



**COLUMBUS  
STAINLESS**  
[Pty] Ltd

**PRODUCT CATALOGUE**

**Adding Stainless Quality to life**  
[www.columbusstainless.co.za](http://www.columbusstainless.co.za)



STRUCTURE	ACX	CHEMICAL COMPOSITIONS (%)										INTERNATIONAL STANDARDS			APPLICATIONS	
		C	Si	Mn	P	S	N	Cr	Mo	Ni	Others	COMMON OR AISI	UNS	EN		
AUSTENITICS	C335	0.08	0.75	6.5-8.0	0.045	0.015	0.15	15.0-17.0	●	3.5-5.0	Cu:2.0 max	CS202	●	●	Cookware, sinks, cutlery, catering equipment, abattoirs, strapping, clamps and cable racking.	
	C115	0.03	1.00	2.0	0.045	0.015	0.07-0.20	16.5-18.0	●	6.0-8.0	●	301LN 301L	S30153 S30103	●	Primarily used as temper rolled for strength in structural applications such as railway carriages, aircraft components, conveyor belts, slat chain, springs, wiper blades, clips. It is also used for utensils and tableware; automobile trim.	
	C111	0.03	1.00	2.0	0.045	0.015	0.10-0.20	16.5-18.5	●	6.0-8.0	●	●	●	1.4318	Rail Car Cladding, Automotive Trim	
	C120	0.07 0.04-0.1	0.75	2.0	0.045	0.015	0.10	18.0-19.5	●	8.0-10.5	●	304 304H	S30400	1.4301	Cookware, sinks, cutlery, catering equipment, hospitals, food and beverage, abattoirs, pharmaceutical, oil and gas, cryogenic as well as pipe work, tanks and process vessels for a large variety of corrosive liquids. H grades have superior high temperature creep resistance. DQ (drawing quality) and DDQ (Deep Drawing Quality) have superior drawing characteristics. 304LS has superior machinability.	
	C160	0.07	0.75	2.0	0.045	0.015	0.10	18.0-19.5	●	8.5-10.5	●	304DQ	S30403	1.4307		
	C181	0.07	0.75	2.0	0.045	0.015	0.10	18.0-19.5	●	9.0-10.5	●	304DDQ	●	1.4301		
	C151	0.03	0.75	2.0	0.045	0.015	0.10	18.0-19.5	●	8.0-10.5	●	304 304LS	S30403 S30400	1.4307 1.4301 1.4306		
	C152	0.03	0.75	2.0	0.045	0.005-0.015	0.10	18.0-19.5	●	8.0-10.5	●	304L 304 304LS	●	●		
	C200	0.03	0.75	2.0	0.045	0.015	0.10	18.0-20.0	●	10.0-10.5	●	304LDDQ	S30450 S30451	●		
	C315	0.08	0.75	2.0	0.045	0.015	0.10	17.0-19.0	●	9.0-12.0	Ti: 5x(C+N) to 0.7	321	S32100	1.4541 1.4878	Furnace components, equipment exposed to elevated temperature and / or aqueous cycles.	
	C240	0.03	0.75	2.0	0.045	0.015	0.10	16.5-18.0	2.0-2.5	10.0-13.0	●	316L 316	S31603 S31600	1.4404 1.4401 1.4402(SANS)	Environments containing chlorides and in polluted marine environments, desalination, pipe work, tanks, process vessels for more aggressive corrosive liquids and conditions in chemical, petrochemical, pulp and paper, pollution control, hydrometallurgical and petroleum industries.	
	C300	0.03	0.75	2.0	0.045	0.015	0.10	17.0-18.0	2.5-3.0	12.5-13.0	●	●	S31603 S31600	1.4432 1.4435 1.4436	Same applications as 316L -1.4404, where high strength is required.	
	C320	0.03	0.75	2.0	0.045	0.015	0.12-0.16	16.5-18.0	2.0-2.5	10.0-12.5	●	316LN 316N	S31653 S31651	1.4406		
	C280	0.08	0.75	2.0	0.045	0.015	0.10	16.5-18.0	2.0-2.5	10.5-13.5	Ti: 5x(C+N) to 0.7	316Ti	S31635	1.4571	Furnace components, equipment exposed to elevated temperature and / or aqueous cycles.	
	C340	0.08	0.75	2.0	0.045	0.015	0.11	22.0-24.0	●	12.0-14.0	●	309S 309 309H	S30908 S30900 S30909	1.4833	Furnace parts, high temperature containers, catalytic converters, exhaust systems etc. Si grade gives superior oxidation resistance.	
	C309	0.20	1.5-2.5	2.0	0.045	0.015	0.11	19.0-21.0	●	11.0-13.0	●	●	●	1.4828	Furnace parts, muffles, radiant tubes, ammonia converters, etc.	
C350	0.04-0.08	0.75	2.0	0.045	0.015	0.11	24.0-26.0	●	19.0-22.0	●	310S 310 310H	S31008 S31000 S31009	1.4845			
FERRITICS	ACX	C	Si	Mn	P	S	N	Cr	Mo	Nb	Ni	Others	COMMON OR AISI	UNS	EN	APPLICATIONS
	C211	0.03	1.00	1.5	0.040	0.030	●	10.5-12.5	●	●	0.3-1.0	Ti: 4x(C+N) to 0.6	3CR12	S41003	1.4003	Ore cars, coal wagons, freight cars, rail cars, bus chassis, bus frames, chutes, conveyor equipment, tanks, x-grid in cooling towers, reefer iso containers. Also in material
