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# Extended Material Examples for the Cutting Data Tables

	Material sub-group	Index	Composition / Structure / Heat treatment	Tensile strength N/mm <sup>2</sup> / HB / HRC
P	Unalloyed steel	P.1.1	< 0,15 % C Annealed	420 N/mm <sup>2</sup> / 125 HB
		P.1.2	< 0,45 % C Annealed	640 N/mm <sup>2</sup> / 190 HB
		P.1.3	< 0,45 % C Tempered	840 N/mm <sup>2</sup> / 250 HB
		P.1.4	< 0,75 % C Annealed	910 N/mm <sup>2</sup> / 270 HB
		P.1.5	< 0,75 % C Tempered	1010 N/mm <sup>2</sup> / 300 HB
	Low-alloy steel	P.2.1	Annealed	610 N/mm <sup>2</sup> / 180 HB
		P.2.2	Tempered	930 N/mm <sup>2</sup> / 275 HB
		P.2.3	Tempered	1010 N/mm <sup>2</sup> / 300 HB
		P.2.4	Tempered	1200 N/mm <sup>2</sup> / 375 HB
	High-alloy steel and high-alloy tool steel	P.3.1	Annealed	680 N/mm <sup>2</sup> / 200 HB
		P.3.2	Hardened and tempered	1100 N/mm <sup>2</sup> / 300 HB
		P.3.3	Hardened and tempered	1300 N/mm <sup>2</sup> / 400 HB
	Stainless steel	P.4.1	Ferritic / martensitic Annealed	680 N/mm <sup>2</sup> / 200 HB
P.4.2		Martensitic Tempered	1010 N/mm <sup>2</sup> / 300 HB	
M	Stainless steel	M.1.1	Austenitic / austenitic-ferritic Quenched	610 N/mm <sup>2</sup> / 180 HB
		M.2.1	Austenitic Tempered	300 HB
		M.3.1	Austenitic / ferritic (Duplex)	780 N/mm <sup>2</sup> / 230 HB
K	Grey cast iron	K.1.1	Pearlitic / ferritic	350 N/mm <sup>2</sup> / 180 HB
		K.1.2	Pearlitic (martensitic)	500 N/mm <sup>2</sup> / 260 HB
	Spherulitic graphite cast iron	K.2.1	Ferritic	540 N/mm <sup>2</sup> / 160 HB
		K.2.2	Pearlitic	845 N/mm <sup>2</sup> / 250 HB
	Malleable iron	K.3.1	Ferritic	440 N/mm <sup>2</sup> / 130 HB
		K.3.2	Pearlitic	780 N/mm <sup>2</sup> / 230 HB
N	Aluminium wrought alloy	N.1.1	Non-hardenable	60 HB
		N.1.2	Hardenable Age-hardened	340 N/mm <sup>2</sup> / 100 HB
	Cast aluminium alloy	N.2.1	≤ 12 % Si, non-hardenable	250 N/mm <sup>2</sup> / 75 HB
		N.2.2	≤ 12 % Si, hardenable Age-hardened	300 N/mm <sup>2</sup> / 90 HB
		N.2.3	> 12 % Si, non-hardenable	440 N/mm <sup>2</sup> / 130 HB
	Copper and copper alloys (bronze/brass)	N.3.1	Free-machining alloys, PB > 1 %	375 N/mm <sup>2</sup> / 110 HB
		N.3.2	CuZn, CuSnZn	300 N/mm <sup>2</sup> / 90 HB
		N.3.3	CuSn, lead-free copper and electrolytic copper	340 N/mm <sup>2</sup> / 100 HB
	Magnesium alloys	N.4.1	Magnesium and magnesium alloys	70 HB
S	Heat-resistant alloys	S.1.1	Fe - basis Annealed	680 N/mm <sup>2</sup> / 200 HB
		S.1.2	Fe - basis Age-hardened	950 N/mm <sup>2</sup> / 280 HB
		S.2.1	Ni or Co basis Annealed	840 N/mm <sup>2</sup> / 250 HB
		S.2.2	Ni or Co basis Age-hardened	1180 N/mm <sup>2</sup> / 350 HB
		S.2.3	Ni or Co basis Cast	1080 N/mm <sup>2</sup> / 320 HB
	Titanium alloys	S.3.1	Pure titanium	400 N/mm <sup>2</sup>
		S.3.2	Alpha + beta alloys Age-hardened	1050 N/mm <sup>2</sup> / 320 HB
S.3.3	Beta alloys	1400 N/mm <sup>2</sup> / 410 HB		
H	Hardened steel	H.1.1	Hardened and tempered	46-55 HRC
		H.1.2	Hardened and tempered	56-60 HRC
		H.1.3	Hardened and tempered	61-65 HRC
		H.1.4	Hardened and tempered	66-70 HRC
	Chilled iron	H.2.1	Cast	400 HB
	Hardened cast iron	H.3.1	Hardened and tempered	55 HRC
O	Non-metal materials	O.1.1	Plastics, duroplastic	≤ 150 N/mm <sup>2</sup>
		O.1.2	Plastics, thermoplastic	≤ 100 N/mm <sup>2</sup>
		O.2.1	Aramid fibre-reinforced	≤ 1000 N/mm <sup>2</sup>
		O.2.2	Glass/carbon-fibre reinforced	≤ 1000 N/mm <sup>2</sup>
		O.3.1	Graphite	

\* Tensile strength

On the following 16 pages you will find an extension of the material examples to our usual indexes with additional international standards.

