





Unytite, Inc.  
 One Unytite Drive  
 Peru, IL 61354  
 Tel 815-224-2221  
 Fax 815-224-3434

# Test Report

**Job No:** 24494

**Job Information**

**Certified Date:** 12/12/16

**Lot Number:** 24494-20465630

## Part Information

**Part No:** ASTM F3125-F1852 7/8-9 X 3 3/4 TC ASSY



**Name:** Grade F1852 (A325 TC) Tension Control Assembly, Type 1

**Manufactured Quantity:** 3,920

## Applicable Specifications

Specification	Amend	Specification	Amend
ASME B1.1	2003	ASME B18.2.6	2010
ASTM F1852	2014	ASTM F606	2014
ASTM F788	2013		

## Test Results

**Test No:** 13055 **Test:** F1852 Mechanical Properties

Description	Hardness (hrc) (HRC)	Tempering Temp (800 Degrees)	Tensile (lb )	Proof Load (Pass/Fail) (ASTM Min)	Shape & Dimension ASME B 18.2.1	Precision ASME B 1.1
Sample Inspection	32.35	869	73,32	39,250	Pass	Pass

## Certified Chemical Analysis

Heat No	Grade	Manufacturer	Origin	C	Mn	P	S	Si	B
20465630	10B30	Charter Steel	USA	0.3100	0.8400	0.010	0.0040	0.2400	0.0021


## Notes

All tests are in accordance with the latest revisions of the methods prescribed in the applicable SAE and ASTM Specifications.

The samples tested conform the specifications as described/listed above and were manufactured free of mercury contamination and there is no welding performed in the production of the products. No heats to which Bismuth, Selenium, Tellurium, or Lead was intentionally added have been used to produce products.

The steel was melted and manufactured in the U.S.A. and the product was manufactured and tested in the U.S.A.

We certify that this data is true representation of information provided by the material supplier and our testing laboratory. This certified material test report relates only to the items listed on this document and may not be reproduced except in full.

	 Savage, Dan - Supervisor, Quality
	12/12/16 Date



# CHARTER STEEL

A Division of Charter Manufacturing Company, Inc.

EMAIL

1658 Cold Springs Road  
Saukville, Wisconsin 53080  
(262) 268-2400  
1-800-437-8789  
Fax (262) 268-2570

## CHARTER STEEL TEST REPORT

Melted in USA Manufactured in USA

**Unytite, Inc.**  
**One Unytite Drive**  
**Peru,IL-61354**  
**Kind Attn :Jean Margherio**

Cust P.O.	5904
Customer Part #	C10B30SC0.856D
Charter Sales Order	10191342
Heat #	20465630
Ship Lot #	4432673
Grade	10B30 M SK FG RHQ 57/64
Process	DD
Finish Size	0.856
Ship date	

I hereby certify that the material described herein has been manufactured in accordance with the specifications and standards listed below and that it satisfies these requirements. The recording of false, fictitious and fraudulent statements or entries on this document may be punishable as a felony under federal statute.

### Test results of Heat Lot # 20465630

Lab Code: 125544

CHEM	C	MN	P	S	SI	NI	CR	MO	CU	SN	V
%Wt	.32	.84	.010	.004	.240	.04	.07	.01	.07	.002	.003
	AL	N	B	TI	NB						
	.029	.0060	.0021	.037	.002						

JOMINY(HRC)

J1	J2	J3	J4	J5	J6	J7	J8	J9	J10	J11	J12	J13	J14	J15	J16	J17	J18	J19	J20
49	48	47	47	37	23	20	20	20	20	20	20	20	20	20	20	20	20	20	20
J01.5MM	J03MM	J05MM	J07MM	J09MM	J11MM	J13MM	J15MM	J17MM	J19MM	J21MM	J23MM	J25MM	J27MM	J29MM	J31MM	J33MM	J35MM	J37MM	J39MM
52	51	49	44	35	28	25	22	20	18	16	14	12	10	8	6	4	2	1	0

JOMINY LAB=0358-04

JOMINY SAMPLE TYPE METRIC=C

JOMINY SAMPLE TYPE ENGLISH=R

### Test results of Rolling Lot # 2112641

REDUCTION RATIO=79:1

### Test results of Processing Lot #4432673

	# of Tests	Min Value	Max Value	Mean Value	
TENSILE (KSI)	1.0	99.3	99.3	99.3	TENSILE LAB = 0358-02
REDUCTION OF AREA (%)	1	56	56	56	RA LAB = 0358-02
ROCKWELL B (HRBW)	1	97	97	97	RB LAB = 0358-02
WIRE SIZE (Inch)	1	.8549	.8549	.8549	
WIRE OUT OF ROUND (Inch)	1	.0003	.0003	.0003	

Specifications:

Manufactured per Charter Steel Quality Manual Rev Date 12/12/13

Charter Steel certifies this product is indistinguishable from background radiation levels by having process radiation detectors in place to measure for the presence of radiation within our process & products.

