

4140 AISI (USA)

Chemical composition

C	0.38 - 0.43	Si	0.20 - 0.35	Mn	0.75 - 1.00	P	< 0.035
S	< 0.04	Cr	0.8 - 1.1	Mo	0.15 - 0.25	Fe	Rest

Properties

By ASTM A519

Hot rolled

Yield Strength: 621 MPa
Tensile Strength: 855 MPa
Elongation: 15 %
Hardness HRB: 100

Stress relieved

Yield Strength: 689 MPa
Tensile Strength: 855 MPa
Elongation: 10 %
Hardness HRB: 100

Annealing

Yield Strength: 414 MPa
Tensile Strength: 552 MPa
Elongation: 25 %
Hardness HRB: 85

Normalized

Yield Strength: 621 MPa
Tensile Strength: 855 MPa
Elongation: 20 %
Hardness HRB: 100