	C220	0.03	1.00	1.5	0.040	0.015	0.03	10.5-12.0	●	●	0.3-1.0	●	3CR12I	S41003	1.4003	handling equipment (chutes and liners), particularly in wet sliding abrasion condition sand structural applications in corrosive industries, ladders, walkways, cable racks, roofing.
	C420	0.08	1.00	1.0	0.040	0.015	●	12.0-13.5	●	●	0.6	●	410S	S41008	●	Cladding and palisade fencing, Oil & Gas Industries.
	C800	0.03	1.00	1.0	0.040	0.015	0.03	10.5-11.7	●	●	0.5	Ti: 6x(C+N) to 0.5	409	S40910	1.4512	Automotive exhaust pipes, silencers and catalytic converters. Coated electrification boxes
	C801	0.03	1.00	1.0	0.040	0.015	0.03	10.5-11.7	●	●	0.5	Ti: 8x(C+N) to 0.5	409	S40920	1.4512	
	C700	0.03	1.00	1.0	0.040	0.030	0.03	10.5-11.7	●	●	0.5-1.0	Ti: 6x(C+N) to 0.75	409Ni	S40975	1.4003	Automotive exhaust pipes.
	C500	0.08	1.00	1.0	0.040	0.015	●	16.0-18.0	●	●	0.75	●	430	S43000	1.4016	Sinks, wash troughs, urinals, toilets, trim for domestic equipment, kitchen and cafeteria utensils and cutlery, roofing and cladding.
	C530	0.08	1.00	1.0	0.040	0.015	●	16.0-18.0	●	●	●	Al:0.30 max	430DDQ	S43000	1.4016	Difficult to form components, where 430 is normally used, and coinage.
	C515	0.05	1.00	1.0	0.040	0.015	●	17.0-18.0	●	0.45	●	Ti: 4x(C+N) +0.15 to 0.8	439Nb	S43932	1.4510	Difficult to form components eg. exhaust system components, evaporator tube in the sugar industry, domestic appliances, geysers and heat exchanger tubing.
	C843	0.03	0.75	1.0	0.040	0.015	●	17.5-18.5	●	3xC+0.3 to 1.00	●	Ti: 0.15 to 0.6	441	S43940	1.4509	Catalytic converters for more arduous conditions than 409 (near exhaust manifold), heat exchangers, tubes, geysers, burners and evaporator tube in the sugar industry.
	C845	0.03	0.75	1.0	0.040	0.015	●	17.5-18.5	●	3xC+0.3 to 1.00	●	Ti: 0.1 to 0.6	441	S43940	1.4509	
	C841	0.03	0.75	1.0	0.040	0.015	●	18.8-15.5	●	3xC+0.3 to 1.00	●	Ti: 0.1 to 0.6	441	S43940	1.4509	
	C550	0.08	1.00	1.0	0.040	0.015	0.04	16.0-18.0	0.8-1.25	7x(C+N)+0.1 to 0.8	●	●	●	436	S43600	1.4526
C553	0.08	1.00	1.0	0.040	0.015	0.04	16.0-18.0	1.2-1.25	7x(C+N)+0.1 to 0.8	●	●	●	●	●	●	Marine environments for roofing and cladding, hand railing, balustrading, walkways, outdoor furniture, cable racks, heat exchangers, tubes, geysers, solar panels, water tanks, food processing, brewery and wine making equipment.
C555	0.025	1.00	1.0	0.040	0.015	0.03	17.5-19.5	1.8-2.5	0.5	1.0	Ti: 4x(C+N) +0.15 to 0.8	444	S44400	1.4521		
DUPLICES	ACX	C	Si	Mn	P	S	N	Cr	Mo	Ni	Cu	PRE	AISI	UNS	EN	APPLICATIONS
	C920	0.03	1.00	4.0-6.0	0.035	0.015	0.05-0.17	19.5-21.5	0.6	1.0-3.0	1.0 max	22	2001	S32001	1.4482	Pulp and paper, food and drink and architecture. Process and storage tanks, ducting and structural applications. Pipe supports, guttering, walkways, cable racking, strapping, clamps, etc. in aggressive environments.
	C940	0.03	1.00	2.0	0.035	0.015	0.05-0.20	22.0-24.0	0.1-0.6	3.5-5.5	0.1 to 0.6	25	2304	S32304	1.4362	Environments containing chlorides and in polluted marine environments, desalination, pipe work, tanks, process vessels for more aggressive corrosive liquids and conditions in chemical, petrochemical, pulp and paper, pollution control, hydro metallurgical and petroleum industries.
C900	0.03	1.00	2.0	0.035	0.015	0.14-0.20	22.0-23.0	2.5-3.5	4.5-6.5	●	35	2205	S32205 S31803	1.4462	Marine environments in the oil and gas extraction and processing industries, the chemical industry, the pulp and paper industry and the mining industry( Mineral beneficiation plants). Also used for heat exchangers where chloride bearing water or brackish water is used as the cooling medium.	