Meets customer specifications with any applicable Charter Steel exceptions for the following customer documents:

Customer Document = RMS-002 & RMS-001      Revision = 6      Dated = 01-JUL-08

Additional Comments:

Melt Source:  
Charter Steel  
Cuyahoga Heights, OH, USA



This MTR supersedes all previously dated MTRs for this order

*Janice Barnard*  
Janice Barnard Division Mgr. of Quality Assurance  
barnardJ@chartersteel.com  
Printed Date : 10/16/2016

Rem: Load1,Fax0,Mail0

**CERTIFIED MATERIAL TEST REPORT**

<small>CUSTOMER ORDER NUMBER</small> P006324-2	<small>CUSTOMER PART NUMBER</small> B1045SC1.1250	<small>HEAT NUMBER</small> 75064466	<small>WORK ORDER NUMBER</small> 305588 101	<small>DATE</small> 11/14/16
---------------------------------------------------	------------------------------------------------------	----------------------------------------	------------------------------------------------	---------------------------------

210mm Billet

REPORT TO

SHIP TO

UNYTITE INC  
 ONE UNYTITE DRIVE

UNYTITE, INC  
 LASALLE PLANT

PERU , IL 61354-9710

325 CIVIC RD  
 LASALLE , IL 61301

**ORDERED**

<small>GRADE</small> 1045	<small>SIZE</small> 1 1/8" RND	<small>LENGTH</small> 24' 10 1/2"
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CUSTOMER SPECIFICATIONS  
 SAE 1045; ASTM E381-01; RMS 021 DATED 9/28/06

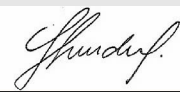
BACK	1	1	1
DECARB	SPECIFICATION ASTM E10 7		
F	TOTAL= 0.011		
REDUCTION RATIO			
RATIO=	68.5 TO	1.0	
RESIDUAL MAX	SPECIFICATION RMS 0 1		
Ni+Cr =	0.2600		

\*\* MATERIAL 100% MELTED AND MANUFACTURED IN THE U.S.A. BY THE ELECTRIC ARC FURNACE AND CONTINUOUS CASTING METHOD. THE PRODUCT HAS NOT BEEN REPAIRED BY WELDING AND THIS MATERIAL HAS NOT BEEN EXPOSED TO MERCURY OR TO ANY OTHER METAL ALLOY THAT IS LIQUID AT AMBIENT TEMPERATURES DURING PROCESSING OR WHILE IN OUR POSSESSION. GERDAU MONITORS ALL INCOMING SCRAP AND ALL HEATS OF STEEL TO ENSURE THAT PRODUCTS SHIPPED ARE FREE OF RADIOACTIVE MATERIAL.

PAGE 2 OF 2

We certify that these data are correct and in compliance with specified requirements.

**Gerdau Monroe**  
 3000 East Front Street  
 Monroe, MI 48161

  
 Gabriela Felipe  
 Quality Assurance Representative



**UNYTITE INC.**  
 INNOVATIVE FASTENING SYSTEMS

Unytite, Inc.  
 One Unytite Drive  
 Peru, IL 61354  
 Tel 815-224-2221  
 Fax 815-224-3434

# INSPECTION CERTIFICATE

**Job No:** 24679

**Job Information**

**Certified Date:** 12/2/16

**Customer:**

**Ship To:**

**Customer PO No:**

**Shipped Qty:**

**Lot Number:** 24679-75064466

## Part Information

**Part No:** A563 7/8-9 DH HHN ASSY



**Description:** ASTM A563 Heavy Hex Nut, Grade DH, Assembly Lub Nut

**Manufactured Quantity:** 56,327

## Applicable Specifications

Specification	Amend	Specification	Amend
ASME B1.1	2003	ASME B18.2.2	2015
ASME B18.2.6	2010	ASTM A563	2015
ASTM F606/606M	2014	ASTM F812/F812M	2012