Overview of standards:

## DIN

Deutsche Industrie Norm  
(German Standard)

## AFNOR

Association Francaise de Normalisation  
(French Standard)

## UNI

Unificazione Italiana  
(Italian Standard)

## ČSN

Czechoslovakian Standard

## BS

British Standards

## SIS

Standardiseringen i Sverige  
(Swedish Standard)

## UNE

Spanish Standard

## JIS

Japanese Industrial Standard

## ГОСТ

Soviet Standard

## UNS

Unified Numbering System

## USA

Under USA several American standards are summarized

	Index	Material number	DIN	AFNOR	UNI	ČSN	BS	SIS	UNE	JIS	ГОСТ	UNS	USA	
P	P.1.1	1.5423	16 Mo 5		16 Mo 5		1503-245-420					G 45200	4520	
		1.0037	St 37-2	E 24-2		11 343				STKM 12 C				
		1.0044	St 44-2	E 28-2	Fe 430 B FN	11 443	4360-43 B	1412			SM 41 B			A 570 Gr. 40
		1.0116	St 37-3	E 24-3; E 24-4	Fe 360 D FF	11 378	4360-40 C	1312; 1313				St 3 kp; ps; sp		A 573 Gr. 58
		1.0144	St 44-3	E 28-3; E 28-4	Fe 430 D FF		4360-43 C	1412; 1414			SM 41 C	St 4 kp; ps; sp		A 573 Gr. 70
		1.0301	C 10	AF 34 C 10; XC 10	C 10	12 010	045 M 10				S 10 C	10	G 10100	1010
		1.0401	C 15	AF 3 7 C 12; XC 18	C 15; C 16	12 020	080 M 15	1350	F-111				G 10170	1015
		1.0402	C 22	AF 42 C 20	C 20; C 21	12 024	050 A 20	1450	F-112			20	G 10200	1020
		1.0406	C 25	AF 50 C 30	C 25	12 030	070 M 26							1025
		1.0570	St 52-3	E 36-3; E 36-4	Fe 510 B; C; D	11 523	4360-50 B	2132			SM 50 YA	17 GS		
		1.1121	Ck 10	XC 10	C 10	12 010	045 M 10	1265	F-1510	S 10 C; S 9 CK		08; 10	G 10100	1010
		1.1133	20 Mn 5	20 M 5	G 22 Mn 3		120 M 19			SMnC 420			G 10220	1022; 1518
		1.1141	Ck 15	XC 15; XC 18	C 15; C 16	12 020	080 M 15	1370	F-1511	S 15 C; S 15 CK		15	G 10170	1015
		1.1151	Ck 22	XC 25; XC 18	C 20		050 A 20			S 20 C; S 20 CK		20		1023
		1.1158	Ck 25	XC 25	C 25	12 030	070 M 26			S 25 C		25	G 10250	1025
	P.1.2	1.0050	St 50-2	A 50-2	Fe 490	11 500	4360-50 B	2172			SS 50	BSt 5 ps; sp		A 570 Gr. 50
		1.0060	St 60-2	A 60-2	Fe 590; Fe 60-2	11 600	4360-SSE; SSC				SM 58	St 6 ps; sp		
		1.0406	C 25	AF 50 C 30	C 25	12 030	070 M 26							1025
		1.0420	GS-38											
		1.0446	GS-45											
		1.0481	17 Mn 4			11 748								
		1.0501	C 35	AF 55 C 35	C 35	12 040	060 A 35	1550	F-113			35	G 10350	1035
		1.0503	C 45	AF 65 C 45	C 45	12 050	080 M 46	1650	F-114			45	G 10430	1045
		1.0511	C 40	AF 60 C 40	C 40	12 041								1040
		1.0528	C 30			12 031								
		1.0540	C 50											
		1.0552	GS-52											
1.0558		GS-60												
1.0619		GS-C 25												
1.0711		9 S 20		CF 9 S 22		220 M 07	220 M 07			SUM 21	SUM 21	G 12120	1212	
1.0715		9 SMn 28	S 250	CF 9 SMn 28	11 109	230 M 07	1912	F-211 / F-2111	SUM 22			G 12130	1213	
1.0718		9 SMnPb 28	S 250 Pb	CF 9 SMnPb 28			1914	F-212 / F-2112	SUM 22 L			G 12134	12 L 13	
1.0721		10 S 20	10 F 1	CF 10 S 20	10 110	210 M 15		F-2121					1108	
1.0722		10 SPb 20	10 PbF 2	CF 10 SPb 20				F-2122					11 L 08	
1.0723		15 S 20				210 A 15	1922		SUM 32					
1.0736		9 SMn 36	S 300	CF 9 SMn 36		240 M 07		F-2113				G 12150	1215	
1.0737		9 SMnPb 36	S 300 Pb	CF 9 SMnPb 36			1926	F-2114				G 12144	12 L 14	
1.1118	GS-24 Mn 6			42 2714										
1.1120	GS-20 Mn 5													
1.1131	GS-16 Mn 5													
1.1138	GS-21 Mn 5													
1.1142	GS-Ck 16													
1.1151	Ck 22	XC 25; XC 18	C 20		050 A 20			S 20 C; S 20 CK		20		1023		
1.1155	GS-Ck 25													
1.1158	Ck 25	XC 25	C 25	12 030	070 M 26			S 25 C		25	G 10250	1025		
1.1178	Ck 30													
1.1181	Ck 35	XC 38 H1; XC 32	C 35		080 M 36	1572		S 35 C		35	G 10340	1035		
1.1186	Ck 40	XC 42 H1	C 40		080 M 40			S 40 C		40		1040		
1.1191	Ck 45	XC 42	C 45		080 M 46	1672		S 45 C		45	G 10420	1045		
1.1206	Ck 50	XC 48 H1			080 M 50					50		1050		
1.1730	C 45 W	Y3 42												

