

Vendor names and personal information in this sample certification document have been removed. An actual certification document from Portland Bolt will include vendor names and other identifying information.



Phone: 800-547-6758 | Fax: 503-227-4634  
3441 NW Guam Street, Portland, OR 97210  
Web: www.portlandbolt.com | Email: sales@portlandbolt.com

+-----+  
| PRODUCT CERTIFICATION |  
+-----+

For:  
PB Invoice#:  
Cust PO#:  
Date: 5/05/2010  
Shipped: 5/06/2010

We certify the following material was supplied in accordance with your order.

Description: 2 X 97 GALV ASTM F1554105 ROD

+-----+  
| Heat#: M34794 | Base Steel: F1554-105 Diam: 2  
+-----+  
Source: STEEL CO LLC Proof Load: 0  
C : .420 Mn: .890 P : .020 Hardness: 313 HBN  
S : .029 Si: .260 Ni: .180 Tensile: 145,000 PSI RA: 59.00%  
Cr: .930 Mo: .170 Cu: .180 Yield: 123,000 PSI Elon: 18.00%  
Pb: .000 V : .008 Cb: .000 Sample Length: 2 INCH  
N : .000 CE: .6706 Charpy: 32 27 27

CVN TEMP -20F

Description: 2 X 90 GALV ASTM F1554105 ROD

+-----+  
| Heat#: M34794 | Base Steel: F1554-105 Diam: 2  
+-----+  
Source: STEEL CO LLC Proof Load: 0  
C : .420 Mn: .890 P : .020 Hardness: 313 HBN  
S : .029 Si: .260 Ni: .180 Tensile: 145,000 PSI RA: 59.00%  
Cr: .930 Mo: .170 Cu: .180 Yield: 123,000 PSI Elon: 18.00%  
Pb: .000 V : .008 Cb: .000 Sample Length: 2 INCH  
N : .000 CE: .6706 Charpy: 32 27 27

CVN TEMP -20F



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Date: 5/05/2010  
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We certify the following material was supplied in accordance with your order.

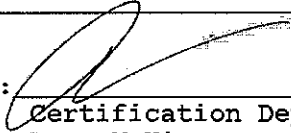
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**Nuts:**  
ASTM A194-2H HVY HEX

**Washers:**  
ASTM F436-1 RND

**Coatings:**  
ASTM A153 CL.C AND F2329, HOT DIP GALV

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By:   
Certification Department Quality Assurance  
Dane McKinnon

**PORTLAND BOLT & MFG. CO.**

HOT ROLLED ROUNDS F1554 GR105  
2.0000 X 24"  
PART NO.

PO/Rel 99097

I hereby certify that this data is correct as contained in the records of this company. I hereby certify that no mercury came in contact

**Certificate of Mill Test Results**

SO 1 -190998-001 4Jan10  
Pg 1/1

with or no weld repair was done to this product while in our possession.  
Attn:



Certificate No. 1281-01

**TEST REPORT**

REPORT NO: 146735

DATE: DECEMBER 21, 2009

PAGE 1 OF 1

TO:

SHIP TO:

DESC: 176 PCS 2"RD X 24"3"		HEAT#: M34784		GRADE: 4140		WT: 45783		
PO: 1-111599		MO: 239550		CO: 20682		LOT: 68239		
SPEC: QUENCH,TEMPER,STRAIGHTEN				ASTM-A193B7-08B/F1554 GR105-07				
PROCESS: FURN TEMP: 1600		FURN TIME hh:mm: 1.20		QUENCH: OIL				
TEMPER TEMP: 1100		TEMPER TIME hh:mm: 2.00						
STRESS TEMP:		STRESS TIME hh:mm:						
PARAMETER	UNITS	LIMITS	TEST RESULTS (See sampling plan on back)					
TENSILE	KSI	125 150	145.0	149.0	140.0	144.0	142.0	
YIELD .2%	KSI	105 N/A	123.0	118.0	116.0	122.0	121.0	
ELONG 2"	%	18 N/A	18.0	18.0	20.0	19.0	19.0	
RED AREA	%	50 N/A	59.0	58.0	58.0	58.0	58.0	
CHARPY	FT-LB	16 N/A	32	27	27			
CVN TEMP	F	-20 -20	-20					
SURFACE HB	HBW	0 N/A	310	309	311	312	307	300
			300	305	308	318		
MIDRAD HB	HBW	N/A 321	313	308	312	312	308	