## Test Results

**Test No:** 13436 **Test:** A563 DH Mechanical Properties

Description	Hardness (HRC)	Tempering Temp (800 degree F Min)	Proof Load (Pass/Fail) (ASTM Min)	Shape & Dimension ASME B18.2.2	Thread Precision ASME B18.1.1	Visual ASTM F812
Sample Inspection	27.65	1,238	80,850	Pass	Pass	Pass

## Certified Chemical Analysis

Heat No	Grade	Manufacturer	Origin	C	Mn	P	S	Si	Cr	Ni	Cu
75064466	1045	Gerdau Special Steel North America	USA	0.4500	0.7600	0.012	0.0320	0.2300	0.1300	0.1130	0.2000

## Notes

All tests are in accordance with the latest revisions of the methods prescribed in the applicable SAE and ASTM Specifications.

The samples tested conform the specifications as described/listed above and were manufactured free of mercury contamination and there is no welding performed in the production of the products. No heats to which Bismuth, Selenium, Tellurium, or Lead was intentionally added have been used to produce products.

The steel was melted and manufactured in the U.S.A. and the product was manufactured and tested in the U.S.A.

We certify that this data is true representation of information provided by the material supplier and our testing laboratory. This certified material test report relates only to the items listed on this document and may not be reproduced except in full.



12/2/16

Savage, Dan - Supervisor, Quality

Date







THIS IS TO CERTIFY THE PRODUCT STATED BELOW WAS FABRICATED AND PROCESSED TO THE ORDER AS INDICATED AND CONFORMS TO THE APPLICABLE SPECIFICATIONS AND STANDARDS.

**Customer:** UNYTITE INNOVATIVE FASTENER  
1 UNYTITE DR  
PERU, IL 61354

<b>Customer Part:</b> 7/8" F436 PLN	<b>Steel Supplier:</b> HORIZON STEEL CO.
<b>Prestige Part:</b> P1700H00	<b>Grade:</b> CF436 GRADE STEEL
<b>Part Name:</b> 7/8"F436 PLN	<b>Lot:</b> D3153
<b>Purchase Order:</b> 45784JS BLANKET-P006541	<b>Heat:</b> A48629
<b>Shipment BOL:</b> B196825	<b>Carbon:</b> .55 (.22 - .55)
<b>Shipment ID:</b> A0210761	<b>Manganese:</b> .84 (.6 - 1.6)
<b>Quantity:</b> 111615	<b>Phosphorous:</b> .019 (.04 Max.)
<b>Manufacturers Marking:</b> "P"	<b>Sulfur:</b> .001 (.05 Max.)
	<b>Silicon:</b> .21 (.15 Min.)

SPECIFICATIONS

**HARDNESS:** TEST METHOD: ASTM E18  
HRC 38 - 45  
ASTM F606

TEST RESULTS

**HARDNESS:**  
HRC 41 - 42

USS/SAE LC Washers are manufactured to the requirements of ASTM F844 specifications  
Chemistry is as reported from raw material certification and does not fall under Prestige Stamping's accreditation.  
This product was produced under an ISO/TS 16949 Quality Assurance System.  
ISO/TS 16949 Certification No: 0062933.  
Material was melted and manufactured in the U.S.A.  
This product was manufactured in Warren, Michigan U.S.A.  
This product conforms to all requirements for washers as produced according to A.S.T.M. F-436-13.  
Sampling Plan per P.S.I W.I. # 5.4.18.015.  
The test results only apply to the items tested.  
This test report must not be reproduced except in full without prior written approval.  
Materials used to manufacture these products are mercury, asbestos and radio activity free.  
Product is RoHS compliant.  
No weld repairs made to material.

  
FRANK SCHUBERT  
Quality Assurance Manager



# CERTIFIED TEST REPORT

D3153

\*HORIZON STEEL  
50390 UTICA DRIVE  
SHELBY TWP., MICH. 48315  
800-575-9914

10/24/16

TO: PRESTIGE STAMPING  
23513 GROESBECK HWY.  
WARREN, MI 48090

SHIP TO: PRESTIGE STAMPING, INC.  
23513 GROESBECK HIGHWAY  
WARREN, MI. 48090  
586-773-2700

SIZE: .136 MIN X 5.01500 X COIL  
GRADE: HRPO F436 GRADE  
\*MELTED & MFG IN USA\*

B/L Date 10/24/16 Bill/Ladng# 031900 Sales Ord# 826694 01  
Cust. P/O# 28129-1 Part No.: ZZ5015136 FOR PT# P1700H00

