

A Comparison of Anviloy[®] 1150 Properties with H-13 Hot Work Tool Steel

	Units	Anviloy [®] 1150	H-13 Tool Steel
Typical Room Temperature Mechanical Properties			
Ultimate Tensile Strength	psi	140000	233000
	MPa	965	1610
Yield Strength, 0.2% Offset	psi	125000	192000
	MPa	862	1320
Elongation	% in 2 inches	3	13.1
Hardness	HRC	34	45
Modulus of Elasticity	x 10 ⁶ psi	49	30.5
	GPa	338	210
Elevated Temperature Tensile Properties			
UTS at 1000 °F (537 °C)	psi	113000	142000
	MPa	779	979
UTS at 1200 °F (648 °C)	psi	105000	85000
	MPa	724	586
UTS at 1500 °F (815 °C)	psi	75000	20500
	MPa	517	141
Coefficient of Thermal Expansion (CTE)			
68 - 750 °F (20 - 400 °C)	x 10 ⁻⁶ in/in/°F	2.52	6.8
	x 10 ⁻⁶ m/m/°C	4.54	12.2
68 - 1450 °F (20 - 788 °C)	x 10 ⁻⁶ in/in/°F	2.92	7.5
	x 10 ⁻⁶ m/m/°C	5.26	13.5
Thermal Conductivity	Btu/h/°F	74	19.3
	W/m/°F	128	34.3
Density	lb/in ³	0.623	0.28
	g/cm ³	17.25	7.76