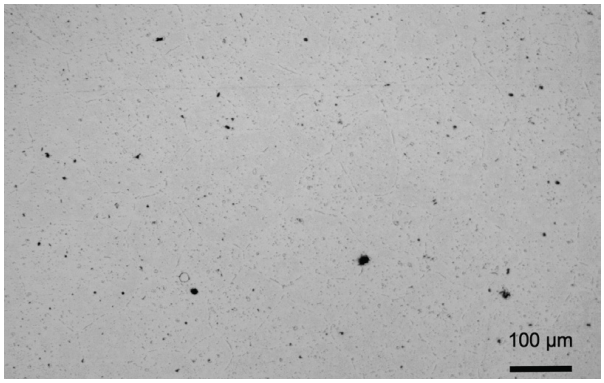
H13 Material Data Sheet

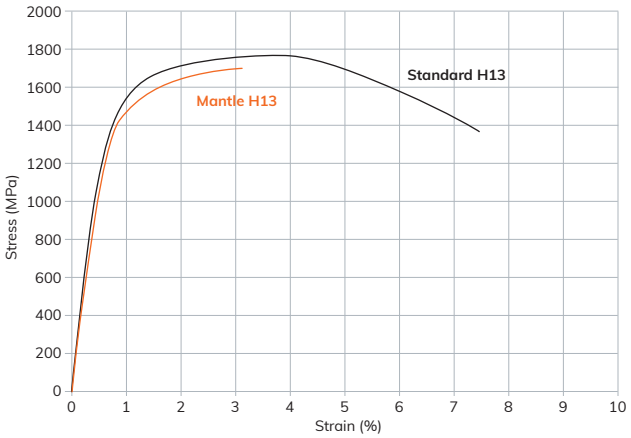
H13

Mantle's H13 material is a versatile tool steel for production-grade tools. Mantle's H13 material is optimized for our TrueShape™ additive manufacturing process that combines rough part creation with precision finishing to deliver a complete precision part solution.

Microstructure of Mantle H13 Heat Treated



Stress-Strain Chart of Mantle H13 and Standard H13



Mechanical Property	Standard	Mantle H13 Heat Treated	Standard H13 Heat Treated
Ultimate Tensile (MPa)	ASTM E8	1700	1770
Tensile Yield (MPa)	ASTM E8	1440	1450
Elongation (%)	ASTM E8	3.1	7.4
Hardness Double Tempered (HRC)	ASTM E18	49	49
Hardness Air Quenched (HRC)	ASTM E18	56–58	54
Relative Density (%)	ASTM B311	96	100

Note: Both Mantle H13 and standard H13 were heat tempered at 575C for 2 hours. Specifications are subject to change without notice. End-use material performance may be impacted by factors such as part geometry, design, and application and evaluation conditions.

©MANTLE INC. 550 10th Street San Francisco, CA 94103
www.mantle3D.com | info@mantle3D.com

Rev 1.0 Jan 2021
Mantle is a registered trademark of Mantle Inc. All other product or company names may be trademarks and/or registered trademarks of their respective owners.