**SUBCONTRACTED LABS (A2LA ACCREDITED)**

Tensile, Standard	Rockwell	Micro Analysis*
Tensile, Full Secn	Brinell	Decarb Measure
Charpy V 10mmx10mm	Ultra Sonic*	Chemistry*
Microhardness, Knoop*		
Test Center	BE: Berg Engineering	MSI: Metallurgical Services
Cert #1281-01	Cert #L1157-1	Cert #0510
2/28/11	2-4-2011	12/31/10

TIME 11:44

\*Not included in our scope of accreditation.

Test Center Supervisor

FC 4.12.10F 10/12/09

*There are no deviations from test methods unless noted. It should not be assumed that mechanical properties of raw material heat treated to a test standard will have the same properties of a finished fastener whose original material characteristics may have been significantly altered.*

*No mercury was used/advised and no wetting/weld repair was performed on this material while in the possession of*

*This original test report displays a raised, reproducible, except in ink, without the written permission of,*

*etc. This test report relates only to the items tested and shall not be*

**PORTLAND BOLT & MFG. CO.**

HOT ROLLED ROUNDS P1554 GR105  
2.0000 X 24"  
PART NO.

PÓ/R#1 99097

I hereby certify that this data is correct as contained in the records of this company.  
I hereby certify that no mercury came in contact

**Certificate of Mill Test Results**

SO 1 -190998-001 4Jan10

with or no weld repair was done to this product while in our possession.  
Attr:

Pg 1/2

**CERTIFIED MATERIAL TEST REPORT**

<b>CUSTOMER ORDER NUMBER</b> 20632	<b>CUSTOMER PART NUMBER</b> 5324	<b>HEAT NUMBER</b> M34794	<b>WORK ORDER NUMBER</b> 233550 101	<b>DATE</b> 12/10/09
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REPORT TO

SHIP TO

*2.000* ORDERED

<b>GRADE</b> 4140	<b>SIZE</b> 2" RND	<b>LENGTH</b> 24' 3"
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**CUSTOMER SPECIFICATIONS**  
ASTM A29/A29M-05; A322-07; E381-01

**CHEMICAL ANALYSIS**

C	Mn	P	S	Si	Ni	Cr	Mo	Cu	Sn	Al
0.42	0.89	0.020	0.029	0.26	0.18	0.93	0.17	0.18	0.010	0.037
V	Nb									
0.008	0.002									

**GRAIN SIZE** SPECIFICATION ASTM E112 FINE GRAIN 5-8

**HARDENABILITY** SPECIFICATION ASTM A255/A304

**THEORETICAL**

J1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	18	20	22	24	26	28	30	32	34
57	57	57	57	57	57	57	55	54	53	50	48	46	46	45	43	40	38							

**MACROCLEANLINESS** SPECIFICATION ASTM E381

**PLATE I**

**PLATE II**

	S	R	C
FRONT	1	1	1
MIDDLE	2	1	1

PAGE 1

I hereby certify that the data are correct and in compliance with specified requirements.

*Chris Little*

CONTINUED ON PAGE 2

**PORTLAND BOLT & MFG. CO.**

HOT ROLLED ROUNDS F1554 GR105  
2.0000 X 24"  
PART NO.

