

# Outokumpu Stainless – Steel Grades

	Steel designations		Outokumpu steel names	Typical chemical composition, %						National steel designations for steel specifications similar to EN				Outokumpu Stainless products	Welding consumables	
	EN	ASTM		C	N	Cr	Ni	Mo	Others	JIS/Japan	GB/PR China	KS/Korea	GOST/Russia			
WET CORROSION AND GENERAL SERVICE	Ferritic	1.4016	430	4016	0.04	–	16,5	–	–	–	SUS 430	1Cr17	STS 430	12Ch17	P N B R	308L/MVR or 309L
		Mart.	1.4006	410	4006	0.15	0.04	12	–	–	–	SUS 410	1Cr12	STS 410	12Ch13	P B R
	1.4005		416	4005	0.10	0.04	13	–	–	S	SUS 416	Y1Cr13	STS 416	–	B R	739 S
	1.4021		420	4021	0.20	–	13	–	–	–	SUS 420J1	2Cr13	STS 420J1	20Ch13	H N B R	739 S
	1.4028		420	4028	0.30	–	12.5	–	–	–	SUS 420J2	3Cr13	STS 420J2	30Ch13	N R	739 S
	1.4418		–	248 SV	0.03	–	16	5	1	–	–	–	–	–	P B	248 SV
	Duplex	1.4162	S32101	LDX 2101®	0.03	0.22	21.5	1.5	0.3	5Mn	–	–	–	–	P H C R	2101 or 2205
		1.4362	S32304	SAF 2304®	0.02	0.10	23	4.8	0.3	–	–	–	–	–	P H C R	2205 or 2304
		1.4462	S32205*	2205	0.02	0.17	22	5.7	3.1	–	SUS 329J3L	00Cr22Ni5Mo3N	STS 329J3L	–	P H C N B R	2205
	1.4410	S32750	SAF 2507®	0.02	0.27	25	7	4	–	–	–	STS 329J4L	–	P C	2507/P100	
	Austenitic	1.4310	301	4310	0.10	–	17	7	–	–	SUS 301	1Cr17Ni7	STS 301	07Ch16N6	H C N B R	308L/MVR
		1.4318	301LN	4318	0.02	0.14	17.7	6.5	–	–	SUS 301L	–	STS 301L	–	H C	308L/MVR
		1.4372	201	4372	0.05	0.15	17	5	–	6.5Mn	SUS 201	1Cr17Mn6Ni5N	STS 201	–	H C N R	307 or 309L
		1.4301	304	4301	0.04	–	18.1	8.3	–	–	SUS 304	0Cr18Ni9	STS 304	08Ch18N10	P H C N B R	308L/MVR
		1.4307	304L	4307	0.02	–	18.1	8.3	–	–	SUS 304L	00Cr19Ni10	STS 304L	03Ch18N11	P H C N B R	308L/MVR
		1.4311	304LN	4311	0.02	0.14	18.5	10.5	–	–	SUS 304LN	00Cr18Ni10N	STS 304LN	–	P H C N B R	308L/MVR
		1.4541	321	4541	0.04	–	17.3	9.1	–	Ti	SUS 321	0Cr18Ni10Ti	STS 321	08Ch18N10T	P H C N B R	308L/MVR
		1.4550	347	4550	0.05	0.04	17.5	9.5	–	Nb	SUS 347	0Cr18Ni11Nb	STS 347	08Ch18N12B	P R	347/MVNB
		1.4305	303	4305	0.05	–	17.3	8.2	–	S	SUS 303	Y1Cr18Ni9	–	12Ch18N10E	P B R	308L/MVR
		1.4303	305	4303	0.04	–	17.7	12.5	–	–	SUS 305J1	1Cr18Ni12	STS 305	06Ch18N11	P H C N B R	308L/MVR
		1.4306	304L	4306	0.02	–	18.2	10.1	–	–	SUS 304L	00Cr19Ni10	STS 304L	03Ch18N11	P H C N B R	308L/MVR
		1.4567	S30430	4567	0.01	–	17.7	9.7	–	3Cu	SUS XM7	0Cr18Ni9Cu3	–	–	B R	308L/MVR
		1.4401	316	4401	0.04	–	17.2	10.2	2.1	–	SUS 316	0Cr17Ni12Mo2	STS 316	–	P H C N B R	316L/SKR
		1.4404	316L	4404	0.02	–	17.2	10.1	2.1	–	SUS 316L	00Cr17Ni14Mo2	STS 316L	03Ch17N14M2	P H C N B R	316L/SKR
		1.4436	316	4436	0.04	–	16.9	10.7	2.6	–	SUS 316	0Cr17Ni12Mo2	STS 316	–	P H C N B R	316L/SKR
		1.4432	316L	4432	0.02	–	16.9	10.7	2.6	–	SUS 316L	00Cr17Ni14Mo2	STS316L	03Ch17N14M3	P H C N B R	316L/SKR
		1.4406	316LN	4406	0.02	0.14	17.2	10.3	2.1	–	SUS 316LN	00Cr17Ni12Mo2N	STS 316LN	–	P H C N B R	316L/SKR
		1.4429	S31653	4429	0.02	0.14	17.3	12.5	2.6	–	SUS 316LN	00Cr17Ni13Mo2N	STS 316LN	–	P C R	316L/SKR
		1.4571	316Ti	4571	0.04	–	16.8	10.9	2.1	Ti	SUS 316Ti	0Cr18Ni12Mo2Ti	STS 316Ti	08Ch17N13M2T	P H C N B R	316L/SKR
		1.4435	316L	4435	0.02	–	17.3	12.6	2.6	–	SUS 316L	00Cr17Ni14Mo2	STS 316L	03Ch17N14M3	P H C N B R	316L/SKR
	1.4438	317L	4438	0.02	–	18.2	13.7	3.1	–	SUS 317L	00Cr19Ni13Mo3	STS 317L	–	P H C N B R	317L/SNR	
	1.4439	317LMN	4439	0.02	0.14	17.8	12.7	4.1	–	–	–	–	–	P H C	SLR-NF	
	1.4539	904L	904L	0.01	–	20	25	4.3	1.5Cu	–	–	STS 317J5L	–	P H C N B R	904L or P12	
1.4547	S31254	254 SMO®	0.01	0.20	20	18	6.1	Cu	–	–	–	–	P H C N B R	P12 or P16		
1.4565	S34565	4565	0.02	0.45	24	17	4.5	5.5Mn	–	–	–	–	P	P16		
HEAT AND CREEP	Austenitic	1.4948	304H	4948	0.05	–	18.1	8.3	–	–	SUS 304	1Cr18Ni9	STS 304	08Ch18N10	P H C B R	308/308H
		1.4878	321	4878	0.05	–	17.3	9.1	–	Ti	SUS 321	1Cr18Ni9Ti	STS 321	08Ch18N10T	P H C N B R	347/MVNB
		1.4818	S30415	153MA™	0.05	0.15	18.5	9.5	–	1.3Si, Ce	–	–	–	–	P C N B R	253 MA
		1.4833	309S	4833	0.06	–	22.3	12.6	–	–	SUS 309	0Cr23Ni13	STS 309S	20Ch23N13	P H C N B R	309
		1.4828	–	4828	0.04	–	20	12	–	2Si	SUH 309	1Cr20Ni14Si2	–	08Ch20N14C2	P H C N B R	253 MA
		1.4835	S30815	253MA®	0.09	0.17	21	11	–	1.6Si, Ce	–	–	–	–	P H C N B R	253 MA
		1.4845	310S	4845	0.05	–	25	20	–	–	SUS 310S	0Cr25Ni20	STS 310S	10Ch23N18	P H C N B R	310
		1.4854	S35315	353MA®	0.05	0.17	25	35	–	1.3Si, Ce	–	–	–	–	P	353 MA