	Index	Material number	DIN	AFNOR	UNI	ČSN	BS	SIS	UNE	JIS	ГОСТ	UNS	USA	
<b>P</b>	<b>P.1.3</b>	1.0501	C 35	AF 55 C 35	C 35	12 040	060 A 35	1550	F-113		35	G 10350	1035	
		1.0503	C 45	AF 65 C 45	C 45	12 050	080 M 46	1650	F-114		45	G 10430	1045	
		1.0511	C 40	AF 60 C 40	C 40	12 041								1040
		1.0528	C 30				12 031							
		1.0540	C 50											
		1.0726	35 S 20	35 MF 4			11 140	212 M 36	1957	F-210.G			G 11400	1140
		1.0727	45 S 20	45 MF 4				212 M 44	1973				G 11460	1146
		1.0728	60 S 20	60 MF 4										
		1.1178	Ck 30											
		1.1181	Ck 35	XC 38 H1:XC 32	C 35			080 M 36	1572		S 35 C	35	G 10340	1035
		1.1186	Ck 40	XC 42 H1	C 40			080 M 40			S 40 C	40		1040
		1.1191	Ck 45	XC 42	C 45			080 M 46	1672		S 45 C	45	G 10420	1045
		1.1206	Ck 50	XC 48 H1				080 M 50				50		1050
		<b>P.1.4</b>	1.0535	C 55	AF 70 C55	C 55	12 060	070 M 55	1655				55	
	1.0601		C 60	CC 55	C 60		080 A 62					60	G 10600	1060
	1.0757		46 SPb 20											
	1.1203		Ck 55	XC 55	C50		070 M 55				S 55 C	55		1055
	1.1221		Ck 60	XC 60	C60		080 A 62	1665; 1678			S 58 C	60; 60G	G 10640	1060
	1.1248		Ck 75	XC 75	C 75	12 081	060 A 78	1774; 1778				75	G 10780	1078; 1080
	1.1274		Ck 101	XC 100			060 A 96	1870			SUP 4		G 10950	1095
	1.1520		C 70 W1											
	1.1525		C 80 W1	Y1 90; Y1 80	C 80 KU							U8A	T 72301	W 108
	1.1545+G502		C 105 W1	Y1 105	C 100 KU				1880			U10A	T 72301	W 110
	1.1620		C 70 W2											
	1.1625		C 80 W2		C 80 KU			BW 1 B			SKC 3; SK 5; SK 6	U8; 80	T 72301	W 1
	1.1645		C 105 W2	Y2 105	C 100 KU						SK 3	U10	T 72301	
	1.1663		C 125 W	Y2 120	C 120 KU						SK 2	U13	T 72301	W 112
	1.1673		C 135 W	Y2 140	C 140 KU						SK 1			
	1.1740		C 60 W	Y3 55							SK 7			
	1.1750		C 75 W					BW 1A				75		W 1
	1.1820		C 55 W											
	1.1830	C 85 W	Y3 90							SK 5				
	<b>P.1.5</b>	1.0535	C 55	AF 70 C55	C 55	12 060	070 M 55	1655				55		1055
		1.0601	C 60	CC 55	C 60		080 A 62					60	G 10600	1060
		1.1203	Ck 55	XC 55	C50		070 M 55				S 55 C	55		1055
		1.1221	Ck 60	XC 60	C60		080 A 62	1665; 1678			S 58 C	60; 60G	G 10640	1060
1.1231		Ck 67	XC 68	C 70	12 071	060 A 67	1770				70	G 10700	1070	
1.1274		Ck 101	XC 100			060 A 96	1870			SUP 4		G 10950	1095	
1.1520		C 70 W1												
<b>P.2.1</b>	1.2162	21 MnCr 5	20 NC 5			19 487				SCR 420 H				
	1.2210	115 CrV 3	100 C 3	107 CrV 3 KU	19 421							T 61202	L 2	
	1.2323	GS-48 CrMoV 6 7												
	1.2341	X 6 CrMo 4												
	1.2369	81 CrMov 42 16												
	1.2516	120 WV 4	110 WC 20	110 W 4 KU	19 711	BF 1								
	1.2542	45 WCrV 7		45 WCrV 8 KU	19 732	BS 1	2710					T 41901	S 1	
	1.2550	60 WCrV 7	55 WC 20	55 WCrV 8 KU	19 735									
	1.2711	54 NiCrMoV 6	55 NCDV 6		19 662									
	1.2735	15 NiCr 14	10 NC 12		16 240					SNC 22		T 51606		
	1.2762	75 CrMoNiW 6 7												
1.2842	90 MnCrV 8	90 MV 8	90 MnVCr 8 KU	19 314	BO 2						T 31502	O 2		

