

HAYNES[®] HR-160[®] alloy

Thermal Stability

Exposure Temperature		Exposure Duration	0.2% Yield strength		Ultimate Tensile Strength		4D Elongation	AGL* Elongation	RA	Impact energy	
°F	°C	h	ksi	MPa	ksi	MPa	%	%	%	ft-lb	J
-	-	0	49	338	119.7	825	64.1	59.6	70.6	263	357
1200	649	1000	51.5	355	123.6	852	32.2	32.8	28.8	29	39
1200	649	4000	54.5	376	131.4	906	30.2	30	26.4	27	36
1200	649	8000	54.7	377	130.4	899	23.1	22.8	20	23	31
1200	649	16000	55.3	381	135.8	936	24.7	23.4	20.8	21	28
1200	649	20000	53.7	370	129.1	890	27.4	27.1	24.6	26	35
1200	649	30000	53.5	369	131.3	905	24.7	24.2	23.7	22	30
1200	649	50000	53.8	371	134.5	927	28.3	26.4	22.1	21	29
1400	760	1000	50.8	350	131.1	904	26.8	26.9	22.2	24	33
1400	760	4000	50.6	349	131.1	904	26.3	26.1	26	21	28
1400	760	8000	50	345	130.1	897	24.8	25.1	22.5	19	26
1400	760	16000	49.9	344	130.7	901	24.6	25	21.2	19	26
1400	760	20000	43.7	301	107.9	744	20.2	19.3	14	12	16
1400	760	30000	44.7	308	102.4	706	-	16.4	11.3	10	14
1400	760	50000	43.5	300	102.3	705	-	16.2	12.4	10	13
1600	871	1000	45.7	315	114.6	790	23.2	23.8	20.8	17	23
1600	871	4000	44.5	307	114	786	24.8	25.1	20.5	17	23
1600	871	8000	44.7	308	114.9	792	24.8	25.3	22.6	15	21
1600	871	16000	44.4	306	115	793	25.2	25.9	22.2	16	22
1600	871	20000	41	283	88.6	611	17	17.2	15.1	6	8
1600	871	30000	41.6	287	89.9	620	18.3	18.1	15.3	7	10
1600	871	50000	40.9	282	86.2	594	17.4	17.6	14.5	8	11
1800	982	1000	43.9	303	119.1	821	44.6	44.9	39	49	66
1800	982	4000	43.7	301	117.5	810	45.3	44.5	39.2	46	63
1800	982	8000	43.2	298	115.3	795	44.4	43.6	38	44	59
1800	982	16000	43.4	299	114.3	788	49.4	48.5	42	54	73
2000	1093	1000	38.4	265	104.4	720	62.3	64.3	62.8	264	358
2000	1093	5065	37.6	259	99.5	686	74	72.1	65.4	263	357
2000	1093	8000	37.6	259	100.2	691	64.6	67.1	60.1	264	358

*AGL is adjusted gauge length and AGL % elongation is useful when tensile fracture
 RA= Reduction of Area

