-RMS-382

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Richco
MATERIAL SPECIFICATION (RMS)
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Richco, Inc.
World Headquarters
8145 River Drive, Morton Grove, IL 60053
Tel: 773 539 4060; Fax: 773 539 6770
www.richco-inc.com

AISI Type 316 Stainless Steel, annealed sheet

Component	Wt. %	Component	Wt. %	Component	Wt. %
C	0.08	Mn	2	P	0.045
Cr	Max 18	Mo	Max 3	S	0.03
Fe	62	Ni	Max 14	Si	1

Material Notes:
Molybdenum content increases resistance to marine environments. High creep strength at elevated temperatures and good heat resistance. Biocompatible. Fabrication characteristics similar to Types 302 and 304.

Applications: food and pharmaceutical processing equipment, marine exterior trim, surgical implants, and industrial equipment that handles the corrosive process chemicals used to produce inks, rayons, photographic chemicals, paper, textiles, bleaches, and rubber.

Corrosion Resistance: better corrosion resistance than 302 and 304; resists sodium and calcium brines; hypochlorite solutions, phosphoric acid; and the sulfite liquors and sulfurous acids used in the paper pulp industry.

Physical Properties	Metric	English	Comments
Density	8 g/cc	0.289 lb/in³	
Mechanical Properties			
Hardness, Rockwell B	79	79	
Tensile Strength, Ultimate	580 MPa	84100 psi	
Tensile Strength, Yield	290 MPa	42100 psi	
Elongation at Break	50 %	50 %	in 50 mm
Modulus of Elasticity	193 GPa	28000 ksi	in tension
Charpy Impact	105 J	77.4 ft-lb	V-notch
Izod Impact	129 J	95.1 ft-lb	

6/5/08

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Electrical Properties			
Electrical Resistivity	7.4e-005 ohm-cm	7.4e-005 ohm-cm	at 20°C
Magnetic Permeability	1.008	1.008	at RT
Thermal Properties			
CTE, linear 20°C	16 µm/m-°C	8.89 µin/in-°F	0 - 100°C
CTE, linear 250°C	16.2 µm/m-°C	9 µin/in-°F	at 0-315°C (32-600°F)
CTE, linear 500°C	17.5 µm/m-°C	9.72 µin/in-°F	0 - 540°C
Specific Heat Capacity	0.5 J/g-°C	0.12 BTU/lb-°F	from 0-100°C (32-212°F)
Thermal Conductivity at Elevated Temperature	16.3 W/m-K	113 BTU-in/hr-ft²-°F	100°C
Melting Point	1370 - 1400 °C	2500 - 2550 °F	
Solidus	1370 °C	2500 °F	
Liquidus	1400 °C	2550 °F	
Maximum Service Temperature, Air	870 °C	1600 °F	Intermittent Service
Maximum Service Temperature, Air	925 °C	1700 °F	Continuous Service

References for this datasheet.

Some of the values displayed above may have been converted from their original units and/or rounded in order to display the information in a consistant format. Users requiring more precise data for scientific or engineering calculations can click on the property value to see the original value as well as raw conversions to equivalent units. We advise that you only use the original value or one of its raw conversions in your calculations to minimize rounding error. We also ask that you refer to MatWeb's disclaimer and terms of use regarding this information. MatWeb data and tools provided by MatWeb.com, a product of Automation Creations, Inc.

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-D. Kidwell
6/5/08