	Index	Material number	DIN	AFNOR	UNI	ČSN	BS	SIS	UNE	JIS	ГОСТ	UNS	USA	
<b>P</b>	<b>P.2.1</b>	1.5015	GS-8 Mn 7											
		1.5122	37 MnSi 4			13 240								
		1.5415	15 Mo 3	15 D 3	16 Mo 3		1501-240	2912					A 204 Gr. A	
		1.5419	GS-22 Mo 4											
		1.5621	GS-10 Ni 6											
		1.5622	14 Ni 6	16 N 6	14 Ni 6									A 350-LF 5
		1.5633	GS-24 Ni 8											
		1.5638	GS-10 Ni 14											
		1.5732	14 NiCr 10	14 NC 11	16 NiCr 11					F-1540	SNC 415 (H)			3415
		1.5752	14 NiCr 14	12 NC 15		16 240	655 M 13			F-1540	SNC 815 (H)		G 33106	3310; 9314
		1.5919	15 CrNi 6	16 NC 6	16 CrNi 4	16 220	S 107							
		1.5920	18 CrNi 8	20 NC 6		13 231								
		1.6221	GS-13 MnNi 6 4											
		1.6523	21 NiCrMo 2	20 NCD 2	20 NiCrMo 2		805 M 20	2506	F-1522		SNCM 220 (H)		G 86170	8620
		1.6587	17 CrNiMo 6	18 NCD 6	18 NiCrMo 7		820 A 16							
		1.6750	GS-20 NiCrMo 3 7											
		1.7003	38 Cr 2	38 C 2	38 Cr 2									
		1.7006	46 Cr 2	42 C 2	45 Cr 2									5045
		1.7012	13 Cr 2											
		1.7015	15 Cr 3	12 C 3		14 120	523 M 15				SCr 415 (H)	15Ch	G 50150	5015
		1.7020	32 Cr 2											
		1.7030	28 Cr 4				530 A 30					30Ch		5130
		1.7033	34 Cr 4	32 C 4	34 Cr 4 (KB)		530 A 32				SCr 430 (H)	35Ch	G 51320	5132
		1.7131	16 MnCr 5	16 MC 5	16 MnCr 5	14 220	527 M 17	2511	F-1516/ F-1517	SCR 415	18ChG	G 51170	5115	
		1.7139	16 MnCrS 5						F-150D					
		1.7147	20 MnCr 5	20 MC 5	20 MnCr 5	14 221					SMnC 420 (H)	18ChG	G 51200	5120
		1.7149	20 MnCrS 5						F-1551					
		1.7218	25 CrMo 4	25 CD 4 S	25 CrMo 4 (KB)	15 130	1717 CDS 110	2225			SCM 420; SCM 430	30ChM	G 41300	4130
		1.7219	GS-26 CrMo 4											
		1.7220	34 CrMo 4	35 CD 4	35 CrMo 4	15 131	708 A 37	2234			SCM 432; SCCrM 3	AS38ChGM	G 41350	4135; 4137
		1.7262	15 CrMo 5	12 CD 4	12 CrMo 4						SCM 415 (H)			
		1.7264	20 CrMo 5	18 CD 4							SCM 421			
		1.7271	23 CrMoB 3 3											
		1.7311	20 CrMo 2							F-1523				
		1.7321	20 MoCr 4	20 CD 4										
	1.7335	13 CrMo 4 4	15 CD 3.5	14 CrMo 4 5		1501-620 Gr. 27	2216				12ChM; 15ChM		A 182-F11; F12	
	1.7337	16 CrMo 4 4	15 CD 4.5	14 CrMo 4 5		1501-620 Gr. 27	2216				15ChM		A 387 Gr. 12 Cl. 2	
	1.7357	GS-17 CrMo 5 5												
	1.7363	GS-12 CrMo 19 5												
	1.7377	GS-17 CrMo 9 10												
	1.7379	GS-18 CrMo 9 10												
	1.7380	10 CrMo 9 10	10 CD 9.10	12 CrMo 9 10		1501-622 Gr. 31; 45	2218					J 21890	A 182-F22	
	1.7715	14 MoV 6 3				1503-660- 440								
	1.7725	GS-30 CrMoV 6 4												
	1.8504	34 CrAl 6			14 340									
1.8506	34 CrAlS 5										K 23745			
1.8521	15 CrMoV 5 9													
1.0904	55 Si 7	55 S 7	55 Si 8			250 A 53	2085; 2090				55S2		9255	
<b>P.2.2</b>	1.2067	100 Cr 6	Y 100 C 6				BL 3					T 61203	L 3	
	1.2101	62 SiMnCr 4												
	1.2103	58 SiCr 8				19 452								

