



**Richco**  
MATERIAL SPECIFICATION (RMS)  
IF STAMP COLOR IS NOT IN BLUE  
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**Richco, Inc.**

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RMS-381

## AISI Type 304 Stainless Steel

Component		Wt. %
C		Max 0.08
Cr		18-20
Fe		66.345-74
Mn		Max 2
Ni		8-10.5
P		Max 0.045
S		Max 0.03
SI		Max 1
Physical Properties	Metric	English Comments
Density	8 g/cc	0.289 lb/in <sup>3</sup>
Mechanical Properties		
Hardness, Brinell	123	123 Converted from Rockwell B hardness
Hardness, Knoop	13B	13B Converted from Rockwell B hardness
Hardness, Rockwell B	70	70
Hardness, Vickers	129	129 Converted from Rockwell B hardness
Tensile Strength, Ultimate	505 MPa	73200 psi
Tensile Strength, Yield	215 MPa	31200 psi at 0.2%



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Elongation of Break	70%	70%	offset in 50 mm
Modulus of Elasticity	193-200 GPa	28000-29000 ksi	
Poisson's Ratio	0.29	0.29	
Charpy Impact	325 J	240 ft-lb	
Shear Modules	86 GPa	12500 ksi	
<b>Electrical Properties</b>			
Electrical Resistivity	7.2e-005 ohm-cm	7.2e-005 ohm-cm	at 20°C (68°F); 1.16E-04 at 650°C 1200°F
Magnetic Permeability	1.008	1.008	at RT
<b>Thermal Properties</b>			
CTE, linear 20°C	17.3 um/m-°C	9.61 uln/in-°F	from 0-100°C
CTE, linear 250°C	17.8 um/m-°C	9.89 uln/in-°F	at 0-315°C (32-600°F)
CTE, linear 500°C	18.7 um/m-°C	10.4 uln/in-°F	at 0-650°C
Specific Heat Capacity	0.5 J/g-°C	0.12 BTU/lb-°F	from 0-100°C (32-212°F)
Thermal Conductivity	16.2 W/m-K	112 BTU-in/hr-ft²-°F	at 0- 100°C, 21.5 W/m°C at 500°C
Melting Point	1400-1455°C	2550-2650°F	
Solids	1400°C	2550°F	
Liquids	1455°C	2550°F	

*D. Johnson*  
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