PO/Rel 99097

I hereby certify that this data is correct as  
contained in the records of this company.  
I hereby certify that no mercury came in contact

**Certificate of Mill Test Results**

SO 1 -190998-001 4Jan10  
Pg 2/2

with or no weld repair was done to this product  
while in our possession.  
Attn:

**CERTIFIED MATERIAL TEST REPORT**

CUSTOMER ORDER NUMBER	CUSTOMER PART NUMBER	HEAT NUMBER	WORK ORDER NUMBER	DATE
20632	5324	M34794	233550 101	12/10/09

BMP TD

**ORDERED**

GRADE	SIZE	RND	LENGTH
4140	2"		24' 3"

**CUSTOMER SPECIFICATIONS**

ASTM A29/A29M-05; A322-07; E381-01

BACK 1 1 1  
AVERAGE 1 1 1

NONE

**REDUCTION RATIO**

RATIO= 11.5 TO 1.0

**MADE & MFG. IN USA**

\*\* 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. \*\*

PAGE 2 OF 2

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

*Chris [Signature]*

**CERTIFICATE OF INSPECTION**

Purchaser:  
P.O.NO: PO 19081408

Date: 2009-9-18  
ISO NO: 03407Q10012ROS  
Expire: 2010-01-10

Manufacturer: Lin'an Huaxing Fastening Piece Co., Ltd.  
Address: Tashan Village, Qianchuan Town, Lin'an City, Zhejiang Province, China  
ASTM A194/ASME SA194 GRADE 2H HEAVY HEX NUT  
W/2H\*\* & MFG'S ID ON ONE FACE, S/C, WASHER FACE

Commodity: H.D.G. & WAX (BLUE)  
Size: 2-4-1/2  
Lot NO.: 29B167-6-2  
Ship quantity: 0.585 MPCS  
Finish: HDGW

CUSTOMER PART NO.: 00216-5000-004  
MANUFACTURING DATE: 2009.8.18  
HEAT NO.: 3109040716  
MATERIAL: 45# CARBON STEEL

**DIMENSIONAL INSPECTION:**

ACCORDING TO ASME B18.2.2-1987(R1999)

TEST DATE: 2009-08-18

SAMPLED BY: zhuxiaochao TITLE: QC MANAGER

SAMPLING DATE: 2009-08-18

INSPECTION ITEM	SAMPLE SIZE	SPECIFICATION	ACTUAL RESULT	ACCEPT	REJECT
APPEARANCE	100	ASME B18.2.2-1987(R1999)	ok	100	0
Marking	100	2H* & 01RC	ok	100	0
Width across flats	32	3.125-3.025	3.120-3.029	32	0
Width across corners	8	3.608-3.449	3.600-3.451	8	0
Thickness	8	2.013-1.925	2.009-1.934	8	0
Minor dia.	8	1.809-1.845	1.811-1.841	8	0
Runout of bearing face FIM	8	0.047 MAX	0.043-0.045	8	0
Go-Gage	8	UNC(T/O)	ok	8	0
NO-GO gage	8	UNC(T/O)	ok	8	0

**CHEMICAL COMPOSITION:**

ACCORDING TO ASTM A194-06a/ASME SA194-01 GRADE 2H

TEST DATE: 2009-04-22

SAMPLED BY: zhuxiaochao TITLE: QC MANAGER

SAMPLING DATE: 2009-04-22

ELEMENT	C	Mn	P	S	Si	Cr	Mo	Ni	Al	Ti	V
SPECIFICATION	0.40 MIN	1.00 MAX	0.040 MAX	0.050 MAX	0.40 MAX						
TEST RESULT	0.45	0.66	0.014	0.013	0.24	0.03		0.01			

**MECHANICAL PROPERTIES:**

ACCORDING TO ASTM A194-06a/ASME SA194-01 GRADE 2H

TEST DATE: 2009-08-18

SAMPLED BY: zhuxiaochao TITLE: QC MANAGER

SAMPLING DATE: 2009-08-18

TEST ITEM	SAMPLE SIZE	SPECIFICATION	ACTUAL RESULT	ACCEPT	REJECT
PROOF LOAD STRESS	4	175 KSI	N/A	4	0
HARDNESS(HRC)	8	24-35	28-32	8	0

THE MINIMUM TEMPERING TEMPERATURE:

