



North American Stainless Canada Inc.
740 Imperial Road North
Guelph, ON N1K1Z3
Canada

METALLURGICAL TEST REPORT

6870 Highway 42 East
Ghent, KY 41045-9615
(502) 347-6000

Certificate: 496172 2	Mail To:	Ship To:	Date: 3/29/2019	Page: 1
Customer: 007175 007	ENCORE METALS, DIV. OF RMCL 7805 51ST STREET S.E. CALGARY, AB T2C 2Z3	ENCORE METALS, DIV. OF RMCL 7805 51ST STREET S.E. CALGARY, AB T2C 2Z3	Steel: 316/316L	Finish: ST
Your Order: P119090875	NAS Order: PN 0103653 03	Heat Treat Code: 52,286	Corrosion: ASTM A262/15 Prac A/E OK	Red Ratio: 14.4 :1

PRODUCT DESCRIPTION:

Round Bar, Annealed, Smooth Turned, Cold Finished
UNS S31600/S31603, EN 10204 3.1, ASTM A484/18
ASTM A276/17, ASTM A479/18, ASTM A182/18 CHEM ONLY,
ASME SA479/17, ASME SA182/18 CHEM ONLY,
AMS 5648/M, AMS 5653/H, AMS-QQS-763/D, QQS:763/F
NACE MR0175/15 (MID RADIUS ONLY), MR0103/15 (MID RADIUS ONLY)
SOLUTION ANNEAL TEMP 1900F MIN, ASTM A320/17a CL 1 GR B8M

ASTM A193/17, ASME SA193/17 CL 1 GR B8M(EXC PAR 6.2)
GRAIN SIZE = 6-8

REMARKS:

COMPLIES W/REQUIREMENTS OF DFAR 252.225-7009 EU DIRECTIVE
2011/65/EU. RoHS. EAF+AOD+CC. NO WELD REPAIR. MELTED AND MFG
IN USA FREE FROM MERCURY AND LOW MELTING ALLOY CONTAMINATION

P119090 R153657 525425 B52X 875

Product Id	Skid #	Diameter	Size	Weight	-----Length-----	Mark	Pieces	Commodity Code
BK2665 4		2.2500		1,323	144.00	4	1	525425

ANAB, ISO/IEC 17025, Certificate# L2323

CHEMICAL ANALYSIS CM(Country of Melt) ES(Spain) US(United States) ZA(South Africa) JP(Japan)

Chemical Analysis per ASTM A751/14a

NAS Heat	CM	C %	CO %	CR %	CU %	MN %	MO %	N %	NI %	P %
B52X	US	.020	.29	16.97	.39	1.36	2.033	.037	10.63	.035
		S %	SI %							
		.0225	.22							

MECHANICAL PROPERTIES

Product Id	l o i c e	HB No.	.2YS KSI	UTS KSI	RA %	Elong % 4D
BK2665 4	R L	190.0	47.00	92.00	64.00	42.00

NAS hereby certifies that the analysis on this certification is correct. Based upon the results and the accuracy of the test methods used, the material meets the specifications stated. These results relate only to the items tested and this report cannot be reproduced, except in its entirety, without the written approval of NAS.

Technical
Dept. Mgr.

[Signature]
KRIS LARK

3/29/2019

NAS