

1.4521

	%C	%Si	%Mn	%p	%S	%N	%Cr	%MO	%Ti
X2CrMoTiNb18-2	-	-	-	-	-	-	17.0	1.80	(4X(C+N))+0.15
	≤0.025	≤1.00	≤1.00	≤0.040	≤0.015	≤0.030	20.0	2.50	0.80

STEEL PROPERTIES

Bolts, nuts, hot water tanks, chimney ducts, and heat exchangers are all made of 1.4521 steel. Underwater applications are possible if the concentration of Cl-chlorides does not exceed 200 ppm. The limit is reduced for hot water or more conservative design requirements. According to ISO, the steel is classified as welding group 7.1. Weldability is excellent for small cross-sections but is limited for larger ones. Heating is recommended prior to welding.

EQUIVALENT GRADES

EN 10088-3	1.4521	X2CrMoTiNb18-2
AISI	444	
AFNOR	Z3CDT18-02	
BS	X2CrMoTi18-2	
JIS	SUS444TP	
UNS	S44400	

APPLICATIONS

1.4521 is used in Food Industry, Heat Exchangers and Hot Water Appliances, Solar Panels, Kitchenware, Decoration & Architecture etc.

HEAT TREATMENT

+A: Annealed (full/soft/spheroidizing)

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Mechanical properties at room temperature for 1.4521 as per EN 10088-1 in the usual delivery condition

Flat products with thickness <i>a</i>	Heat Treatment Condition	Hardness HB max.	0.2% Proof strength MPa. min.	Tensile Strength R _m MPa.	A % Min. Long Products
50	+A	200	200	450 to 650	18

Physical properties of 1.4521 as per EN 10088-1

Density Kg/dm ³	Linear Expansion Coefficient 10 ⁻⁶ k ⁻¹ Between 20°C and (°C)					Thermal conductivity W/(m.K)		Specific Heat capacity kJ(kg.K)	Electrical resistivity Ωmm ² /m At 20°C	Magnetizability
	200°C	400°C	500°C	100°C	300°C	20°C	500°C			
7.7	10.8	11.6	11.9	10.4	11.2	23	-	0.43	0.80	YES