

S31254 • 1.4547 • TPS-INOX 4547-254

UNS S31254 is an austenitic grade in which the additions of chromium, molybdenum and nitrogen give high resistance to pitting in sea water. This alloy has a mean Pitting Resistance Equivalent Number (PREN' = Cr+3.3Mo+16N) of 43.8. Tests indicate high resistance to crevice-corrosion attack in seawater and to stress corrosion cracking in hot concentrated sodium chloride. Compared with CrNiMo 17 12 2.5 steels, it shows superior corrosion resistance in many acids at similar concentrations and its yield strength is approximately 50% higher. Good weldability using Ni-Cr-Mo consumables. Quench annealing and short periods within the 600-1000°C range avoids the possible development of deleterious sigma phase, which may embrittle and impair corrosion resistance.

Material grade	Norm	Chemical composition • mass in %									
		C	Si	Mn	P	S	Cr	Ni	Mo	Ti	Sonst.
		max.	max.	max.	max.	max.	min. – max.	min. – max.	min. – max.		
1.4547	EN 10216-5	0,020	0,70	1,00	0,030	0,010	19,50 - 20,5 0	17,50 - 18,5 0	6,00 - 7,00	-	N 0,18-0,25; Cu 0,50-1,0 0
TP347	ASME SA / AS TM A 213	0,020	0,80	1,00	0,030	0,010	19,50 - 20,5 0	17,50 - 18,5 0	6,00 - 6,50	-	N 0,18-0,22; Cu 0,50-1,0 0

Material grade	Norm	Mechanical properties and heat treatment					
		Rp 0,2 [MPa]	Rp 1,0 [MPa]	Rm [MPa]	A [%]	Härte	Wärmebehandlung
		min.	min.	min. – max.	min	HRB max.	
1.4547	EN 10216-5	205	240	510 - 740	35	-	lösungsgeglüht
TP347	ASME SA / AS TM A 213	310	-	675	35	96	lösungsgeglüht

Tolerances				
AD - Rohr	AD	WD	special WT	ID
ab Ø4,550 mm	±0,050 mm	±0,150 mm	±0,100 mm	X
ab Ø9,530 mm	±0,050 mm	±0,100 mm	±0,080 mm	±0,050 mm
ab Ø30,001 mm***	±0,100 mm	±0,150 mm		±0,050 mm

*** to max. ø44,500 mm

- Tolerances acc. to DIN EN 10305-1 can be confirmed to OD 30mm
- Tolerances acc. to DIN EN ISO 1127 / DIN EN 10216-5 can be confirmed
- Tolerances acc. to ASTM can be confirmed generally

Abmessungsbereich*

Abmessungsspektrum

	WD	[mm]	0,89	1,00	1,20	1,24	1,65	1,82	2,00	2,11	2,30	2,35	2,50	2,60	2,64	2,77	2,87	3,00	3,20	3,25	3,60	3,85	3,91	4,00	4,40	5,50	6,35	7,00
AD	[inch]	0,035			0,048	0,065	0,072		0,083		0,093			0,104	0,109	0,113		0,126	0,128			0,154					0,250	
[mm]	[inch]																											
6,00																												
6,35	0,250																											
7,00																												
7,50																												
8,00																												
9,00																												
9,53	0,375																											
10,00																												
11,00																												
12,70	0,500																											
13,00																												
15,00																												
15,88	0,625																											
16,00																												
16,80																												
17,15	0,675																											
18,00																												
19,00																												
19,05	0,750																											
20,00																												
21,34	0,840																											
22,00																												
22,23	0,875																											
23,00																												
25,00																												
25,40	1,000																											
26,00																												
26,67	1,050																											
28,00																												
30,00																												
31,75	1,250																											
32,00																												
33,40	1,315																											
36,00																												
38,10	1,500																											
42,00																												
44,50	1,750																											

