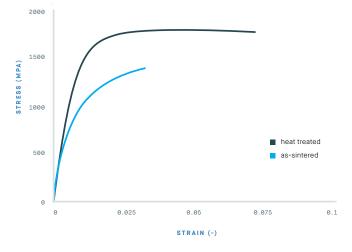


H13 tool steel

Characterized by its stability in heat treatment, exceptional hot hardness, and abrasion resistance, H13 is a tool steel widely used in both hot and cold work applications.

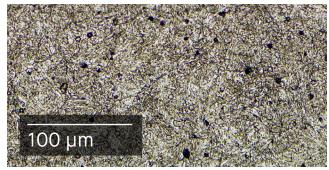


Composition %

Cr	4.8 - 5.5
Мо	1.1 – 1.7
Si	0.8 - 1.2
V	0.8 - 1.2
С	0.3 - 0.45
Mn	0.2 - 0.6
P	0.03 Max
S	0.03 Max
Fe	Balance

Other standard designations⁴

UNS	T20813	
DIN	1.2344	
JIS	SKD61	



Studio System heat treated microstructure.

Mechanical properties¹

		Studio System	Studio System	Wrought
	standard	as-sintered	heat treated ³	heat treated, for reference ³
Yield strength (MPa)	ASTM E8 ²	650	1250	1525
Ultimate Tensile Strength (MPa)	ASTM E8 ²	1325	1720	1950
Elongation at break	ASTM E8 ²	2.3%	5.8%	9%
Hardness (HRC)	ASTM E18	35	45	54
Density (relative)		≥ 93.5%	_	100%

 $^{^1\,}Properties \,shown \,reflect \,beta \,processing \,parameters. \,Properties \,were \,obtained \,for \,sintering \,loads \,between \,1.5\,\,kg \,and \,3\,\,kg$

End-use material performance is impacted (+/-) by certain factors including but not limited to part geometry and design, application and evaluation conditions, etc

² Specimens tested according to ASTM E8 with a modified crosshead displacement rate of 0.009 mm/mm/min.
³ Heat treated samples were air quenched at 1040 °C and double tempered at 540 °C.

⁴ Listed designations are for reference purposes only. Composition and mechanical properties may vary.