

# ALLOY 1.4547

# UNS S31254

# 6MO / F44

The 6Mo super austenitic steel combines moderate tensile strength and high ductility with excellent corrosion resistance in seawater and variety of industrial environment. Typically the alloy has PREN of 42 – 44, which ensure that the resistance to pitting corrosion is high and it also has a high resistance to crevice corrosion.

# ALLOY 1.4547 / UNS S31254 / 6MO / F44

**Approvals:** NACE MR0175, NORSOK M650, NORSOK M630 – MDS R11/ R13/ R14/ R15/ R17/ R18

**Product Standards:** EN 10272, EN 10088, ASTM A276, ASTM A240, ASTM A479, ASTM A182–11A  
(Chemical composition and mechanical properties only)

## APPLICATIONS

Typical applications for the 6Mo alloy are pumps, valves, chokes, pipework/flanges and manifolds in oil and gas industry. High resistance to general corrosion.

### Heat Treatment

Solution annealing at min 1150°C followed by water quenching.

### Weldability

Very good.

$PREN = (Cr\% + 3.3Mo\% + 16N\%) \geq 40$

## CHEMICAL COMPOSITION

Weight %	C	Si	Mn	S	P	Cr	Ni	Mo	N	Cu
Min.						19,50	17,50	6,00	0,18	0,50
Max.	0,020	0,80	1,00	0,010	0,030	20,50	18,50	6,50	0,25	1,00

## MECHANICAL PROPERTIES

	Yield strength Rp0.2, MPa	Tensile strength Rm, MPa	Elongation [%]	Hardness [HB]	Impact, Charpy-V, -46°C [J]	Pre
All products	≥ 310	655 - 850	≥ 35	≤ 310	≥ 45	≥ 40

## PLATE

1 x 1250 x 2500 mm	6 x 2000 x 6000 mm	15 x 2000 x 6000 mm	30 x 2000 x 6000 mm
1,5 x 1500 x 3000 mm	8 x 1500 x 3000 mm	16 x 2000 x 6000 mm	30 x 1500 x 6000 mm
2 x 1500 x 3000 mm	8 x 1500 x 6000 mm	18 x 2000 x 6000 mm	30 x 2000 x 6000 mm
3 x 1500 x 3000 mm	8 x 2000 x 6000 mm	20 x 1500 x 3000 mm	32 x 2000 x 3000 mm
3 x 1500 x 6000 mm	10 x 1500 x 3000 mm	20 x 1500 x 6000 mm	35 x 2000 x 6000 mm
3 x 2000 x 6000 mm	10 x 1500 x 6000 mm	20 x 2000 x 6000 mm	36 x 2000 x 3000 mm
4 x 1500 x 3000 mm	10 x 2000 x 6000 mm	22 x 2000 x 6000 mm	40 x 1500 x 3000 mm
4 x 1500 x 6000 mm	12 x 1500 x 3000 mm	24 x 2000 x 6000 mm	40 x 1500 x 6000 mm
4 x 2000 x 6000 mm	12 x 1500 x 6000 mm	25 x 1500 x 3000 mm	40 x 2000 x 6000 mm
5 x 1500 x 3000 mm	12 x 2000 x 6000 mm	25 x 1500 x 6000 mm	50 x 1500 x 3000 mm
5 x 1500 x 6000 mm	15 x 1500 x 3000 mm	25 x 2000 x 6000 mm	50 x 1500 x 6000 mm
5 x 2000 x 6000 mm	15 x 1500 x 6000 mm	28 x 2000 x 6000 mm	50 x 2000 x 6000 mm
6 x 1500 x 3000 mm	15 x 2000 x 6000 mm	30 x 1500 x 3000 mm	
6 x 1500 x 6000 mm	15 x 1500 x 6000 mm	30 x 1500 x 6000 mm	

## COIL

1300 mm	1500 mm	2000 mm
0,5 mm	1,5 mm	3 mm
0,6 mm	2 mm	4 mm
0,7 mm	3 mm	5 mm
0,8 mm	4 mm	6 mm
1 mm	5 mm	
	6 mm	

## ROUND BAR

DIA	DIA	DIA	DIA
10 mm	60 mm	130 mm	250 mm
12 mm	65 mm	140 mm	270 mm
16 mm	70 mm	150 mm	280 mm
20 mm	75 mm	160 mm	300 mm
25 mm	80 mm	170 mm	325 mm
30 mm	90 mm	180 mm	350 mm
32 mm	100 mm	200 mm	380 mm
35 mm	110 mm	210 mm	400 mm
40 mm	115 mm	220 mm	
50 mm	120 mm	230 mm	

## PIPE

DIM	DIM	DIM	DIM
1/2" S40s 21,3 x 2,77 mm		3" S10s 88,9 x 3,05 mm	
3/4" S40s 26,7 x 2,87 mm		3" S40s 88,9 x 5,49 mm	
1" S10s 33,4 x 2,77 mm		4" S10s 114,3 x 3,05 mm	
1" S40s 33,4 x 3,38 mm		4" S40s 114,3 x 6,02 mm	
1 1/4" S10s 42,2 x 2,77 mm		6" S10s 168,3 x 3,40 mm	
1 1/2" S10s 48,3 x 2,77 mm		6" S40s 168,3 x 7,11 mm	
1 1/2" S40s 48,3 x 3,68 mm		8" S10s 219,1 x 3,76 mm	
2" S10s 60,3 x 2,77 mm		10" S10s 273 x 4,19 mm	
2" S40s 60,3 x 3,91 mm		12" S10s 323,8 x 4,57 mm	
2 1/2" S10s 73 x 3,05 mm		14" S20 355,6 x 6,35 mm	