

# HAYNES<sup>®</sup> HR-120<sup>®</sup> alloy

## Tensile Data

**Average Tensile Data, Solution Heat-treated Sheet**

Test Temperature		Ultimate Tensile Strength		0.2% Offset Yield Strength		Elongation
°F	°C	ksi	MPa	ksi	MPa	%
RT	RT	104.2	718	47.5	328	46.3
1000	538	80.0	552	28.3	195	53.6
1200	649	73.5	507	27.0	186	55.0
1400	760	57.4	396	26.4	182	48.0
1600	871	32.6	225	24.7	170	67.2
1800	982	17.1	118	13.2	91	74.7
2000	1093	8.8	61	6.4	44	56.1

RT= Room Temperature

**Average Tensile Data, Solution Heat-treated Plate**

Test Temperature		Ultimate Tensile Strength		0.2% Offset Yield Strength		Elongation	Reduction of Area
°F	°C	ksi	MPa	ksi	MPa	%	%
RT	RT	104.3	719	46.8	322	49.8	63.3
1000	538	80.4	554	26.9	186	58.7	57.7
1200	649	72.9	503	26.0	179	55.4	59.6
1400	760	59.8	412	25.6	177	51.6	65.6
1600	871	35.8	247	26.4	182	71.1	72.3
1800	892	18.6	128	14.5	100	83.6	77.4
2000	1093	9.6	66	7.4	51	84.1	69.4

RT= Room Temperature

**Comparative Yield Strengths**

Temperature	0.2% Yield Strength, ksi				
°F	HR-120 <sup>®</sup>	800H	RA330	600	601
70	46.8	35	42	41	35
1000	26.9	-	-	-	-
1200	26.0	16.9	21.5	30	25.4
1400	25.6	18.5	18.8	26	26.8
1600	26.4	18.5	15.9	11	19.2
1800	14.5	8.1	9	6	10.9
2000	7.4	3.3	-	3.1 est	5.1