	Index	Material number	DIN	AFNOR	UNI	ČSN	BS	SIS	UNE	JIS	ГОСТ	UNS	USA		
P	P.2.2	1.2108	90 CrSi 5P												
		1.2162	21 MnCr 5	20 NC 5		19 487				SCR 420 H					
		1.2210	115 CrV 3	100 C 3	107 CrV 3 KU	19 421						T 61202	L 2		
		1.2311	40 CrMnMo 7			19 520									
		1.2312	40 CrMnMoS 8 6	40 CMD 8 + S											
		1.2323	GS-48 CrMoV 6 7												
		1.2330	35 CrMo 4	34 CD 4	35 CrMo 4			708 A 37	2234				35 HM	T 51620	4135
		1.2332	47 CrMo 4	42 CD 4	40 CrMo 4			708 M 40	2244						4142
		1.2419	105 WCr 6	105 WC 13	107 WCr 5 KU							SKS 31	ChWG		
		1.2510	100 MnCrW 4	90 MWCV 5	95 MnWCr 5 KU	19 314	BO 1	2140	F-5220	SKS 3				T 31501	O 1
		1.2542	45 WCrV 7		45 WCrV 8 KU	19 732	BS 1	2710						T 41901	S 1
		1.2550	60 WCrV 7	55 WC 20	55 WCrV 8 KU	19 735									
		1.2711	54 NiCrMoV 6	55 NCDV 6		19 662									
		1.2713	55 NiCrMoV 6	55 NCDV 7		19 662				F-520.S	SKT 4	5ChNM	T 61206	L 6	
		1.2721	50 NiCr 13												
		1.2738	40 CrMnNiMo 8							F-5303					
		1.2826	60 MnSiCr 4												
		1.2833	100 V 1	Y1 105 V	102 V 2 KU	19 356	BW 2					SKS 43		T 72302	W 210
		1.2842	90 MnCrV 8	90 MV 8	90 MnVCr 8 KU	19 314	BO 2							T 31502	O 2
		1.3505	100 Cr 6	100 C 6	100 Cr 6	14 100	534 A 99	2258	F-131 / F-1310	SUJ 2	SchCh 15	G 52986	52100		
		1.3520	100 CrMn 6			14 209									
		1.3561	44 Cr 2												
		1.3563	43 CrMo 4												
		1.5120	38 MnSi 4												
		1.5121	46 MnSi 4												
		1.5122	37 MnSi 5			13 240									
		1.5131	50 MnSi 4												
		1.5141	53 MnSi 4												
		1.5223	42 MnV 7			13 242									
		1.5710	36 NiCr 6	35 NC 6		16 240	640 A 35				SNC 236				3135
		1.5736	36 NiCr 10	30 NC 11	35 NiCr 9						SNC 631 (H)				3435
		1.5755	31 NiCr 14	18 NC 13			653 M 31				SNC 836				
		1.6511	36 CrNiMo 4	40 NCD 3	38 NiCrMo 4 (KB)	16 341	816 M 40					40 ChN2MA	G 98400	9840	
		1.6513	28 NiCrMo 4												
		1.6546	40 NiCrMo 2 2	40 NCD 2	40 NiCrMo 2 (KB)		311-Type 7				SNCM 240	38ChGNM	G 87400	8740	
		1.6565	40 NiCrMo 6				311-Type 6				SNCM 439	40Ch2N2MA		4340	
		1.6570	GS-30 NiCrMo 8 5												
		1.6580	30 CrNiMo 8	30 CND 8	30 NiCrMo 8		823 M 30			F-1272	SNCM 431				
		1.6582	34 CrNiMo 6	35 NCD 6	35 NiCrMo 6 (KW)	16 342	817 M 40	2541	F-128 / F-1270	SNCM 447	38Ch2N2MA			4340	
		1.6746	32 NiCrMo 14 5	35 NCD 14			830 M 31								
		1.6781	GS-18 NiCrMo 12 6												
		1.7003	38 Cr 2	38 C 2	38 Cr 2										
		1.7006	46 Cr 2	42 C 2	45 Cr 2										5045
		1.7030	28 Cr 4				530 A 30					30Ch			5130
		1.7033	34 Cr 4	32 C 4	34 Cr 4 (KB)		530 A 32				ScR 430 (H)	35Ch	G 51320	5132	
		1.7034	37 Cr 4	38 C 4	38 Cr 4	14 140	530 A 36				ScR 435 H	40Ch		5135	
		1.7035	41 Cr 4	42 C 4	41 Cr 4		530 M 40				ScR 440 (H)	40Ch	G 51400	5140	
1.7045	42 Cr 4	42 C 4 TS	41 Cr 4		530 A 40	2245			ScR 440	40Ch		5140			
1.7103	67 SiCr 5														
1.7131	16 MnCr 5	16 MC 5	16 MnCr 5	14 220	527 M 17	2511	F-1516 / F-1517	SCR 415	18ChG	G 51170	5115				
1.7139	16 MnCrS 5							F-150D							

