BINDER JETTING MATERIAL DATASHEET

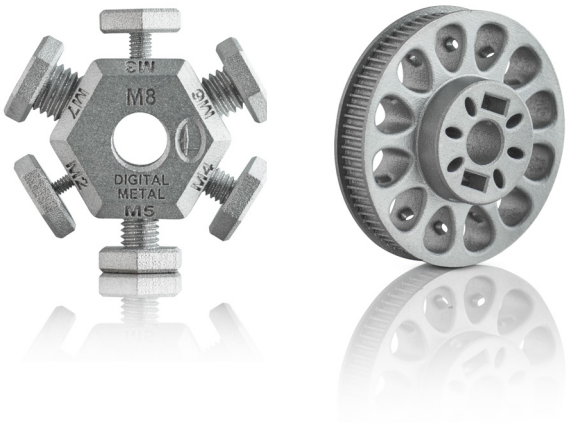
Markforged

4140

LOW ALLOY STEEL

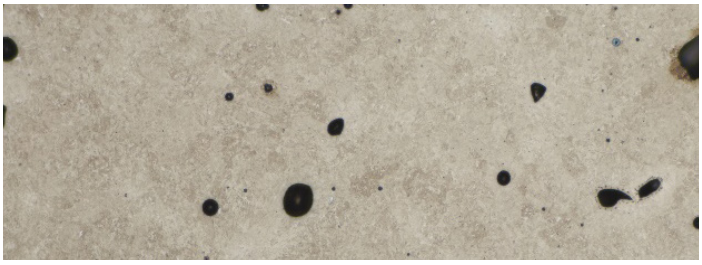
4140 is a low-alloyed steel known for its high strength, hardenability, and toughness. It is commonly used to produce gears, pulleys, and fasteners in the automotive and machinery industries, where precise and strong components are required.

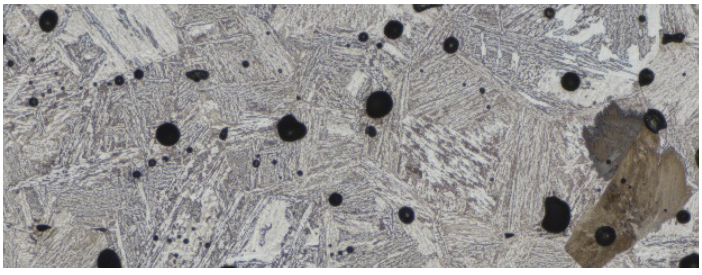
Additionally, it can be easily machined and welded, and can be heat-treated to enhance its mechanical properties.



Composition	Weight%
Iron	Balance
Chromium	1.0
Molybdenum	0.2
Manganese	0.7
Silicon	0.3
Copper	0.4

Features & Benefits
Hardenable
High specific strength
Good impact and abrasion resistance





*Related standards and denominations: ISO22068 (2014) ; MPIF #35 (2018) ; 1.4404; AISI 316L; UNS S31603

Physical Properties	As Sintered	As Q+T*
Ultimate tensile strength [MPa]	880	1600
Yield strength [MPa]	640	1400
Elongation [%]	6	3
Hardness [HRC]	95 (HRB)	47 (HRC)
Relative density [%]	96	96

*Q=Quench, T=Temper