and Performance of Testing Services by Element Materials Technology a Kentucky business corporation d.d. 12/02/2011. In no event shall Element be liable for any consequential, special or indirect loss or any damages above the cost of the work.