

## 1.4057 431

X17CrNi16-2	%C	%Si	%Mn	%P	%S	%Cr	%Cu	%Mo	%Nb	%Ni
	0.12	-	-	-	-	15.0	-	-	-	1.50
	0.22	1.00	≤1.50	0.040	≤0.030	17.0	-	-	-	2.50

### STEEL PROPERTIES

1.4057 431 belongs to stainless steel martensitic family. Can achieve high hardenability along with good corrosion resistance. This grade is normally used in the quenched and tempered condition. This grade is normally used where you need higher corrosion resistance and higher toughness compared to 12% chromium grades.

### EQUIVALENT GRADES

EN 10088-3	1.4057	X17CrNi16-2
AFNOR	Z15CN16-02	
JIS/AISI	431	
BS	431S29	

### APPLICATIONS

1.4057 431 is typically used in the automotive industry, shafts for wind turbines, shafts for valves, shafts for pumps, in hydraulic and pneumatic shaft and shafts for e-mobility.

### HEAT TREATMENT

1.4057 431 is supplied in annealed +A and quenched tempered +QT conditions.

### Mechanical Values for 1.4057 431 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 <sub>m</sub> Mpa	Elongation after fracture A % Min.		Impact Energy (ISO-V) KV J Min.	
					(long)	(tr.)	(long)	(tr.)
-	+A	295	-	Max 950	-	-	-	-
≤60	+QT 800	-	600	800 to 950	14	-	25	-
60 <t≤ 160	+QT 800	-	600	800 to 950	12	-	20	-
≤60	+QT 900	-	700	900 to 1050	12	-	20	-
60 <t≤ 160	+QT 900	-	700	900 to 1050	10	-	15	-

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**Mechanical Values for 1.4057 431 Bright Bars at room temperature in EN 10088-3: 2014 in conditions 2H, 2B, 2G, 2P**

Diameter (mm)	Annealed		Heat Treatment Condition	0.2% Proof strength min.	Tensile Strength R <sub>m</sub> Mpa	A5 % Min Elongation		Impact Energy (ISO-V) KV J Min.	
	R <sub>m</sub> Mpa Max	HB Max				(long)	(tr.)	(long)	(tr.)
≤10	1050	330	+QT 800	750	850 to 1100	7	-	-	-
10 <t ≤ 16	1050	330	+QT 800	700	850 to 1100	7	-	-	-
16 <t ≤ 40	1000	310	+QT 800	650	800 to 1050	9	-	25	-
40 <t ≤ 63	950	295	+QT 800	650	800 to 1000	12	-	25	-
63 <t ≤ 160	950	295	+QT 800	650	800 to 950	12	-	20	-

## PRODUCTS OFFERED

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