




<b>Scope according to</b>	<input checked="" type="checkbox"/> Directive 2014/68/EU Annex I §4.3	<input type="checkbox"/> EN 764-4	<input checked="" type="checkbox"/> AD 2000-Merkblatt W0	<input type="checkbox"/> FPC, Regulation (EU) No. 305/2011(System 2+)								
<b>Manufacturer</b>		<b>Work</b>		<b>Nationality</b>	<b>Date</b>	<b>Page No..</b>						
Company Name: Columbus Stainless (Pty) Ltd.		Hendrina Road, Middelburg South Africa		South Africa	06-08-18	1	TÜV Rheinland Industrie Service GmbH					
Location: Hendrina Road, Middelburg, South Africa					Rev.: 02	of : 4						
Cur	Materials-term Materials-No.	Material Specification	Delivery Cond.	Article Type of Product	Dimensions				Weight max  1=t / 2=kg ↓ res ult	Technical Specifications  Requirements Technical Regulations	Remarks	
					Thick-ness mm		Ø mm					
					from	Up to	fro m	Up to				
1	2	3	4	5	6a	6b	7a	7b	8a	8b	9	10
<b>1. Materials according to harmonized European standards (hEN) and European Approval for Materials (EAM) acc. Directive 2014/68/EU</b>												
The use of the materials according to Directive 2014/68/EU is bound to the publication of Harmonized European Standards or to the qualification by a European material approval or to the particular material appraisal. With that the manufacturing reliability for equivalent material grades according to other standards (e.g. BS, AFNOR, ASME) is proved. The requirements and limits of the applicable code respectively the PED must be observed for the use of material grades listed in column 2 to 4.												
01	X2CrNiMoN22-5-3(1.4462)	EN 10028-7	AT	Plate	6.0	63.5						
02	X2CrNiN23-4(1.4362)	EN 10028-7	AT	HR Coil / Sheet	2.5	8.0						
03	X2CrNi12(1.4003)	EN 10028-7	AT		CR Coil /Sheet	0.4	6.0					
04	X2CrTiNb18(1.4509)	EN 10028-7	AT	CR Coil /Sheet								
05	X3CrTi17(1.4510)	EN 10028-7	AT									
06	X2CrMoTi18-2(1.4521)	EN 10028-7	AT		CR Coil /Sheet	0.4	6.0					
07	X6CrMoNb17-1(1.4526)	EN 10028-7	AT									
<b>Remarks</b>												
+AT =			+NT = normalized and tempered			a = PMA for the use in pressure equipment in Directive 2014/68/EU necessary						
+AR = as rolled			+QT = quenched and tempered									
+M = thermo mechanical treated			+S = soft annealed									
+N = normalized or normalizing formed			+SR = stress relieved									



<b>Scope according to</b>	<input checked="" type="checkbox"/> Directive 2014/68/EU Annex I §4.3	<input type="checkbox"/> EN 764-4	<input checked="" type="checkbox"/> AD 2000-Merkblatt W0	<input type="checkbox"/> FPC, Regulation (EU) No. 305/2011(System 2+)								
<b>Manufacturer</b>		<b>Work</b>		<b>Nationality</b>	<b>Date</b>	<b>Page No..</b>						
Company Name: Columbus Stainless (Pty) Ltd.		Hendrina Road, Middelburg South Africa		South Africa	06-08-18	2	TÜV Rheinland Industrie Service GmbH					
Location: Hendrina Road, Middelburg, South Africa					Rev.: 02	of : 4						
Cur	Materials-term Materials-No.	Material Specification	Delivery Cond.	Article Type of Product	Dimensions				Weight max  1=t / 2=kg ↓ res ult	Technical Specifications  Requirements  Technical Regulations	Remarks	
					Thick- ness mm		Ø mm					
					fro m	Up to	from	Up to				
1	2	3	4	5	6a	6b	7a	7b	8a	8b	9	10
<b>2. Materials according to the AD 2000-Code</b>												
The use of the materials according to DGR 2014/68/EU is bound to the publication of Harmonized European Standards or to the qualification by a European material approval or to the particular material appraisal. With that the manufacturing reliability for equivalent material grades according to other standards (e.g. BS, AFNOR, ASME) is proved. The requirements and limits of the applicable code respectively the PED must be observed for the use of material grades listed in column 2 to 4.												
08	X5CrNi18-10 (1.4301)	EN 10028-7	AT	} Plate  } HR Coil / Sheet  } CR Coil /Sheet	8.0	63.5					} AD 2000 W2  } AD 2000 W10	
09	X2CrNi19-11(1.4306)	EN 10028-7	AT									
10	X5CrNiMo17-12-2(1.4401)	EN 10028-7	AT									
11	X2CrNiMo17-12-2(1.4404)	EN 10028-7	AT									
12	X2CrNiMoN17-11-2(1.4406)	EN 10028-7	AT									
13	X6CrNiTi18-10(1.4541)	EN 10028-7	AT									
14	X6CrNiMoTi17-12-2(1.4571)	EN 10028-7	AT									
15	X2CrNi18-9(1.4307)	EN 10028-7	AT									
<b>Remarks</b>	+AT = solution annealed +AR = as rolled +M = thermo mechanical treated +N = normalized or normalizing formed			+NT = normalized and tempered +QT = quenched and tempered +S = soft annealed +SR = stress relieved			a = PMA for the use in pressure equipment in Directive 2014/68/EU necessary					