Compositions are maximum values, unless otherwise stated. Balance is iron  
PRE is Pitting Resistance Equivalent = Cr + 3.3Mo+ 16N



## FINISHES AVAILABLE

COLUMBUS	ACERINOX	ASTM / ASME	EN	DESCRIPTION
Unground	595	-	-	Slabs with no grinding.
Ground	596	-	-	Slabs with grinding
HR	599	-	1U	Hot rolled (not heat treated, not descaled). Suitable for products which are to be further worked (e.g. Re-Rolling.)
HRA	504	-	1C	Hot rolled and heat treated, (not descaled). Suitable for industrial heat resisting and materials handling applications.
NO.1	501	NO.1	1D	Hot rolled, heat treated and descaled. Suitable when smoothness and uniformity of finish are not important
2D	512	NO.2D	2D	Cold rolled, heat treated and pickled. Dull, smooth finish. Suitable for forming applications.
2B	522	NO.2B	2B	Cold rolled, heat treated and pickled. Bright and smoother finish than 2D (obtained by skin passing or tension levelling.).
2E	524	NO.2B	2E	Cold rolled, heat treated and mechanically descaled. may be followed by pickling. Rough and dull finish.
NO.3	531	NO.3	2G	A linearly textured polished finish, one or both sides, typically using 120 grit polishing belts, with a transverse Ra <1.5µm
NO.4	543 523	NO.4	2G	A linearly textured polished finish, one or both sides, typically using 180 to 240 grit polishing belts, with a transverse Ra <1µm.
SB	551	NO.6	2J	Scotch Brite finish, one or both sides, with a transverse Ra <0.5µm.
SSB	553	-	-	Superior Scotch Brite finish, one or both sides, with a transverse Ra <0.25µm.
BA	571	BRIGHT ANNEALED FINISH	2R	Cold rolled, bright annealed finish, retained by final annealing in a controlled atmosphere furnace (may be skin passed). Smooth, bright, reflective finish.
BE	510	-	-	Columbus 2B cold rolled, but final anneal in a controlled atmosphere furnace.
TR	572 / 573	TR	2H	Finish obtained by Cold Rolled, annealed, pickled and Temper Rolled.