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<b>P</b>	<b>P.2.2</b>	1.7147	20 MnCr 5	20 MC 5	20 MnCr 5	14 221				SMnC 420 (H)	18ChG	G 51200	5120		
		1.7149	20 MnCrS 5						F-1551						
		1.7176	55 Cr 3	55 C 3	55 Cr 3			527 A 60	2253	F-1431	SUP 9 (A)	50ChGA	G 51550	5155	
		1.7218	25 CrMo 4	25 CD 4 S	25 CrMo 4 (KB)	15 130	1717 CDS 110		2225		SCM 420; SCM 430	30ChM	G 41300	4130	
		1.7220	34 CrMo 4	35 CD 4	35 CrMo 4	15 131	708 A 37		2234		SCM 432; SCCrM 3	AS38ChGM	G 41350	4135; 4137	
		1.7223	41 CrMo 4	42 CD 4 TS	41 CrMo 4		708 M 40		2244		SCM 440	40 ChFA	G 41420	4142; 4140	
		1.7225	42 CrMo 4	42 CD 4	42 CrMo 4	15 142	708 M 40		2244		SCM 440 (H)		G 41400	4142; 4140	
		1.7228	50 CrMo 4	50 CR M04			708 A 47				SCM 445 (H)	50ChFA	G 41470	4150	
		1.7323	20 MoCrS 4	20 CD 4 S											
		1.7325	25 MoCr 4	25 CD 4											
		1.7326	25 MoCrS 4	25 CD 4 S											
		1.7361	32 CrMo 12	30 CD 12	32 CrMo 12	15 230	722 M 24		2240	F-124A					
		1.7707	30 CrMoV 9			15 330									
		1.7709	21 CrMoV 5 7												
		1.7725	GS-30 CrMoV 6 4												
		1.7735	14 CrMoV 6 9	15 CDV 6											
		1.8159	50 CrV 4	50 CV 4	51 CrV 4	15 260	735 A 50		2230	F-143 / F-1430	SUP 10	50ChGFA	G 61500	6150	
		1.8161	58 CrV 4			15 261									
		1.8507	34 CrAlMo 5	30 CAD 6.12	34 CrAlMo 7		905 M 31			F-1741			K 23545	A 355 Cl. D	
		1.8509	41 CrAlMo 7	40 CAD 6.12	41 CrAlMo 7	15 340	905 M 39		2940	F-1740	SACM 645	38ChMJuA	K 24065	A 355 Cl. A	
		1.8515	31 CrMo 12	30 CD 12	31 CrMo 12		722 M 24		2240	F-1712					
		1.8519	31 CrMoV 9							F-1721					
		1.8523	39 CrMoV 13 9		36 CrMoV 13 9		897 M 39								
		1.8550	34 CrAlNi 7										K 52440		
		1.0904	55 Si 7	55 S 7	55 Si 8				250 A 53	2085; 2090			55S2		9255
		1.1157	40 Mn 4	35 M 5					150 M 36				40G	G 10390	1039
		1.1165	30 Mn 5	35 M 5					120 M 36			SMn 433 H; SCMn 2	30GSL		1330
		1.1167	36 Mn 5	40 M 5		42 2715	150 M 36		2120			SMn 438 (H); SCMn 3	35G2; 35GL	G 13350	1335
		1.1170	28 Mn 6	20 M 5	C 28 Mn		150 M 28					SCMn 1	30G		1330
		<b>P.2.3</b>	1.2744	57 NiCrMoV 7 7											
			1.7131	16 MnCr 5	16 MC 5	16 MnCr 5	14 220	527 M 17			F-1516 / F-1517	SCR 415	18ChG	G 51170	5115
			1.7755	GS-35 CrMoV 10 4											
		<b>P.2.4</b>	1.2714	56 NiCrMoV 7											
	1.3505		100 Cr 6	100 C 6	100 Cr 6	14 100	534 A 99		2258	F-131 / F-1310	SUJ 2	SchCh 15	G 52986	52100	
	1.7225		42 CrMo 4	42 CD 4	42 CrMo 4	15 142	708 M 40		2244		SCM 440 (H)		G 41400	4142; 4140	
	<b>P.3.1</b>	1.2080	X 210 Cr 12	Z 200 C 12	X 210 Cr 13 KU	19 436	BD 3				SKD 1	Ch12	T 30403	D 3	
		1.2201	G-X 165 CrV 12												
		1.2343	X 38 CrMoV 5 1	Z 38 CDV 5	X 37 CrMoV 5 1 KU	19 552	BH 11			F-5317	SKD 6	4Ch5MFS	T 28811	H 11	
		1.2363	X 100 CrMoV 5 1	Z 100 CDV 5	X 100 CrMoV 5 1 KU	19 571	BA 2		2260	F-5227	SKD 12		T 30102	A 2	
		1.2365	X 32 CrMoV 3 3	32 DCV 28	30 CrMoV 12 27 KU	19 541	BH 10				SKD 7	3Ch3M3F	T 20810	H 10	
		1.2367	X 38 CrMoV 5 3												
		1.2379	X 155 CrVMo 12 1	Z 160 CDV 12	X 155 CrVMo 12 1 KU	19 573	BD 2			F-5211	SKD 11		T 30402	D 2	
		1.2436	X 210 CrW 12	Z 200 CW 12	X 215 CrW 12 1 KU	19 437			2312	F-5213	SKD 2				
		1.2567	X 30 WCrV 5 3	Z 32 WCV 5	X 30 WCrV 5 3 KU	19 720					SKD 4				
		1.2581	X 30 WCrV 9 3	Z 30 WCV 9	X 30 WCrV 9 3 KU	19 721	BH 21				SKD 5	3Ch2W8F	T 20821	H 21	
1.2601		X 165 CrMoV 12		X 165 CrMoV 12 KU	19 572			2310							
1.2606		G-X 37 CrMoW 5 1													
1.2764		X 19 NiCrMo 4													
1.2767		X 45 NiCrMo 4	Y 35 NCD 16	42 NiCrMo 15 7	19 655										
1.2880		G-X 165 CrCoMo 12													
1.2885	X 32 CrMoCoV 3 3 3	30 DCKV 28													



