



ASM Aerospace Specification Metals Inc.



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Rene 41® Nickel Superalloy, Heat Treatment: 1079°C (1975°F) + Age

Subcategory: Metal; Nickel Base; Superalloy

Key Words: Allvac, an Allegheny Teledyne Company, UNS N07041; AMS 5712, 5713; René 41 Nickel

Component	Wt. %	Component	Wt. %	Component	Wt. %
Al	1.6	Co	11	Mo	9.75
B	0.007	Cr	19	Ni	52
C	0.06	Fe	3	Ti	3.15

Material Notes:

Nickel content calculated as remainder. Data provided by Allvac.

Applications: Jet and rocket engines, torque rings, afterburners, and hardware; space shuttle turbo pumps seals.

Physical Properties	Metric	English	Comments
Density	<u>8.24 g/cc</u>	0.298 lb/in ³	

Mechanical Properties

Hardness, Brinell	334	334	Estimated from Rockwell C value for Brinell test with 3000 kg load/10 mm diameter ball
Hardness, Knoop	363	363	Estimated from Rockwell C value.
Hardness, Rockwell C	36	36	
Hardness, Vickers	349	349	Estimated from Rockwell C value.
Tensile Strength, Ultimate	<u>1241 MPa</u>	180000 psi	
Tensile Strength, Yield	<u>793 MPa</u>	115000 psi	0.2% Offset
Elongation at Break	<u>20 %</u>	20 %	
Reduction of Area	<u>25 %</u>	25 %	

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 consistent 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.