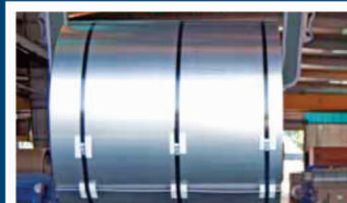
## DIMENSIONS

	HOT ROLLED COIL							HOT ROLLED PLATE						
	GENERAL TYPE	WIDTH < 1400mm			WIDTH > 1400mm			GENERAL TYPE	WIDTH < 1400mm			WIDTH > 1400mm		
		HR	HRA	No.1	HR	HRA	No.1		HR	HRA	No.1	HR	HRA	No.1
FERRITICS	3CR12	●	3-6	3-6	●	3-6	3-6	3CR12	●	3-30	3-30	●	3-30	3-30
	3CR12L	●	3-6	3-6	●	3-6	3-6	3CR12L	●	3-30	3-30	●	3-30	3-30
	410S	●	●	3-6	●	●	3-6	410S	●	●	3-20	●	●	3-20
	40910	3-6	●	3-6	3-6	●	3-6	40910	●	●	3-16	●	●	3-16
	40920	3-6	●	3-6	3-6	●	3-6	40920	●	●	3-16	●	●	3-16
	40975	●	3-6	3-6	●	3-6	3-6	40975	●	3-30	3-30	●	3-30	3-30
	430	3-6	●	3-6	3-6	●	3-6	430	●	●	3-12	●	●	3-12
	430DDQ	●	●	3-6	●	●	3-6	430DDQ	●	●	3-12	●	●	3-12
	439NB	●	●	3.5-6	●	●	3.5-6	439	●	●	3-12	●	●	3-12
	441	●	●	3-6	●	●	3-6	441	●	●	3-12	●	●	3-12
	436	●	●	3-6	●	●	3-6	436	●	●	3-12	●	●	3-12
	444	●	●	3-6	●	●	3.5-6	444	●	●	3-12	●	●	3-12
DUPLEXES	2001	●	●	4-6	●	●	4-6	2001	●	●	4-40	●	●	4-40
	2304	●	●	4-6	●	●	4-6	2304	●	●	4-50	●	●	4-50
	2205	●	●	4-6	●	●	4-6	2205	●	●	4-40	●	●	4-40
AUSTENITICS	202	3-16	●	3-8	3-16	●	3-8	202	●	●	3-40	●	●	3-40
	301LN/301L	3-16	●	3-8	3-16	●	3-8	301LN	●	●	3-40	●	●	3-40
	304	3-16	●	3-8	3-16	●	3-8	304	●	●	3-63.5	●	●	3-63.5
	304DQ	3-16	●	3-8	3-16	●	3-8	304H	●	●	8-63.5	●	●	8-63.5
	304DDQ	3-16	●	3-8	3-16	●	3-8	304DQ	●	●	3-63.5	●	●	3-63.5
	304L	3-16	●	3-8	3-16	●	3-8	304L	●	●	3-63.5	●	●	3-63.5
	304LS	3-16	●	3-8	3-16	●	3-8	304LS	●	●	3-63.5	●	●	3-63.5
	304LDDQ	3-16	●	3-8	3-18	●	3-8	304LDDQ	●	●	3-63.5	●	●	3-63.5
	321	3-16	●	3-8	3-16	●	3-8	321	●	●	3-63.5	●	●	3-63.5
	316L-1.4404	3-16	●	3-8	3.5-16	●	3.5-8	316L-1.4404	●	●	3-63.5	●	●	3.5-63.5
	316L-1.4435	3-16	●	3-8	3.5-16	●	3.5-8	316L-1.4435	●	●	3-63.5	●	●	3.5-63.5
	316LN	3-16	●	3-8	3.5-16	●	3.5-8	316LN	●	●	3-63.5	●	●	3.5-63.5
	316Ti	3-16	●	3-8	3.5-16	●	3.5-8	316Ti	●	●	3-63.5	●	●	3.5-63.5
	309S-1.4833	3-16	●	3-8	3.5-16	●	3.5-8	309S-1.4833	●	●	3-50	●	●	3.5-50
	309S Si-1.4828	3-16	●	3-8	3.5-16	●	3.5-8	309S Si-1.4828	●	●	3-50	●	●	3.5-50
310S-1.4845	3-16	●	3-8	3.5-16	●	3.5-8	310S-1.4845	●	●	3-50	●	●	3.5-50	