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P	P.3.1	1.3302	S 12-1-4			19 810									
		1.3318	S 12-1-2			19 802									
		1.3333	S 3-3-2		HS 3-3-2	19 820									
		1.3343	S 6-5-2	Z 85 WDCV 06-05-04-0	HS 6-5-2	19 830	BM 2	2722	F-5603	SKH 9; SKH 51	R6AM5	T 11302	M 2		
		1.3346	S 2-9-1	Z 85 DCVV 08-04-02-0	HS 1-8-1		BM 1				H41	T 11301	H 41; M 1		
		1.4943	X 4 NiCrTi 25 15	Z 6 NCTDV 25.15 B				HR 251; HR 52; HR 51			SUH 660				
		1.5662	G-X 8 Ni 9												
		1.5680	12 Ni 19	Z 18 N 5											2515
	P.3.2	1.2080	X 210 Cr 12	Z 200 C 12	X 210 Cr 13 KU	19 436	BD 3				SKD 1	Ch12	T 30403	D 3	
		1.2343	X 38 CrMoV 5 1	Z 38 CDV 5	X 37 CrMoV 5 1 KU	19 552	BH 11			F-5317	SKD 6	4Ch5MFS	T 28811	H 11	
		1.2344	X 40 CrMoV 5 1	Z 40 CDV 5	X 40 CrMo 5 1 1 KU	19 554	BH 13	2242		F-5318	SKD 61	4Ch5MF1S	T 20813	H 13	
		1.2363	X 100 CrMoV 5 1	Z 100 CDV 5	X 100 CrMoV 5 1 KU	19 571	BA 2	2260		F-5227	SKD 12		T 30102	A 2	
		1.2365	X 32 CrMoV 3 3	32 DCV 28	30 CrMoV 12 27 KU	19 541	BH 10				SKD 7	3Ch3M3F	T 20810	H 10	
		1.2367	X 38 CrMoV 5 3												
		1.2379	X 155 CrVMo 12 1	Z 160 CDV 12	X 155 CrVMo 12 1 KU	19 573	BD 2			F-5211	SKD 11		T 30402	D 2	
		1.2567	X 30 WCrV 5 3	Z 32 WCV 5	X 30 WCrV 5 3 KU	19 720					SKD 4				
		1.2581	X 30 WCrV 9 3	Z 30 WCV 9	X 30 WCrV 9 3 KU	19 721	BH 21				SKD 5	3Ch2W8F	T 20821	H 21	
		1.2606	G-X 37 CrMoW 5 1												
		1.2709	X 2 NiCoMoTi 18 9 5												
		1.2764	X 19 NiCrMo 4												
		1.2767	X 45 NiCrMo 4	Y 35 NCD 16	42 NiCrMo 15 7	19 655									
		1.2885	X 32 CrMoCoV 3 3 3	30 DCKV 28											
		1.3207	S 10-4-3-10	Z 130 WKCDV 10-10-04	HS 10-4-3-10	19 861	BT 42			F-5553	SKH 57				
		1.3243	S 6-5-2-5	Z 85 WDKCV 06-05-05	HS 6-5-2-5	19 852		2723		F-5613	SKH 55	R6M5K5			
		1.3246	S 7-4-2-5	Z 110 WKCDV 07-05-04	HS 7-4-2-5	19 851								T 11341	M 41
		1.3247	S 2-10-1-8	Z 110 DKCWW 09-08-04	HS 2-9-1-8				BM 42		SKH 51			T 11342	M 42
		1.3249	S 2-9-2-8						BM 34					T 11333	M 33; M 34
		1.3255	S 18-1-2-5	Z 80 WKCVC 18- 05-04-0	HS 18-1-1-5	19 855	BT 4				SKH 3			T 12004	T 4
		1.3265	S 18-1-2-10		HS 18-0-1-10	19 860	BT 5				SKH 4 A			T 12005	T 5
		1.3344	S 6-5-3	Z 120 WDCV 06-05-04	HS 6-5-3				BM 4		SKH 52; SKH 53			T 11323	M 3 Cl. 2
		1.3348	S 2-9-2	Z 100 DCVV 09-04-02	HS 2-9-2					2782				T 11307	M 7
		1.3401	G-X 120 Mn 12	Z 120 M 12	XG 120 Mn 12			Z 120 M 12				SCMnH 1	110G13L		A 128 (A)
		1.5860	14 NiCr 18				16 523								
		1.5864	35 NiCr 18				16 640			F-122					
		P.3.3	1.6359	X 2 NiCrMo 18 8 5	Maraging 250									K 92890	
	P.4.1	1.2083	X 42 Cr 13	Z 40 C 14	X 41 Cr 13 KU	19 435				F-5263	SUS 420 J 2				
		1.2316	X 36 CrMo 17	Z 38 CD 17	X 38 CrMo 16 1 KU										
		1.3543	X 102 CrMo 17	Z 100 CD 17											
		1.4001	G-X 7 Cr 13	Z 8 C 13 FF		17 020				F-8401					
		1.4002	X 6 CrAl 13	Z 6 CA 13	X 6 CrAl 13		405 S 17	2302	F-3111	SUS 405		S 40500	405		
		1.4005	X 12 CrS 13	Z 12 CF 13	X 12 CrS 13		416 S 21	2380		SUS 416		S 41600	416		
		1.4006	X 10 Cr 13	Z 12 C 13	X 12 Cr 13	17 021	410 S 21	2302	F-3401	SUS 410	12Ch13	S 41000	410; CA-15		
		1.4008	G-X 8 CrNi 13	Z 12 CN 13 M		42 2904									
		1.4016	X 6 Cr 17	Z 8 C 17	X 8 Cr 17	17 040	430 S 15	2320	F-3113	SUS 430	12Ch17	S 43000	430		
		1.4021	X 20 Cr 13	Z 20 C 13	X 20 Cr 13	17 022	420 S 37	2303	F-3402	SUS 420 J 1	20Ch13	S 42000	420		
1.4024		X 15 Cr 13	Z 13 C 13		17 021	420 S 29			SUS 410 J 1						
1.4027		G-X 20 Cr 14	Z 20 C 13 M		42 2906	420 C 29			SCS 2	20Ch13L					
1.4028		X 30 Cr 13	Z 30 C 13	X 30 Cr 13	17 023	420 S 45	2304		SUS 420 J 2	30Ch13					
1.4031		X 38 Cr 13	Z 40 C 14	X 40 Cr 14	17 024		2304	F-3404	SUS 420 J 2	40Ch13					
1.4034		X 46 Cr 13	Z 40 C 14	X 40 Cr 14	17 029	420 S 45		F-3405		40Ch13					
1.4085		G-X 70 Cr 29													