\* also available as S31803

## EN Material Standards

EN 10088-1	Stainless steel grades general, not for ordering)
EN 10088-2	Stainless steel flat products for general purposes
EN 10088-3	Stainless steel long products for general purposes
EN 10095	Heat resisting steels and Ni alloys
EN 10302	Creep resisting steels and Ni/Co alloys
EN 10028-7	Stainless flat products for pressure purposes
EN 10272	Stainless rolled bar for pressure purposes
EN 10263-5	Stainless rod, bar and wire for cold heading and cold extrusion
EN 10151	Stainless Steel Strip for Springs

Outokumpu Stainless sells in accordance with national and international standards required by customers and these are met in full.

## EN Product Conditions

1D	Hot rolled, heat treated, pickled
1G	Hot rolled, ground
1Q	Hot rolled, quenched and tempered, pickled
2H	Work hardened
2E	Cold rolled, heat treated, mech. desc. pickled
2D	Cold rolled, heat treated, pickled
2B	Cold rolled, heat treated, pickled, skin passed
2F	Cold rolled, heat treated, pickled, skin passed on roughened rolls
2R	Cold rolled, bright annealed
2G	Ground
2J	Brushed or dull polished
2K	Satin polished
2M	Patterned
2W	Profile rolled
2L	Coloured

## Outokumpu Stainless Products

P	Hot rolled plate Quarto
H	Hot rolled strip/sheet CPP
C	Cold rolled strip/sheet
N	Cold rolled narrow strip
B	Bar
R	Rod
	Semifinished products
	Tube/pipe
	Fittings
	Welding consumables
	SAF 2304 and SAF 2507 are trademarks owned by SANDVIK AB

## Outokumpu Special Steel Conditions

ESR, LIC	for improved steel cleanliness
PRODEC®	for improved machinability
HyClad®	for a decorative surface
HyClean®	for improved cleaning properties
HyDraw®	for improved deepdrawing
HyStretch®	for improved stretchforming
HyTens®	for improved mechanical properties
CCS®	for improved mechanical properties
VKS®	for improved thickness tolerances
	Multicertification is made on request to EN/ASTM/ASME as well as to superseded national standards



[www.outokumpu.com/stainless](http://www.outokumpu.com/stainless)