

HAYNES[®] R-41 alloy

Thermal Stability

Baseline Tensile Properties at RT and ET; Residual Tensile Properties at Room Temperature and Exposure Temperature

Condition	Test Temperature		0.2% Yield Strength		Ultimate Tensile Strength		4D Elongation
	°F	°C	ksi	MPa	ksi	MPa	%
Solution Annealed	RT	RT	83.6	576	151.4	1044	38.7
Age Hardened*	RT	RT	116.8	805	178.6	1231	17.3
	1200	649	103.1	711	169.6	1169	18.0
	1400	760	111.6	769	138.2	953	28.4
	1500	816	100.6	694	113.5	783	32.0
	1600	871	78.1	538	87.9	606	30.0
Age Hardened* + 1200°F/8000h	RT	RT	150.7	1039	188.5	1300	5.3
	1200	649	129.7**	894**	182.6	1259	8.1**
Age Hardened* + 1400°F/8000h	RT	RT	151.6**	1045**	173.9**	1199**	0.1
	1400	760	88.2	608	126.8	874	30.1**
Age Hardened* + 1500°F/8000h	RT	RT	113.5	783	156.6	1080	1.4
	1500	816	58.2	401	88.5	610	26.8
Age Hardened* + 1600°F/8000h	RT	RT	83.3	574	122.9	847	2.0
	1600	871	36.3	250	60.9	420	33.0

*Aged hardened at 2050°F (1121°C)/30 MAT/AC + 1650°F (899°C)/4H/AC

**Limited data