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Manufacturer		Work		Nationality	Date	Page No..						
Company Name: Columbus Stainless (Pty) Ltd.		Hendrina Road, Middelburg South Africa		South Africa	06-08-18	3	TÜV Rheinland Industrie Service GmbH					
Location: Hendrina Road, Middelburg, South Africa					Rev.: 02	of : 4						
Cur	Materials-term Materials-No.	Material Specification	Delivery Cond.	Article Type of Product	Dimensions				Weight max  1=t / 2=kg ↓ res ult	Technical Specifications  Requirements  Technical Regulations	Remarks	
					Thick- ness mm		Ø mm					
					fro m	Up to	from	Up to				
1	2	3	4	5	6a	6b	7a	7b	8a	8b	9	10
<b>2. Materials according to the AD 2000-Code</b>												
The use of the materials according to DGR 2014/68/EU is bound to the publication of Harmonized European Standards or to the qualification by a European material approval or to the particular material appraisal. With that the manufacturing reliability for equivalent material grades according to other standards (e.g. BS, AFNOR, ASME) is proved. The requirements and limits of the applicable code respectively the PED must be observed for the use of material grades listed in column 2 to 4.												
16	X2CrNiMo17-12-3(1.4432)	EN 10028-7	AT	Plate	8.0	63.5					AD 2000 W2	
17	X2CrNiMo18-14-3(1.4435)	EN 10028-7	AT									
18	X3CrNiMo17-13-3(1.4436)	EN 10028-7	AT	HR Coil / Sheet	2.5	8.0				AD 2000 W10		
19	X6CrNi23-13(1.4950)	EN 10028-7	AT									
20	X6CrNi25-20(1.4951)	EN 10028-7	AT	CR Coil /Sheet	0.4	6.0						
<b>Remarks</b>												
+AT = solution annealed			+NT = normalized and tempered			a = PMA for the use in pressure equipment in Directive 2014/68/EU necessary						
+AR = as rolled			+QT = quenched and tempered									
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					Thick- ness mm		Ø mm					
					fro m	Up to	from	Up to				
1	2	3	4	5	6a	6b	7a	7b	8a	8b	9	10
<b>3. Materials according to international standards ( e. g. ASTM, ASME, IBR etc. )</b>												
The use of the materials according to DGR 2014/68/EU is bound to the publication of Harmonized European Standards or to the qualification by a European material approval or to the particular material appraisal. With that the manufacturing reliability for equivalent material grades according to other standards (e.g. BS, AFNOR, ASME) is proved. The requirements and limits of the applicable code respectively the PED must be observed for the use of material grades listed in column 2 to 4.												
21	X2CrMnNiMoN21-5-3(1.4482)	EN 10088-2	AT	Plate  HR Coil / Sheet  CR Coil /Sheet  Plate	6.0	63.5					PMA for the use in pressure equipment in Directive 2014/68/EU necessary  	
22	301L, 301LN, 304, 304L, 316	ASTM A 240	AT		2.5	8.0						
23	309S, 310S, 316L, 316LN, 316Ti		AT									
24	321, 430, 436, 439, 444	ASME SA 240	AT		0.4	6.0						
25	S32001, S31803, 2205, 2304		AT									
26	409, S40975, 410S, S41003		AT									
27	S43932, S43940		AT									
28	321H, 309H, 304H, 310H		AT		8.0	63.5						
<b>Results</b>	+AT = solution annealed +AR = as rolled +M = thermo mechanical treated +N = normalized or normalizing formed			+NT = normalized and tempered +QT = quenched and tempered +S = soft annealed +SR = stress relieved			a = PMA for the use in pressure equipment in Directive 2014/68/EU necessary					