McMASTER-CARR®

Certificate

330-995-5500
330-995-9600 (fax)
cle.sales@mcmaster.com

Purchase Order	Order Date	Placed By	McMaster-Carr Number	Number of Certificates
P1501786	1/30/2024	Jane Beattey	7256025-02	1

Line		Product	Ordered	Status	Certificate
1	89535K41	Multipurpose 304/304L Stainless Steel Rod, 1-1/8" Diameter, 2 Feet Long	1 each	1 each delivers January 31	228–0798

Your order is subject only to our terms and conditions, available at www.mcmaster.com or from our Sales Department.

MARCEGAGLIA Certificate of Test

PRODEC QUALITY Page: 1

HEAT E230354 ORDER 707265/ 02 BOL 0260432 * CERTIFICATION * 07/05/23

SHIP TO:
ROLLED ALLOYS BAR CENTER
711 PHOENIX LAKE AVENUE

STREAMWOOD 601070000

---------- YOUR ORDER & DATE ----------
0217094-STR 4/24/23 CUST# 0773001 CUST TAG#0009107

---------- ITEM DESCRIPTION ----------
GRADE 304L/304 PRODEC QUALITY Ship Condition CONDA
Size304L RND CFA CONDA 1.1250 x 144.000 RL
Country of Melt: UNITED KINGDOM Country of Mfg.: UNITED STATES
No weld repair
Free of mercury contamination, Free of radiation contamination
No WEEE relevant substances; Meets RoHS-2011/65/EU and 2015/863

Total Bundles 3 Total Weight 6428 Approx. Hot Red. Ratio 32:1

WO 2125070 Bundles: 1A, 1B, 1C

---------- SPECIFICATIONS ----------

MFG TO FINISHED BAR IN THE USA FROM BILLETS IMPORTED UNITED KINGDOM	
AMS5639K, AMS5647M	SAE AMS-QQ-S-763D
ASME SA-182 2021 Ed.	ASME SA-479 2021 Ed.
ASME SA-484 2021 Ed.	ASME SA-320 B8 CL1, 2021 Ed.
ASME SA-193 B8 2021 Edition	ASTM A182/A182M 22
ASTM A262 15 re 21 Pr. A/E	ASTM A276/A276M 17
ASTM A314 19	ASTM A479/A479M-21
ASTM A484/A484M-23	ASTM A320 21a B8 Class 1
ASTM A193 23 B8	Solution Annealed Condition
NACE MR0175/ISO 15156-3:2015	DFARS 252.225.7009 10/4/11
Federal Spec QQ-S-763F	UNS S30400, AISI 304
UNS S30403, AISI 304L	Free of Cont.carbide network
Prodec Quality	EN 10204 Type 3.1 Document
RA-53 RAM 304L	ASTM F899-20
NACE MR0103/ISO 17945:2015	DFARS 225.7002-3(B)(1)
Solution Anneal 1900Fmin/WQ	DFARS 225.7002-3(B)(1)
QTC is a prolongation of bar	1.4301 X2CrNi18-9 304
ASME SA-276 2021 Edition	ASTM A314 19
Bars are Eddy Current tested	
Sol Anneal at 1900F min/ Water Quench	

---------- MECHANICAL & OTHER TESTS ----------
Mechanical and Met tested Element Materials Technology 1200 Westinghouse Blvd A, Charlotte, NC 28273

Hardness as shipped	(213 HB)		
Hardness as shipped	94 HRB		
Grain size	8.5	Tensile strength,KSI (MPa)	96.0 (662)
Micro	OK	0.2% Yield Strngth,KSI(MPa)	52.0 (359)
Intergranular corrosion	OK		
		Elongation % in 4D	51.0
		Reduction of area %	77.0

-- Continued --

HEAT # E230354
TRACER # 0682926US

Marcegaglia Stainless Richburg, LLC
3043 Crenshaw Pkwy
Richburg, SC 29729

M.F. Marcegaglia

MARCEGAGLIA Certificate of Test

PRODEC QUALITY Page: 2

HEAT E230354 ORDER 707265/ 02 BOL 0260432 * CERTIFICATION * 07/05/23

SHIP TO:
ROLLED ALLOYS BAR CENTER
711 PHOENIX LAKE AVENUE

STREAMWOOD 601070000

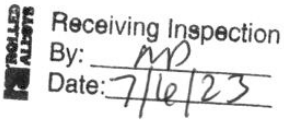
CHEMICAL COMPOSITION

Carbon	(C)	.022	Manganese	(Mn)	1.430
Phosphorus	(P)	.033	Sulphur	(S)	.029
Silicon	(Si)	.440	Chromium	(Cr)	18.150
Nickel	(Ni)	8.040	Cobalt	(Co)	.173
Copper	(Cu)	.570	Moly	(Mo)	.400
Nitrogen	(N)	.082	Columbium	(Cb)	.017
Titanium	(Ti)	.007	Aluminum	(Al)	.006
Tin	(Sn)	.015	Cerium	(Ce)	.011
Boron	(B)	.001	Tantalum	(Ta)	.001
Vanadium	(V)	.090	Tungsten	(W)	.040
Columbium/ Tantalum	(Cb+Ta)	.018			
Iron	(Fe)	Balance			
Melt Practice		EAF			
Refining Practice		AOD			
De-long Ferrite					

Knowingly & willfully falsifying or concealing a material act on this form, or making false, fictitious or fraudulent statements or representations herein could constitute a felony punishable under federal statutes. We hereby certify that the test results shown in this report are correct and accurate as contained in the records of the company and are in compliance with the specifications, codes, and standards listed above.

Digitally Signed by M.F. Marcanio, Quality Manager





Marcegaglia Stainless Richburg, LLC
3043 Crenshaw Pkwy
Richburg, SC 29729

M.F. Marcanio