Tag# 935127	01	Heat# A48629	MasterTag# 256695	01		
C : .550		Mn: .840	P : .019	S : .001	Al: .038	Si: .210
Ni: .010		Nb: .000	Mo: .00	Cu: .030	V : .003	Cr: .050
		Sn: .002	Ca: .0018	N : .0060	B : .0001	Ti: .0030
Rock: 91		Olsn: 480				
Tag# 935128	01	Heat# A48629	MasterTag# 256695	01		
C : .550		Mn: .840	P : .019	S : .001	Al: .038	Si: .210
Ni: .010		Nb: .000	Mo: .00	Cu: .030	V : .003	Cr: .050
		Sn: .002	Ca: .0018	N : .0060	B : .0001	Ti: .0030
Rock: 91		Olsn: 480				
Tag# 935129	01	Heat# A48629	MasterTag# 256695	01		
C : .550		Mn: .840	P : .019	S : .001	Al: .038	Si: .210
Ni: .010		Nb: .000	Mo: .00	Cu: .030	V : .003	Cr: .050
		Sn: .002	Ca: .0018	N : .0060	B : .0001	Ti: .0030
Rock: 91		Olsn: 480				
Tag# 935130	01	Heat# A48629	MasterTag# 256695	01		
C : .550		Mn: .840	P : .019	S : .001	Al: .038	Si: .210
Ni: .010		Nb: .000	Mo: .00	Cu: .030	V : .003	Cr: .050
		Sn: .002	Ca: .0018	N : .0060	B : .0001	Ti: .0030
Rock: 91		Olsn: 480				
Tag# 935133	01	Heat# A48629	MasterTag# 256476	01		
C : .550		Mn: .840	P : .019	S : .001	Al: .038	Si: .210
Ni: .010		Nb: .000	Mo: .00	Cu: .030	V : .003	Cr: .050
		Sn: .002	Ca: .0018	N : .0060	B : .0001	Ti: .0030
Rock: 91		Olsn: 330				
Tag# 935134	01	Heat# A48629	MasterTag# 256476	01		
C : .550		Mn: .840	P : .019	S : .001	Al: .038	Si: .210
Ni: .010		Nb: .000	Mo: .00	Cu: .030	V : .003	Cr: .050
		Sn: .002	Ca: .0018	N : .0060	B : .0001	Ti: .0030
Rock: 91		Olsn: 330				
Tag# 935135	01	Heat# A48629	MasterTag# 256476	01		
C : .550		Mn: .840	P : .019	S : .001	Al: .038	Si: .210

Continued...

# CERTIFIED TEST REPORT

\*HORIZON STEEL  
50390 UTICA DRIVE  
SHELBY TWP., MICH. 48315  
800-575-9914

10/24/16

TO: PRESTIGE STAMPING  
23513 GROESBECK HWY.  
WARREN, MI 48090

SHIP TO: PRESTIGE STAMPING, INC.  
23513 GROESBECK HIGHWAY  
WARREN, MI. 48090  
586-773-2700

SIZE: .136 MIN X 5.01500 X COIL  
GRADE: HRPO F436 GRADE  
\*MELTED & MFG IN USA\*

B/L Date 10/24/16 Bill/Ladng# 031900 Sales Ord# 826694 01  
Cust. P/O#: 28129-1 Part No.: ZZ5015136 FOR PT# P1700H00  
Ni: .010 Nb: .000 Mo: .00 Cu: .030 V: .003 Cr: .050  
Sn: .002 Ca: .0018 N: .0060 B: .0001 Ti: .0030  
Rock: 91 Olsn: 330

Tag# 935136 01 Heat# A48629 MasterTag# 256476 01  
C: .550 Mn: .840 P: .019 S: .001 Al: .038 Si: .210  
Ni: .010 Nb: .000 Mo: .00 Cu: .030 V: .003 Cr: .050  
Sn: .002 Ca: .0018 N: .0060 B: .0001 Ti: .0030  
Rock: 91 Olsn: 330

Tag# 935137 01 Heat# A48629 MasterTag# 256476 01  
C: .550 Mn: .840 P: .019 S: .001 Al: .038 Si: .210  
Ni: .010 Nb: .000 Mo: .00 Cu: .030 V: .003 Cr: .050  
Sn: .002 Ca: .0018 N: .0060 B: .0001 Ti: .0030  
Rock: 91 Olsn: 330

