

Custom 465® is a premium melted, martensitic, age-hardenable stainless steel alloy. This material was designed with improved tensile strength, fracture toughness, improved fabricability, and excellent resistance to stress corrosion cracking. It has been used in the medical industry, oil and gas drilling, aerospace components, marine equipment, firearms and hand tools.

Products & Sizes

Bar

0.125" - 1.250"

Custom 465® Chemical Composition

	Element	Min	Max
Mn	Manganese	-	0.50
S	Sulfur	-	0.030
Cr	Chromium	11.00	12.50
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

- Surgical instruments for orthopedic, spinal, & dental markets
- Drill bits
- Drivers
- Distractors
- Shafts
- Aerospace
- Oil and gas
- Sports equipment

Related Industries


 Defense


 Medical


 Oil & Gas


 Space

Physical Properties

Physical Properties of Custom 465	
Density Condition	g/cm ³
Annealed/CT	7.81
H900	7.82
H950	7.83
H1000	7.84
H1050	7.86
H1100	7.86

Mechanical Properties

Mechanical Properties of Custom 465	
Property	Value
Condition	H950
Yield Strength, MPa (ksi)	1648 (239)
Ultimate Tensile Strength, MPa (ksi)	1751 (254)
Elongation	14%
Reduction in Area	63%
Fracture Toughness	98 (89)
Charpy V-Notch Energy, J (ft-lb)	27 (20)