850°F

MACRO ETCH TEST:

s-1 r-1 c-1

WE CERTIFY THAT THIS DATA IS A TRUE REPRESENTATION OF INFORMATION PROVIDED BY THE MATERIAL SUPPLIER AND OUR TESTING LABORATORY

SIGNATURE:

zhuxiaochao

TITLE: QC MANAGER

01209-002

## MATERIAL CERTIFICATION

CUSTOMER NAME		CUSTOMER ORDER NUMBER				DATE			
Portland Bolt & Mfg. Co.		99937				4/2/10			
PART NUMBER - CUSTOMER LOT NO.		LOT NUMBER				QUANTITY			
2 " F436 Hdg		0709-511				1,700			
STEEL GRADE	HEAT	C	MN	P	S	SI	AL	REVISION	
SAE 1050	B25585	.52	.74	.010	.001	.22	.034	ASTM F-436-09	
SPECIFICATION		ACTUAL				GAUGE			
O.D -		3.687 - 3.813				3.733 - 3.736			CALIPER
I.D -		2.125 - 2.188				2.148 - 2.151			CALIPER, PIN GAUGE
THICKNESS-		.178 - .280				.191			MICROMETER
FLAT-		Max .010				.005			CALIPER
HEAT TREAT -		26 - 45 HRC				40 - 42			
PLATING-						See Cert			
OTHER						N/A			

WE HEARBY CERTIFY THIS PRODUCT WAS PRODUCED UNDER A ISO-9001:2000 QUALITY ASSURANCE SYSTEM. ISO-9001:2000 CERTIFICATION NUMBER-1265 - DATE OF REGIS. JAN. 3, 2003  
ALL MATERIALS ARE MADE AND MELTED IN THE U.S.A. THIS PRODUCT WAS MANUFACTURED IN CHESTERFIELD, MICHIGAN, U.S.A. THIS PRODUCT CONFORMS TO ALL REQUIREMENTS  
FOR WASHERS AS PRODUCED ACCORDING TO A.S.T.M. F-436-09. THE ABOVE TEST RESULTS APPLY ONLY TO THE ITEMS TESTED. THIS TEST REPORT MUST NOT BE REPRODUCED  
EXCEPT IN FULL WITHOUT PRIOR WRITTEN APPROVAL.

  
 AUTHORIZED SIGNATURE

CERTIFIED ISO 9001:2000

99937-001

4/26/1

# HEAT TREAT CERTIFICATION

Customer:

Certification Date:  
**07/30/2009**



Page: 1 of 1

## Order Details

Part Number: **F0200**  
Packing Slip: **4727**  
Purchase Order:  
IST Order Number: **827760-1**  
Lot Number: **0709-511**  
Heat Number:

Blue Print Rev: **1279**  
Material Type: **1030 -1050**  
Quantity: **11,652**  
Net Weight: **4,486.0**  
Part Desc: **WASHER**  
Comments: **4 TUBS#. 1506.803.902.64**

## SPECIFICATIONS

## RESULTS

HRC 38 -45

HRC 40 -42

Approval: *Tom*  
Quality Assurance Supervisor

Contact: \_\_\_\_\_  
Quality Assurance Supervisor



4661

3/19/2009  
 Report: 108  
 Version 1.8  
 12/18/2007

## CERTIFIED REPORT OF CHEMICAL ANALYSIS AND MECHANICAL TESTS

This report will not be reproduced in whole or in part without the prior written approval from

