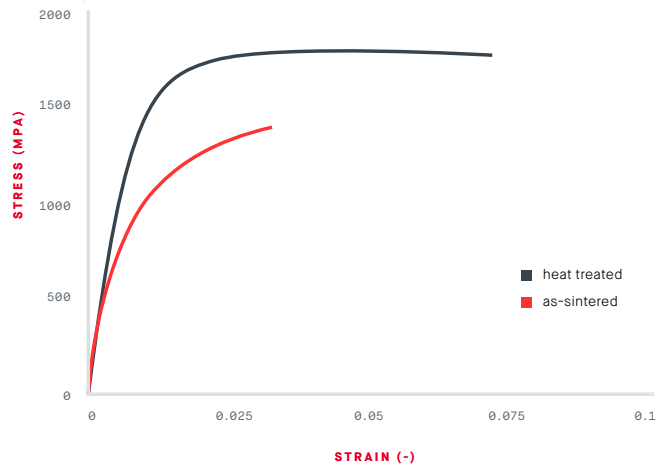


H13 tool steel

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.

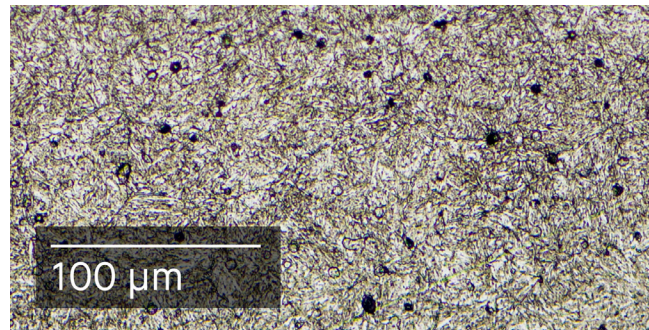


Composition %

Cr	4.8 – 5.5
Mo	1.1 – 1.7
Si	0.8 – 1.2
V	0.8 – 1.2
C	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

	standard	Studio System as-sintered	Studio System heat treated ³	Wrought 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

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.

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