

The material AISI 316Ti / EN 1.4571 is a titanium-stabilized, stainless austenitic steel, which has a very good corrosion resistance. This stainless steel grade has low magnetisation, excellent welding properties and is suitable for cold forming. The material AISI 316Ti / EN 1.4571 can be used at temperatures up to 550 °C.

The processing possibilities include cold upsetting and polishing.

Chemical composition (% by mass according to DIN EN 10088-3 for EN 1.4571)

C	Si	Mn	P	S	N	Cr	Cu	Mo	Ni	Ti	Other
≤ 0,08	≤ 1,00	≤ 2,00	≤ 0,045	≤ 0,03	-	16,5 – 18,5	-	2,00 – 2,50	10,5 – 13,5	5 x C – 0,70	-

Specification

EN-grade	1.4571
EN-short name	X6CrNiMoTi17-12-2
EN-standard	10088-3/10270-3
AISI	316 Ti *
B.S.	320S18, 320S31 *
JIS	SUS316Ti *
Microstructure	austenite

Physical properties

Magnetizability:	low
Density(kg/dm ³)	8,0
Thermal conductivity (up to 20°C)	15
Electronic resistance at room temperature (in Ω mm ² /m)	0,75

Possible fields of application

automotive industry
 construction industry
 pressure vessel construction
 food industry
 petrochemistry
 shipbuilding
 and more

Mechanical properties at room temperature in solution annealed condition (according to EN 10088-3 for EN 1.4571)

Ø in mm	Hardness in HB	Yield strength		Tensile strength R _m in Mpa	Elongation A in%
		R _{p0,2} in Mpa	R _{p1,0} in Mpa		
≤ 160	≤ 215	≥ 200	≥ 235	500-700	40
160 < d ≤ 250	≤ 215	≥ 200	≥ 235	500-700	-

Yield strength at elevated temperature in solution annealed condition (according to EN 10088-3 for EN 1.4571)

Temperature in °C	100	150	200	250	300	350	400	450	500	550
R _{p0,2} in Mpa	185	175	165	155	145	140	135	131	129	127
R _{p1,0} in Mpa	215	205	192	183	175	169	164	160	158	157

(* in accordance with)

Heat treatment and hot forming

Solution heat treatment
(cooling by air or water) 1020-1120 °C

Hot forming
(cooling by air) 1200-900 °C

Welding

The material AISI 316Ti / EN 1.4571 can be used for all common welding processes (with the exception of gas welding) and without welding additives. Subsequent heat treatment is normally not necessary.

The resistance to intergranular corrosion is not affected by 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

Please note:

The information given in this data sheet has been compiled to the best of our knowledge and is based on the current version of the relevant standard.

It is considered for reference only and we assume no liability for any errors.