Quality	**X6Cr17** AISI 430	**Ferritic**
According to standards	**EN 10088-3: 2005**	
Number	**1.4016**	

Lucefin Group

Chemical composition

C%	**Si%**	**Mn%**	**P%**	**S%**	**Cr%**	
max	max	max	max	max		Permissible
0,08	1,00	1,00	0,040	0,030	16,0-18,0	deviations on the
± 0.01	+ 0.05	+ 0.03	+ 0.005	± 0.005	± 0.20	**product**

Temperature in °C

Melting range	**Hot forming**	**Normalizing**	**Quenching**	**Recrystallization annealing**	**Welding**	
					preheating	stress relieving
1460-1490	1100-950	--	--	750-850 air (HB max 200)	not demanded	slow cooling

Mechanical properties

Hot rolled EN 10088-3: 2005 +A annealing

size mm		Testing at room temperature (longitudinal)			
		R	**Rp** 0.2	**A**%	**HB** [a]
over	to	N/mm²	N/mm² min	min L	max
	100	400-630	240	20	200

[a] for information only

Mechanical properties on annealed material, obtained at **different temperatures** only for guidance

Test temperature **°C**	**R** N/mm²	**Rp** 0.2 N/mm²	**A** %	**Z** %
+ 20	455	266	37	73
0	483	280	37	72
- 40	532	287	36	72
- 60	567	308	36	70
- 190	630	609	0	4

Cold drawn +C ASTM A 276-04 condition +A

size mm		Testing at room temperature (longitudinal)			
		R	**Rp** 0.2	**A**%	**C**%
		N/mm² min	N/mm² min	min L	min L
	all	415	207	20	45

Cold processed bright bars EN 10088-3: 2005 in conditions 2H, 2B, 2G, 2P Table 13

size mm		Testing at room temperature (longitudinal)			
		R	**Rp** 0.2	**A**%	**Kv** +20 °C
over	to	N/mm²	N/mm² min	min L	--
	10 [b]	500-750	320	8	--
10	16	480-750	300	8	--
16	40	400-700	240	15	--
40	63	400-700	240	15	--
63	100	400-630	240	20	--

[b] In the range 1 mm ≤ d < 5 mm valid only for rounds – the mechanical properties of non round bars with thicknesses < 5 mm have to be agreed at the time of enquiry and order.

Work-hardness by **Cold drawing**

R	N/mm²	500	590	650	700	780	840	920	940
Rp 0.2	N/mm²	260	420	520	620	670	720	760	800
A	%	32	25	22	20	18	16	15	14
C	%	58	48	39	34	32	30	28	26
Reduction	%	**0**	**10**	**20**	**30**	**40**	**50**	**60**	**70**

Min. val. for the 0.2% proof strength at high temperature EN 10088-3: 2005 EN 10250-4: 2001

Rp 0.2	N/mm²	--	220	215	210	205	200	195	190	+A	Hot rolled & Forged
Testing at	**°C**	**50**	**100**	**150**	**200**	**250**	**300**	**350**	**400**		

Forged EN 10250-4: 2001 +A annealing

Testing at room temperature (longitudinal)

size d / *t*		**R**	**Rp** 0.2	**A**%	**A**%	**Kv** +20 °C	**Kv** +20 °C
over	to	N/mm²	N/mm² min	min L	J min L	J min L	J min T
	150/*100*	400-630	240	--	--	--	--

d = diameter *t* = *thickness*

X6Cr 17 AISI 430 *Lucefin Group*

Thermal expansion	[m/(m•K)] •10^{-6}	--	10.0	10.0	10.5	10.5	11.0		
Modulus of elasticity	longitudinal N/mm^2	220000	218000	212000	205000	197000	--		
Modulus of elasticity	tangential N/mm^2	98000	97000	95000	92000	88000	--		
Specific electric resistivity	Ohm•mm^2/m	0.60	--	0.75	--	0.93	--	1.11	1.25
Conductivity	Siemens•m/mm^2	1.67	--	--	--	--	--		
Specific heat capacity	J/(Kg•K)	460	--	495	--	570	--	660	760
Mean coefficient of linear expansion	10^{-6}/°K	--	--	10.6	--	11.4	--	12.0	12.6
Testing at **°C**		**20**	**100**	**200**	**300**	**400**	**500**	**600**	**800**

Density Kg/dm^3	**Thermal conductivity** W/(m•K)					**Magnetic permeability**	**Resistence to intergranular corrosion** in the	
	20 °C	**200** °C	**400** °C	**600** °C	**800** °C	μ_r	delivery condition	welded condition
7.75	25.0	23.4	24.1	25.1	26.9	600-1100	yes	no

EUROPE EN	**ITALY** UNI	**CHINA**	**GERMANY** DIN	**FRANCE** AFNOR	**U.K.** B.S.	**RUSSIA**	**USA** AISI
X6Cr17	X8Cr17	1Cr17	X6Cr17	Z8C17	430S17	08H17	430