

DM 4140

AISI 4140 is a low alloyed medium carbon level steel that has high strength and hardenability, good toughness and small deformation during quenching. It is widely used for engineering steel purpose in automotive and machinery.

Common applications are within automotive and machinery industry where it finds use in high strength parts e.g. gearwheels, connecting rods, fasteners (bolts and nuts), couplings, shafts.

COMPOSITION - TYPICAL VALUES

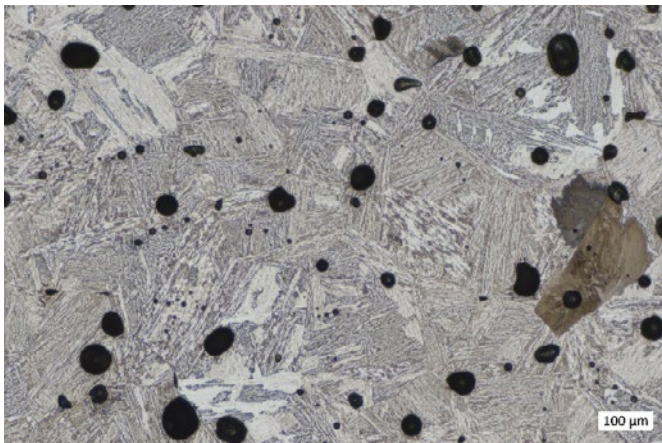
Element	[weight %]
Fe	Balance
Cr	1,0
Mo	0,2
Mn	0,7
Si	0,3
C	0,4

Related standards and denominations: ISO22068 (2014); MPIF #35 (2018); AISI4140; 42CrMo4; 1.7225; SS2244

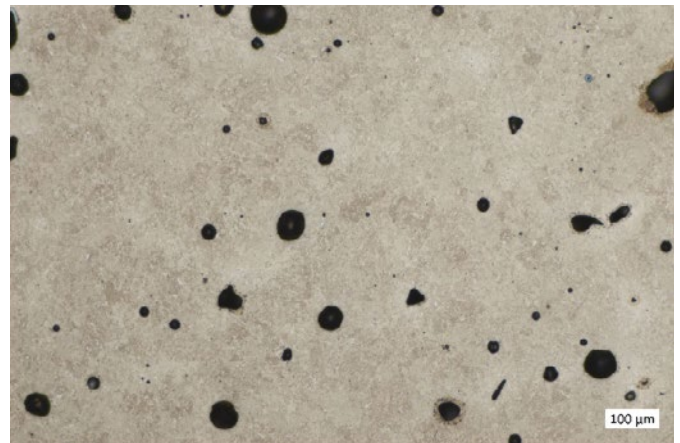
PHYSICAL PROPERTIES - TYPICAL VALUES

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

* Q = Quench, T = Temper



As sintered



As quenched and tempered (oil quenched +300 °C, 1 h)

FEATURES

- High specific strength
- Through hardening
- Good dimensional stability after hardening