Data sheet

DIN EN 10088-3

Grade AISI 430 / EN 1.4016

The material 1.4016 / AISI 430 is a magnetisable ferritic stainless steel that is suitable for forging and cold forming. Due to its high chromium content of 16-18 %, this stainless steel grade is more corrosion resistant (especially against stress corrosion cracking) than a comparable material with a lower chromium content. Please note that the material 1.4016 / AISI 430 can only be used for welding to a limited extent. The processing possibilities include cold upsetting and bending.

Chemical composition (% by mass according to DIN EN 10088-3 for 1.4016)

C	Si	Mn	P	S	N	Cr	Cu	Mo	Ni	Ti	Other
≤ 0,08	≤ 1,00	≤ 0,04	≤ 0,04	≤ 0,03	-	16,0 – 18,0	-	-	-	-	-

Specifications

EN material number	1.4016
EN short name	X6Cr17
EN standard	10088
AISI	430*
BS	430S17
JIS	SUS430
Microstructure class	ferrite

Physical properties

Magnetizability: present

Density (kg/dm³): 7.7

Thermal conductivity (at up to 20°C): 25

Electronic resistance at room temperature (in Ω mm²/m): 0.60

Possible areas of application

Automotive industry
Construction industry
Household appliances
Interior design
Food industry
Mechanical engineering
and more

Mechanical properties at room temperature in annealed condition (according to EN 10088-3 for EN 1.4016)

Ø	Hardness	Yield strength		Tensile strength	Elongation
in mm	in HB	$R_{p0,2}$ in Mpa	$R_{p1,0}$ in Mpa	R_m in Mpa	A in%
≤ 100	≤ 200	≤ 240	-	400-630	20
-	-	-	-	-	-

Yield strength at elevated temperature in annealed condition (according to EN 10088-3 for EN 1.4016)

Temperature in °C	100	150	200	250	300	350	400	450	500	550
$R_{p0,2}$ in Mpa	220	215	210	205	200	195	190	-	-	-
$R_{p1,0}$ in Mpa	-	-	-	-	-	-	-	-	-	-

(* in accordance with)

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Heat treatment and hot forming

Hot forging	800-1100 °C
Soft annealing	750-850 °C

Welding

The material 1.4016 / AISI 430 has medium weldability. It is suitable for TIG welding and laser beam welding, but cannot be used for arc welding.

If you have further questions about this or any other product, please contact our team at +49 2263-9240-0 or email agst@agst.de

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