**DIMENSIONS  
COLD ROLLED COIL AND SHEET**

	TYPE	WIDTH < 1300mm				WIDTH > 1300mm	
		2D/2B/2E	BA	BE	POLISHED	2D/2B/2E	POLISHED
<b>FERRITICS</b>	3CR12	0.5 to 3.5	●	●	●	0.7 to 3.5	●
	3CR12L	0.5 to 3.5	●	●	●	0.7 to 3.5	●
	410S	0.5 to 3.5	●	●	●	0.7 to 3.5	●
	40910	0.4 to 3	●	●	●	0.7 to 3	●
	40920	0.4 to 3	●	●	●	0.7 to 3	●
	430	0.4 to 3.0	0.4 to 1.6	0.4 to 1.6	0.4 to 3	0.7 to 3.0	0.7 to 3.0
	430DDQ	0.4 to 3	0.4 to 1.6	0.4 to 1.6	0.4 to 3	0.7 to 3	0.7 to 3
	439	0.4 to 3	●	●	0.4 to 3	0.7 to 3	0.7 to 3
	441	0.4 to 3	●	0.4 to 1.6	0.4 to 3	0.7 to 3	0.7 to 3
	436	0.4 to 3	0.4 to 1.6	0.4 to 1.6	0.4 to 3	0.7 to 3	0.7 to 3
	444	0.4 to 3	●	0.4 to 1.6	0.4 to 3	0.7 to 3	0.7 to 3
<b>DUPLEX</b>	2001	0.7 to 3	●	●	●	0.7 to 3	●
	2304	0.7 to 3	●	●	●	0.7 to 3	●
	2205	0.7 to 3	●	●	●	0.7 to 3	●
<b>AUSTENITICS</b>	202	0.4 to 6	●	●	0.4 to 3	0.7 to 6	0.7 to 3
	301LN	0.5 to 6	0.6 to 1.6	0.6 to 1.6	0.6 to 3	1 to 6	●
	304	0.4 to 6	0.4 to 1.6	0.4 to 1.6	0.4 to 3	0.5 to 6	0.5 to 3
	304H	0.4 to 6	0.4 to 1.6	0.4 to 1.6	0.4 to 3	0.5 to 6	0.5 to 3
	304DQ	0.4 to 6	0.4 to 1.6	0.4 to 1.6	0.4 to 3	0.5 to 6	0.5 to 3
	304DDQ	0.4 to 6	0.4 to 1.6	0.4 to 1.6	0.4 to 3	0.5 to 6	0.5 to 3
	304L	0.4 to 6	0.4 to 1.6	0.4 to 1.6	0.4 to 3	0.5 to 6	0.5 to 3
	304LS	0.4 to 6	●	●	●	0.5 to 6	●
	304LDDQ	0.4 to 6	0.4 to 1.6	0.4 to 1.6	0.4 to 3	0.5 to 6	0.5 to 3
	321	0.4 to 6	●	0.4 to 1.6	●	0.7 to 6	●
	316L-1.4404	0.4 to 6	0.4 to 1.6	0.4 to 1.6	0.4 to 3	0.7 to 6	0.7 to 3
	316L-1.4435	0.4 to 6	●	0.4 to 1.6	0.4 to 3	0.7 to 6	●
	316LN	1 to 6	●	●	●	1.5 to 6	●
	316Ti	0.4 to 6	●	0.4 to 1.6	●	0.7 to 6	●
	309S-1.4833	0.4 to 6 <sup>6</sup>	0.4 to 1.6	0.4 to 1.6	●	0.7 to 6 <sup>6</sup>	●
	309S Si-1.4828	0.4 to 6 <sup>6</sup>	0.4 to 1.6	0.4 to 1.6	●	0.7 to 6 <sup>6</sup>	●
310S-1.4845	0.4 to 6 <sup>6</sup>	0.4 to 1.6	0.4 to 1.6	●	0.7 to 6 <sup>6</sup>	●	



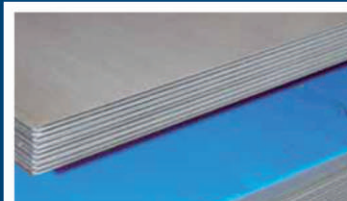
Cold rolled coil, 2D, 2B



Cold rolled coil, BA



Plates



Hot rolled sheet



Black Hot rolled Coil



No. 1 Coil



Slab



Slit Products

**COATINGS**

COATING	DESCRIPTION	THICKNESS (MICRONS)
LNC	Novacel Fibre laser Protective Film (Grey)	100
LPF	Polifilm Fibre laser Protective Film (Dark Grey)	100
PVC	PE Black / White Laser Protective Film suitable for CO <sub>2</sub> Lasers.	70/80
PEB	PE Blue Translucent Protective Film	60
PLD	Low Density ,Low Glue PE Protective Film (Transparent)	30
●	No Coating	●



## CERTIFICATIONS

Hot rolled products can be certified to the following specifications:

- ASTM A240/A240M
- ASME BPVC IIA SA240 / SA240M
- EN 10088-1
- EN 10088-2

- EN 10088-4
- EN 10028-7
- EN 10095
- SANS 50028-7
- IS 6911

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HOT ROLLED

PRODUCTS

COLD ROLLED

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## DISCLAIMER

The material presented in this document has been prepared for the general information of the reader. It should not be used without first securing competent advice with respect to its suitability for any given application. While the information is believed to be technically correct Columbus Stainless does not warrant its suitability for any general or particular use.



**COLUMBUS  
STAINLESS**  
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## ENQUIRIES

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