Tag# 935138 01 Heat# A48629 MasterTag# 256476 01  
C: .550 Mn: .840 P: .019 S: .001 Al: .038 Si: .210  
Ni: .010 Nb: .000 Mo: .00 Cu: .030 V: .003 Cr: .050  
Sn: .002 Ca: .0018 N: .0060 B: .0001 Ti: .0030  
Rock: 91 Olsn: 330

Tag# 935139 01 Heat# A48629 MasterTag# 256476 01  
C: .550 Mn: .840 P: .019 S: .001 Al: .038 Si: .210  
Ni: .010 Nb: .000 Mo: .00 Cu: .030 V: .003 Cr: .050  
Sn: .002 Ca: .0018 N: .0060 B: .0001 Ti: .0030  
Rock: 91 Olsn: 330

Tag# 935140 01 Heat# A48629 MasterTag# 256476 01  
C: .550 Mn: .840 P: .019 S: .001 Al: .038 Si: .210  
Ni: .010 Nb: .000 Mo: .00 Cu: .030 V: .003 Cr: .050  
Sn: .002 Ca: .0018 N: .0060 B: .0001 Ti: .0030  
Rock: 91 Olsn: 330

Tag# 935141 01 Heat# A48629 MasterTag# 256476 01  
C: .550 Mn: .840 P: .019 S: .001 Al: .038 Si: .210  
Ni: .010 Nb: .000 Mo: .00 Cu: .030 V: .003 Cr: .050  
Sn: .002 Ca: .0018 N: .0060 B: .0001 Ti: .0030  
Rock: 91 Olsn: 330

Continued...

# CERTIFIED TEST REPORT

\*HORIZON STEEL  
50390 UTICA DRIVE  
SHELBY TWP., MICH. 48315  
800-575-9914

10/24/16

TO: PRESTIGE STAMPING  
23513 GROESBECK HWY.  
WARREN, MI 48090

SHIP TO: PRESTIGE STAMPING, INC.  
23513 GROESBECK HIGHWAY  
WARREN, MI. 48090  
586-773-2700

SIZE: .136 MIN X 5.01500 X COIL  
GRADE: HRPO F436 GRADE  
\*MELTED & MFG IN USA\*

B/L Date 10/24/16 Bill/Ladng# 031900 Sales Ord# 826694 01  
Cust. P/O#: 28129-1 Part No.: ZZ5015136 FOR PT# P1700H00

Tag# 935142 01 Heat# A48629 MasterTag# 256476 01  
C : .550 Mn: .840 P : .019 S : .001 Al: .038 Si: .210  
Ni: .010 Nb: .000 Mo: .00 Cu: .030 V : .003 Cr: .050  
Sn: .002 Ca: .0018 N : .0060 B : .0001 Ti: .0030  
Rock: 91 Olsn: 330

Tag# 935143 01 Heat# A48629 MasterTag# 256476 01  
C : .550 Mn: .840 P : .019 S : .001 Al: .038 Si: .210  
Ni: .010 Nb: .000 Mo: .00 Cu: .030 V : .003 Cr: .050  
Sn: .002 Ca: .0018 N : .0060 B : .0001 Ti: .0030  
Rock: 91 Olsn: 330

Tag# 935144 01 Heat# A48629 MasterTag# 256695 01  
C : .550 Mn: .840 P : .019 S : .001 Al: .038 Si: .210  
Ni: .010 Nb: .000 Mo: .00 Cu: .030 V : .003 Cr: .050  
Sn: .002 Ca: .0018 N : .0060 B : .0001 Ti: .0030  
Rock: 91 Olsn: 480

Tag# 935145 01 Heat# A48629 MasterTag# 256695 01  
C : .550 Mn: .840 P : .019 S : .001 Al: .038 Si: .210  
Ni: .010 Nb: .000 Mo: .00 Cu: .030 V : .003 Cr: .050  
Sn: .002 Ca: .0018 N : .0060 B : .0001 Ti: .0030  
Rock: 91 Olsn: 480

Tag# 935146 01 Heat# A48629 MasterTag# 256695 01  
C : .550 Mn: .840 P : .019 S : .001 Al: .038 Si: .210  
Ni: .010 Nb: .000 Mo: .00 Cu: .030 V : .003 Cr: .050  
Sn: .002 Ca: .0018 N : .0060 B : .0001 Ti: .0030  
Rock: 91 Olsn: 480

Tag# 935147 01 Heat# A48629 MasterTag# 256695 01  
C : .550 Mn: .840 P : .019 S : .001 Al: .038 Si: .210  
Ni: .010 Nb: .000 Mo: .00 Cu: .030 V : .003 Cr: .050  
Sn: .002 Ca: .0018 N : .0060 B : .0001 Ti: .0030  
Rock: 91 Olsn: 480

WE HEREBY CERTIFY THE ABOVE IS CORRECT AS CONTAINED IN THE RECORDS OF THE  
Continued...

