

Product information: Special materials



Standard and special parts according to drawings can be delivered for the different cases of application in all necessary special materials - in every amount required.

The table shows some examples of frequently requested special materials, roughly ordered according to application area:

Material group Particular properties/areas of application	Material no.	(AISI)	Material designation (previous)	Standard/ Material data sheet	
Stainless steels – ¹⁾ a) ferritic (F) and martensitic (C) Greater mechanical properties with less corrosion-resistance	F1	1.4016	X6Cr17 (X8Cr17)	EN 10088 (DIN 17440)	
	C 1	1.4006 (410)	X10Cr13	ISO 3506 (DIN 267-11)	
	C 1	1.4021 (420)	X20Cr13		
	C 3	1.4057 (431)	X20CrNi172 (X20CrNi17)		
	C 4	1.4104 (430 F)	X12CrMoS17		
		1.4034 (420)	X46Cr13 (X40Cr13)		
b) austenitic (A)	A3	1.4541* (321)	X6CrNiTi1810	EN 10088 (DIN 17440)	
Increased corrosion resistance, rust and acid-resistant, tough at sub-zero temperatures	A4	1.4436 (319)	X5CrNiMo17133 (X5CrNiMo1812)	ISO 3506 (DIN 267-11) * DIN 267-13	
	A 5	1.4571* (316 Ti)	X6CrNiMoTi1722		
	A4	1.4580 (316 Cb)	X6CrNiMoNb17122 (X10CrNiMoNb1810)	** SEW 400	
		1.4310** (301)	X12CrNi177		
Rust and acid-resistant steel For particular corrosion media e.g. for use in indoor swimming pools	Uranus B 6	1.4539	X1NiCrMoCu 25 20 5	ISO 3506-1, E1 (especially resistant against chloride-induced stress corrosion)	
	Austenitic	1.4439	X2CrNiMoN 17 13 5		
	Austenitic	1.4529	X1NiCrMoCuN 25 20 7		
	Austenitic/ferritic	1.4462	X2CrNiMoN 22 5 3		
Steels tough at sub-zero temperatures Increasing strength and stretch limit behaviour and high toughness at temperatures as low as –195 °C (SEW)/–253 °C (AD)	Marking: KA	1.7219	26 CrMo4	DIN 267 - 13 SEW 680/70	
	Marking: KB	1.5680	12 Ni 19		
	Marking: KC	1.6900	X12CrNi189		
	Marking: KD	1.6903	X10CrNiTi1810		
	A2	1.4301 (304)	X5CrNi1810	ISO 3506 (DIN 267-11) DIN 267 - 13 EN 10088 (DIN 17440) ADW 2 / ADW 10	
	A2	1.4303 (305)	X5CrNi1812		
	A3	1.4541 (321)	X6CrNiTi1810		
	A4	1.4401 (316)	X5CrNiMo17122		
	A5	1.4571 (316 Ti)	X6CrNiMoTi17122		
	Highly heat-resisting and heat-resistant steels Good temperature-resistance with medium to lower mechanical properties	Alongside materials listed in DIN 267-13, Table 7, the following, among others, are available:			
Nimonic 80 A		2.4631/2.4952	NiCr20TiAl	EN 10269 (DIN 17240, DIN 17480 DIN 17225)	
Nimonic 90		2.4632/2.4969	NiCr20Co18Ti		
Nimonic 105		2.4634	NiCo20Cr15MoAlTi		
(Sicromal 8)		1.4713	X10CrAl7	SEW 470/76	
		1.4724	X10CrAl13		
(Sicromal 10)		1.4742	X10CrAl18		
(Sicromal 12)		1.4762	X10CrAl24		
		1.4821	X20CrNiSi254		
		1.4828 (309)	X15CrNiSi2012		
		1.4841 (310)	X15CrNiSi2520		
		1.4845 (310 S)	X12CrNi2521		
		1.4864 (330)	X12NiCrSi3616		
Non-magnetisable steels – ¹⁾ Mechanical properties (tensile strength, stretch limit, toughness) are dependent on the processing state - e.g. quenched, hot/cold-shaped, fully hardened		Amanox 182M9	1.3805	X35Mn18	SEW 390/61
			1.3813	X40MnCrN19	
	1.3817		X40MnCr18		
	1.3819		X50MnCrV2014		
	1.3952		X4CrNiMoN1814		
	1.3960		X45MnNiCrV1376		
	1.3965 (202)		X8CrMnNi188		
	1.3967		X50CrMnNi229		
Nickel, nickel alloys High corrosion resistance, saltwater-proof, very high to highest resistance against aggressive chemical agents, higher oxidation resistance, high to optimum mechanical properties and fatigue strength - also at higher temperatures	Nickel 99.6	2.4060	Ni 99.6	EN 10088 (DIN 17740)	
	Nickel 99.2	2.4066	Ni 99.2		
	Nickel 99	2.4068	LC-Ni 99		
	Hastelloy B	2.4617	NiMo28	DIN 17744	
	Hastelloy C	2.4610	NiMo16Cr16Ti		
	Monel 400/Silverin	2.4360*	NiCu30Fe	DIN 17743 * ASTM B 164 Class A	
	K-Monel/Silverin Al	2.4375	NiCu30Al		
	Inconel 600/625	2.4816/2.4856	NiCr15Fe	DIN 17742 DIN 17744 * EN 10269 (DIN 17240) * DIN 267-13	
	Nicrofer 7216				
	Inconel X 750/ Nimonic 80 A	2.4952*	NiCr15Ti7Al/NiCr20TiAl		
Incolloy 825/ Nicrofer 4221	2.4858	NiCr21Mo			
Titanium, titanium alloys Low specific weight, high corrosion resistance, salt-water proof, anti-magnetic	Titanium 992 (Grade 4)	3.7065	Ti 99.2	DIN 17850 DIN 17860 DIN 17862 DIN 17863 DIN 17864 * ISO 8839 (DIN 267-18)	
	Titanium 993 (Grade 3)	3.7055	Ti 99.3		
	Titanium 994 (Grade 2)	3.7035	Ti 99.4		
	Titanium 995 (Grade 1)	3.7025*	Ti 99.5		
	Ti 1				
	Titanium Al 6V4	3.7164	TiAl6V4	DIN 17851 WL sheets * ISO 8839 (DIN 267-18)	
Titanium Grade 5/Ti 2	3.7165*	TiAl6V4			

1) further austenitic materials, see "Parts made from stainless steels" → TI-162