

HAYNES[®] 556[®] alloy

Tensile Properties

Cold-Rolled and Solution-annealed Sheet, 0.033 to 0.109 in. (0.8 to 2.8 mm) Thick*

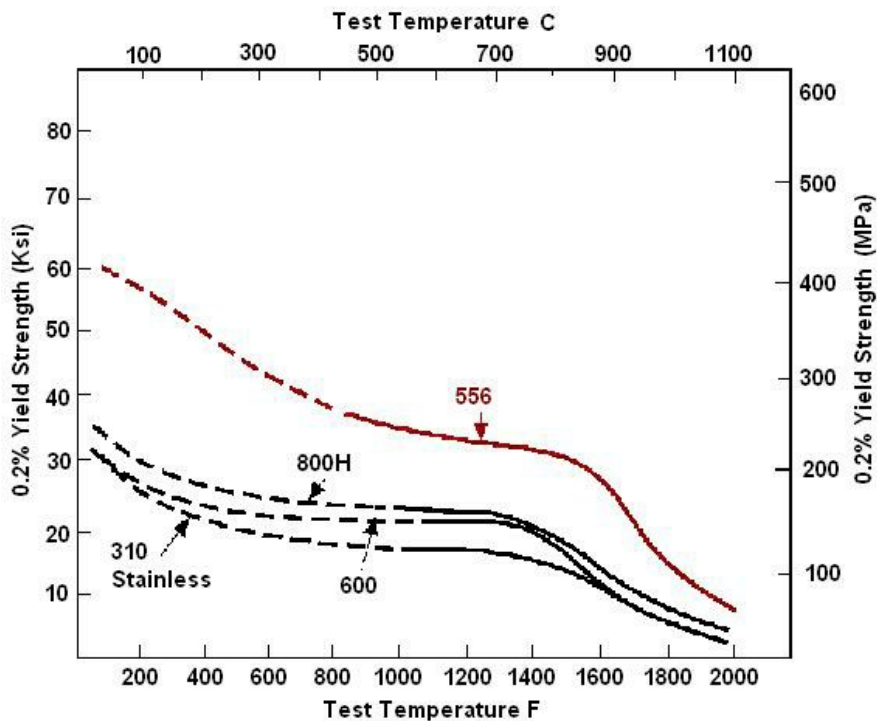
Test Temperature		Yield Strength 0.2% Offset		Ultimate Tensile Strength		Elongation
°F	°C	ksi	MPa	ksi	MPa	%
RT	RT	59.5	410	118.1	815	47.7
1000	538	34.9	240	93.4	645	54.4
1200	649	32.8	225	85.4	590	52.4
1400	760	32.0	220	68.5	470	49.1
1600	871	28.6	195	47.6	330	52.6
1800	982	15.5	105	28.0	195	63.3
2000	1093	8.0	55	14.8	100	55.4

*Based upon 10 or more Tests per condition

RT= Room Temperature

Elevated temperature tensile tests for sheet were performed with a strain rate that is no longer standard. These results were from tests with a strain rate of 0.005 in./in./minute through yield and a crosshead speed of 0.5 in./minute for every inch of reduced test section from yield through failure. The current standard is to use a strain rate of 0.005 in./in./minute though yield and a crosshead speed of 0.05 in./minute for every inch of reduced test section from yield through failure.

Comparative Yield Strengths (Sheet)



Holt-Rolled and Solution-annealed Plate

Test Temperature		Ultimate Tensile Strength		0.2% Yield Strength		Elongation
°F	°C	ksi	MPa	ksi	MPa	%
RT	RT	114.6	790	54.1	373	51.3
1000	538	95.6	659	33.7	232	58.2
1200	649	87.2	601	33.2	229	55.1
1400	760	63.1	435	34.0	234	57.4
1600	871	37.4	258	26.9	185	87.9
1800	982	20.3	140	13.2	91	96.2
2000	1093	11.2	77	6.7	46	90.3

RT= Room Temperature