# CERTIFIED TEST REPORT

\*HORIZON STEEL  
50390 UTICA DRIVE  
SHELBY TWP., MICH. 48315  
800-575-9914

10/24/16

TO: PRESTIGE STAMPING  
23513 GROESBECK HWY.  
WARREN, MI 48090

SHIP TO: PRESTIGE STAMPING, INC.  
23513 GROESBECK HIGHWAY  
WARREN, MI. 48090  
586-773-2700

SIZE: .136 MIN X 5.01500 X COIL  
GRADE: HRPO F436 GRADE  
\*MELTED & MFG IN USA\*

B/L Date 10/24/16 Bill/Ladng# 031900 Sales Odr: 826694 01  
Cust. P/O#: 28129-1 Part No.: ZZ5015136 FOR PT# P1700H00  
COMPANY

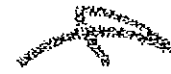
.....HORIZON STEEL CO.....  
QUALITY ASSURANCE MANAGER



Sample

6/23/2015

# CERTIFIED REPORT OF CHEMICAL ANALYSIS AND MECHANICAL TESTS



TESTING CERT # 2914.01

ArcelorMittal

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Page 1 of 1

<b>HORIZON STEEL</b> 50390 UTICA DR SHELBY TOWNSHIP MI	ArcelorMittal Riverdale LLC. 13500 South Perry Avenue Riverdale, IL 60827
-----------------------------------------------------------	---------------------------------------------------------------------------------

<b>HORIZON STL C/O VOSS TAYLOR</b> C/O VOSS STEEL CORP 7925 BEECH DALY RD TAYLOR MI	PO#: 046280      Invoice # Pending SO#: 857497      Carrier: COMMON CARRI Date Of Issuance/Shipped: 6/22/2016
-------------------------------------------------------------------------------------------	---------------------------------------------------------------------------------------------------------------------

Heat	Coil	Thickness (In)	Width (In)	Weight (tons)	Reduction Ratio
A48629	114187	0.136	55.500	21.3	93.72% (16:1)
A48629	114190	0.136	55.500	18.9	93.72% (16:1)

HEAT NUMBER IS BEING USED AS CERTIFICATE NUMBER. COUNTRY OF ORIGIN/EXPORT COUNTRY IS USA. FOR QUESTIONS CONCERNING IMPORTATION OF THIS MATERIAL PLEASE CONTACT: JOSE CISNEROS; 1 SOUTH DEARBORN ST., CHICAGO, IL, 60603; TEL: (773) 835-3535; FAX: (773) 835-3536; E-MAIL: Jose.Cisneros@arcelormittal.com

Grade	Part Number	Material Description	Comments
SAE 1050	HB1365550-02	Hot Band Prime	

This material was melted and manufactured in the USA. All products are strand cast and free of mercury or radioactive elements. Elongation based on 2" gage length.

Heat	Coil	Yield (ksi)	Tensile (ksi)	El (%)	Dir	Flt	Range	Hardness	Ft-lbs	F	Str	Dir
* Maximal tested in accordance with ISO 17025 by an accredited lab.												

Heat	C	Mn	P	S	Si	Cu	Ni	Cr	Mo	Cb	V	Al
A48629	.55	.84	.019	.001	.21	.03	.01	.05	.00	.000	.003	.038
	N	Sn	B	Ti	Ca	Sb						
	.0060	.002	.0001	.0030	.0018	.0010						

Chemical analysis was performed by ArcelorMittal Riverdale, Inc. in accordance with the current revision of ASTM E415 and E1019.

We hereby certify the above is correct as contained in the records of the corporation. All tests performed to the current standard to date unless otherwise noted. Uncertainties of measurements estimated and are available upon request. These results relate only to the items tested. Test results marked with an asterisk (\*) were reported by an external accredited lab and with double asterisk(\*\*) were reported by an internal laboratory.

Ryan N Fritz  
 Manager - Quality  
 13500 South Perry Ave., Riverdale IL 60827  
 T+708 392 1077 | Ryan.Fritz@ArcelorMittal.com