

Products & Sizes

Bar

0.1875" - 2.000"

Custom 455® Chemical Composition

	Element	Min	Max
Mn	Manganese	-	0.50
S	Sulfur	-	0.030
Cr	Chromium	11.00	12.00
Mo	Molybdenum	-	0.50
Ti	Titanium	0.80	1.40
Fe	Iron	-	Balance
C	Carbon	-	0.05
P	Phosphorous	-	0.040
Si	Silicon	-	0.50
Ni	Nickel	7.50	9.50
Cu	Copper	1.50	2.50
Nb/ Ta	Columbium & Tantalum	0.10	0.50

Industry Standards

Industry Applications

- Drill bits
- Drivers
- Distractors
- Shafts
- Surgical instruments for orthopedic, spinal, and dental markets

Physical Properties

Property	Value
Density	7.76 g/cm ³
Density Imperial	0.280 lb/in ³

Mechanical Properties

Properties	Metric	Imperial
Tensile Strength	1413 MPa	204900 psi
Yield Strength	1345 MPa	195100 psi
Modulus of Elasticity	200 GPa	29000 ksi
Poisson's Ratio	0.3	0.3
Elongation at Break	14%	14%
Brinell Hardness	411	411
Knoop Hardness, Rockwell C	450	450
Vickers Hardness, Rockwell C	430	430
Hardness, Rockwell C	44	44