

Fidelity Stainless



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316/L Round Bar Over 4 Inch

MATERIAL SPECIFICATIONS

PREPARED BY: M POPE

REVISION DATE: 05/25/23

MATERIAL	STAINLESS ROUND BAR 316/316L 4 1/8" TO 20"	ROUGH TURNED 12-14' R/L DUAL CERTIFIED	RMS 125-250
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SPECIFICATIONS	ALL SPECIFICATIONS WITH LATEST YEAR REVISIONS AISI 316,316L, UNS S316/S31603, DIN# WNR 1.4401/1.4404 ASTM A182, ASTM A193 B8M CL1, ASTM A262 PRACTICE E, ASTM A276 ASTM A314, ASTM A320 B8M CL1, ASTM A388, ASTM A479, ASTM A484 ASME SA182, ASME SA193 B8M CL1, ASME SA320 B8M CL1, ASME SA479 AMS 5648, AMS 5653, SAE-AMS-S-7720A, QQ-S-763F COND A, MIL-S-862 B NACE MR 0175, NACE MR 0103, EN 10088-3, EN 10204-3.1, EN 10222-5, EN 10272
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<u>CHEMICAL ANALYSIS</u>		<u>MECHANICAL PROPERTIES</u>	
Carbon ©	.03	Tensile Strength (U.T.S.)	75 KSI
Chromium (Cr)	16.00/18.00	Yield Strength (Yield)	30 KSI
Cobalt (Co)	aim .20 max	Elongation (Ei. or Elong.)	40%
Copper (Cu)	1.00 aim .75 max	Reduction of Area (R.A. or Red.)	50%
Manganses (Mn)	2.00	Hardness (RB,RC,or BHN)	140/223 Max BHN AIM 150-180
Molybdenum (Mo)	2.00/3.00		
Nickel (Ni)	10.00/14.00		
Nitrogen (N)	.10		
Phosphorous (P)	.045		
Silicon (Si)	1.00		
Sulfur (S)	.03 aim .02-.03		

All singular chemisty values are
MAXIMUM unless otherwise noted

All mechanical properties are
MINIMUM unless otherwise noted

OTHER TEST(S) AND/OR REQUIREMENTS

INTERGRANULAR CORROSION TEST (FREE FROM CONTINUOUS CARBIDE)
 AS PER ASTM A262-02 PRACTICE E
 MACRO ETCH TEST & MICRO STRUCTURE TO BE SATISFACTORY
 ULTRASONIC TESTED AS PER ASTM A388
 MERCURY FREE CONTAMINATION STATEMENT
 FREE FROM RADIOACTIVE CONTAMINATION
 NO WELDING OR WELD REPAIR STATEMENT
 REPORT GRAIN SIZE PER ASTM E112-96
 SOLUTION ANNEALED CONDITION A, PER ASTM A479 AT 1040C/1900F MINIMUM AND WATER QUENCHED
 HEAT TREATMENT TEMPERATURE AND TIME (HOURS SOAKED) MUST BE REPORTED
 FINISHED CONDITION, MELT AND HOT WORKING PRACTICES (FORGED OR ROLLED) TO BE REPORTED
 ROUGH TURNED BAR TO 8" 125 RMS MAXIMUM, OVER 8" 250 RMS MAXIMUM FINISH AS PER ASTM A484
 GRADE AND HEAT NUMBER MUST BE METAL STAMPED AT BOTH ENDS ON SIZES 1" DIA. AND LARGER
 COLOUR CODE GREEN
 BUNDLE WEIGHT - 2200 LBS MAXIMUM

IMPORTANT:

ORIGINAL CERTIFICATES OF CHEMICAL & PHYSICAL ANALYSIS REQUIRED TWO (2) WEEKS BEFORE
 SHIPMENT ARRIVES
 ALL TEST REPORTS MUST STATE COUNTRY OF ORIGIN
 TEST REPORTS MUST HAVE THE SIGNATURE NAME AND TITLE PRINTED
 ALL TEST REPORTS MUST BE SIGNED BY AUTHORIZED PERSON