Page 1 of 1

SOLD TO				VENDOR								
SHIP TO				ORDER INFORMATION								
				PO#: 004512/3	Invoice #: 0500027446							
				SO#: 420737	Carrier: COMMON CARRI							
				Shipped: 3/13/2009								
DIMENSIONAL INFORMATION												
Heat	Coil	Thickness (in)	Width (in)	Weight (tons)	Reduction Ratio							
B25585	786499	0.188	50.250	21.8	91.32% (12:1)							
B25585	786500	0.188	50.250	21.8	91.32% (12:1)							
B25585	786497	0.188	50.250	21.7	91.32% (12:1)							
B25585	786498	0.188	50.250	21.3	91.32% (12:1)							
PRODUCT INFORMATION												
Grade	Part Number		Comments									
SAE 1050 MOD4	HB1885025-01											
We certify that this material meets the provisions of the 'Buy American' program. This material was melted and manufactured in the USA. All products are strand cast and free of harmful or radioactive elements. Elongation based on 2" gage length.												
MECHANICAL / PHYSICAL TEST RESULTS												
Heat	Coil	Yield (ksi)	Tensile (ksi)	E <sub>L</sub> (%)	Dir	K-Value	H-Range	Hardness (HR)	FT-10s	*	Size	D <sub>17</sub>
* Material tested in accordance with ISO 17025 by an accredited lab.												
CHEMICAL TEST RESULTS (%wt)												
Heat	C	Mn	P	S	Si	Cu	Ni	Cr	Mo	Co	V	Al
B25585	.52	.74	.010	.001	.22	.02	.01	.03	.00	.000	.004	.034
	N	Sn	B	Tl	Cd	Sb	O					
	.0072	.001	.0003	.0030	.0010	.0000						

Chemical analysis was performed by \_\_\_\_\_ in accordance with ASTM E415 and E1018.

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.

*Patton*

Metallurgist

INC.

HOT DIP  
GALVANIZING

March 29, 2010

To Whom It May Concern:

This is to certify that the hot dip galvanizing of the following washers on your Purchase Order number 1548 conforms to specification ASTM A-153. The following sizes and lot numbers comply with the coating, workmanship, finish, and appearance requirements of ASTM F2329 specifications.

<u>PIECES</u>	<u>PART# &amp; SIZE</u>	<u>LOT NUMBER</u>	<u>AVERAGE ZINC COATING IN MILS.</u>
102535	F0012 1/2"	1209-686	3.77
275477	F0034 3/4"	0210-750	5.16
63248	F0100 1"	1109-665	4.44
10277	F0118 1-1/8"	1209-693	8.92
24276	F0114 1-1/4"	1209-690	6.86
3927	F0134 1-3/4"	0309-438	4.02
3744	F0200 2"	0709-511	6.18
95031	F0012 1/2"	0210-746	4.95
188839	F0058 5/8"	0210-744	3.39
16896	U0034 3/4"	0110-710	3.09
1925	U0118 1-1/8"	1108-341	2.56

This certification in no way implies anything other than the quality of our hot dip galvanizing as it pertains to your order.

Yours very truly,

INC.

Lorraine

Lorraine

SUBSCRIBED AND SWORN  
BEFORE ME THIS 29TH  
DAY OF MARCH 2010, AD

Judith  
NOTARY PUBLIC



# Portland Bolt & Manufacturing Company

Phone: 800-547-6758 | Fax: 503-227-4634  
 PO Box 2866 | Portland, OR 97208

CERTIFICATION  
 MTR - EMAIL ONLY  
 ORDER

CONSTRUCTION  
 009615  
 CONSTRUCTION  
 5/05/10  
 11:53:04

EXTRAS: N  
 REF# 48055

QTY ORDERED	B.O.	PRODUCT NO.	DESCRIPTION	P.O.	LINE	MT	SIX OR	QTY SHIPPED	UNIT
22		12378	2 X 97 GALV F1554105 ROD 68"TOE 11"TOE					1899	2
2		12378	2 X 90 GALV F1554105 ROD 61"TOE 11"TOE					160	2
120		11784	2-4-1/2 GAL A194-2H HVY HX NUT					359	1
24		16461	2 DOM GAL F436-1 RND WASHER					9	1
07		14188	FREIGHT CHARGES						2
TOTAL WEIGHT		DATE SHIPPED	FREIGHT	B/O FROM INVOICE NUMBER	B/O TO INVOICE NUMBER	SALES TAX	TOTAL QTY SHIPPED		

2427# CERTIFICATION COPY RECEIVED BY X TOT QTY 168