

1.4005 416

X12CrS13	%C	%Si	%Mn	%P	%S	%Cr	%Cu	%Mo	%Nb	%Ni
	0.06	-	-	-	0.15	12.00	-	-	-	-
	0.15	1.00	≤1.50	0.040	0.35	14.00	-	0.60	-	-

STEEL PROPERTIES

1.4005 416 also known as a martensitic free-machining stainless steel. It is known for its good machinability and moderate corrosion resistance.

EQUIVALENT GRADES

EN 10088-3	1.4005	X12CrS13
AFNOR	Z11CF13	
JIS	416	
AISI	416	
BS	416S21	

APPLICATIONS

Commonly used in applications where good machinability and moderate corrosion resistance are required, such as in the manufacturing of bolts, nuts, and studs.

HEAT TREATMENT

1.4005 416 is supplied in annealed +A & +QT Conditions.

Mechanical Values for 1.4005 416 at room temperature in EN 10088-3: 2014 in conditions 1C,1E,1D,1X,1G & 2D

Diameter (mm)	Heat Treatment Condition	Hardness HB max.	0.2% Proof strength min.	Tensile Strength R _m Mpa	Elongation after fracture A % Min.		Impact Energy (ISO-V) KV J Min.	
					(long)	(tr.)	(long)	(tr.)
-	+A	220	-	MAX 730	-	-	-	-
160	+QT650	-	450	650 to 850	12	-	-	-

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Mechanical Values for 1.4005 416 Bright Bars at room temperature in EN 10088-3:2014 in conditions 1C,1E,1D,1X,1G & 2D

Diameter (mm)	Annealed		Heat Treatment Condition	0.2% Proof strength min.	Tensile Strength Rm Mpa	A5 % Min Elongation		Impact Energy (ISO-V) KV J Min.	
	Rm Mpa Max	HB Max				(long)	(tr.)	(long)	(tr.)
=<10	880	280	+QT650	550	700 to 1000	8	-	-	-
10<t<=16	880	280	+QT650	500	700 to 1000	8	-	-	-
16<t<=40	800	250	+QT650	450	650 to 930	10	-	-	-
40<t<=63	760	230	+QT650	450	650 to 880	10	-	-	-
63<t<=160	730	220	+QT650	450	650 to 850	12	-	-	-

PRODUCTS OFFERED

- PEELED BARS
- BRIGHT BARS
- HEXAGONS
- SQUARES
- FLAT BARS
- WIRES