

Combined Metals Material Datasheet

Alloy 441 Stainless Steel

1.0

Description: Type 441 is a nominal 18% chromium-bearing ferritic stainless steel stabilized with columbium. The alloy provides good high-temperature strength that exceeds that of type 409 and 439 stainless steels. Type 441 offers good corrosion resistance in many exhaust gas environments, equivalent to that of 439 and 18 Cr-Cb stainless steels.

Applications include: Exhaust systems, Automotive manifolds, Tubes

0.04

Industries supplied include: Automotive/Transportation, General Manufacturing

0.030

Nominal Composition											
	С	Mn	Р	S	Si	Cr	Ni	N	Cb	Ti	Fe
min	-	-	-	-	-	17.5	-	-	0.30+9*C	0.10	BAL

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	At 70°F	At 20°C			
Density	0.278 lb/in ³	7.7 g/cm³			
Modulus of Elasticity (E)	29 x 10³ ksi	200 GPa			
Coefficient of Expansion	5.7 μin/in-°F (32-212°F)	10.2 μm/m-°C (0-100°C)			
Electrical Resistivity	23.1 μohm-in	58.7 μohm-cm			
Thermal Conductivity	173 Btu-in/ft²-hr- °F	25 W/m-K			

Applicable Specifications

Strip & Sheet | ASTM A240

Typical Mechanical Properties Typical Room Temperature Mechanical Properties

Condition	Tensile Strength (UTS)	0.2% Offset Yield	Elongation in 2" (50.8 mm)	Hardness Rockwell
Annealed	70 ksi (MPa)	45 ksi (MPa)	30%	80 HRBW

Typical mechanical properties are based on ASTM A240

For further information email: cmcinfo@combmet.com or call: (800) 323-0758

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UNS: S44100

EN DIN: 1.4509

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