

Joining of Similar Materials

Parent metal ASTM/UNS/ Common name	EN	Sandvik	Welding consumable	
			Normal choice ^a	Over-alloyed choice ^a
304L ^b	1.4306 ^b	3R12 ^b	19.9.L (19.9.Nb)	19.12.3.L (19.12.3.Nb)
321 / 347 ^b	1.4541 / 1.4550 ^b	6R35 / 8R40 ^b	19.9.Nb (19.9.L)	19.12.3.Nb (19.12.3.L)
316L ^b	1.4435 ^b	3R60 ^b	19.12.3.L (19.12.3.Nb)	25.22.2.LMn
"316Ti" ^{b,c} / 318 ^b	1.4571 ^b / –	5R75 ^b / –	19.12.3.Nb (19.12.3.L)	(20.25.5.LCu)
317L	1.4438	3R64	19.13.4.L	20.25.5.LCu
310	.4845 ^b	7RE10 ^b	25.20.C	–
S30815	1.4835	253MA / 309HT ^c	22.12.HT	–
S35315	1.4854	353MA	28.34.HT	–
"310L" ^c	1.4335	2RE10	25.20.L	(25.22.2.LMn)
S31050	1.4466	2RE69	25.22.2.LMn	–
S31500	1.4417	3RE60	22.8.3.L	–
LDX2101	1.4162	–	22.8.3.L	25.10.4.L
S31803	1.4462	SAF 2205	22.8.3.L	25.10.4.L
S32304	1.4362	SAF 2304	22.8.3.L	–
S32750	1.4410	SAF 2507	25.10.4.L ^d	–
S32906	–	SAF 2906	29.8.2.L	–
N08028	1.4563	Sanicro 28	27.31.4.LCu	–
N08904	1.4539	2RK65	20.25.5.LCu	27.31.4.LCu
S31254	1.4547	254 SMO	Sanicro 60	–
Alloy 600	–	Sanicro 70	Sanicro 72HP	–
Alloy 625	–	–	Sanicro 60	–
Alloy 800	1.4876	Sanicro 31HT	Sanicro 72HP	–
Alloy 825	–	Sanicro 41	7.31.4.LCu	–

a Alternative selection within brackets.

b Also other grades with similar chemical compositions (minor variations mainly the C and/or N contents).

Stabilising element, if any, can be either Ti or Nb.

c Not standard designation. For information only.

d 25.10.4.L can also be used for the welding of other similar superduplex steels as well as for a group of 25% Cr duplex steels with PRE values between 37 and 40 – UNS S31803 / S32205 has PRE 35 and S32750 PRE >41.



Joining of Dissimilar Materials

Parent metal 1 ^a Type ASTM/UNS EN Sandvik	Parent metal 2 ^b ASTM/UNS/ Common name	Welding consumable EN
Carbon and low-alloyed steel	304L	1.4306
	321/347	1.4541/1.4550
	316L	1.4435
	"316Ti"/318	1.4571/–
	S30815	1.4835
	S35315	1.4854
	LDX2101	1.4162
	S31803	1.4462
	S32304	1.4362
	S32750	1.4410
	S32906	–
	N08028	1.4563
	N08904	1.4539
	S31254	1.4547
	Alloy 600 ^c	–
	Alloy 600 ^c	–
18/8	321/347	1.4541/1.4550
304L	316L	1.4435
1.4306	"316Ti"/318	1.4571/–
3R12	S30815	1.4835
	S35315	1.4854
	S31803	1.4462
	S32304	1.4362
	S32750	1.4410
	S32906	–
	N08028	1.4563
	N08904	1.4539
	S31254	1.4547
	Alloy 600 ^c	–
	Alloy 600 ^c	–
18/8/Ti or Nb	316L	1.4435
321/347	"316Ti"/318	1.4571/–
1.4541/1.4550	S30815	1.4835
6R35/8R40	S35315	1.4854
	S31803	1.4462
	S32304	1.4362
	S32750	1.4410
	S32906	–
	N08028	1.4563
	N08904	1.4539
	S31254	1.4547
	Alloy 600 ^c	–
	Alloy 600 ^c	–
18/12/Mo	"316Ti"/318	1.4571/–
316L	S30815	1.4835
1.4435	S35315	1.4854
3R60	S31803	1.4462
	S32304	1.4362
	S32750	1.4410
	S32906	–
	N08028	1.4563
	N08904	1.4539
	S31254	1.4547
	Alloy 600 ^c	–
	Alloy 600 ^c	–

Parent metal 1 ^a Type ASTM/UNS EN Sandvik	Parent metal 2 ^b ASTM/UNS/ Common name	Welding consumable EN
18/12/Mo/Ti or Nb	S30815	1.4835
	S35315	1.4854
"316Ti"/318	S31803	1.4462
1.4571/–	S32304	1.4362
5R75	S32750	1.4410
	S32906	–
	N08028	1.4563
	N08904	1.4539
	S31254	1.4547
	Alloy 600 ^c	–
Duplex	S32750	1.4410
LDX2101	S32906	–
1.4162	N08028	1.4563
	N08904	1.4539
	S31254	1.4547
	Alloy 600 ^c	–
	Alloy 600 ^c	–
Duplex	S32750	1.4410
S31803	S32906	–
1.4462	N08028	1.4563
SAF 2205	N08904	1.4539
	S31254	1.4547
	Alloy 600 ^c	–
	Alloy 600 ^c	–
Duplex	S32750	1.4410
S32304	S32906	–
1.4362	N08028	1.4563
SAF 2304	N08904	1.4539
	S31254	1.4547
	Alloy 600 ^c	–
	Alloy 600 ^c	–
Superduplex	N08028	1.4563
S32750	N08904	1.4539
1.4410	S31254	1.4547
SAF 2507	Alloy 600 ^c	–
	Alloy 600 ^c	–
Superduplex	N08028	1.4563
S32906	N08904	1.4539
–	S31254	1.4547
	Alloy 600 ^c	–
SAF 2906	Alloy 600 ^c	–
	Alloy 600 ^c	–
20/25/5	N08028	1.4563
N08904	S31254	1.4547
1.4539	Alloy 600 ^c	–
2RK65	Alloy 600 ^c	–
	Alloy 600 ^c	–
20/18/6	N08028	1.4563
S31254	Alloy 600 ^c	–
1.4547	Alloy 600 ^c	–
254 SMO	Alloy 600 ^c	–
	Alloy 600 ^c	–
27/31/4	Alloy 600 ^c	–
N08028	Alloy 600 ^c	–
1.4563	Alloy 600 ^c	–
Sanicro 28	Alloy 600 ^c	–

a Each group of stainless steels is also valid for other grades with similar compositions.

b Also other steels with similar compositions.

c Represents a whole group of Ni/Cr and Ni/Cr/Mo alloys, such as Alloy 625, Alloy 800 and Alloy 825.