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P	P.4.1	1.4104	X 12 CrMoS 17	Z 10 CF 17	X 10 CrS 17	17 140		2383	F-3403	SUS 430 F		S 43020	430 F	
		1.4105	X 4 CrMoS 18						F-3114					
		1.4106	X 2 CrMoSiS 18 2 1											
		1.4107	G-X 8 CrNi 12				42 2904							
		1.4109	X 65 CrMo 14											
		1.4112	X 90 CrMoV 18										S 44003	
		1.4113	X 6 CrMo 17	Z 8 CD 17.01	X 8 CrMo 17			434 S 17	2325	F-3116	SUS 434		S 43400	434
		1.4116	X 45 CrMoV 15							F-3422				
		1.4122	G-X 35 CrMo 17				17 137							
		1.4125	X 105 CrMo 17	Z 100 CD 17	X 105 CrMo 17						SUS 440 C		S 44004	440 C
		1.4136	G-X 70 CrMo 29 2											
		1.4405	G-X 5 CrNiMo 16 5											
		1.4407	G-X 5 CrNiMo 13 4											
		1.4510	X 6 CrTi 17	Z 8 CT 17	X 6 CrTi 17						SUS 430 LX	08Ch17T	S 43036	XM 8; 430 Ti
		1.4511	X 8 CrNb 17	Z 8 CNb 17	X 6 CrNb 17					F-3122	SUS 430 LX			
		1.4512	X 5 CrTi 12	Z 6 CT 12	X 6 CrTi 12			409 S 19		F-3121	SUH 409		S 40900	409
		1.4528	X 105 CrCoMo 18 2											
		1.4540	G-X 4 CrNiCuNb 16 4											
		1.4724	X 10 CrAl 13	Z 10 C 13	X 10 CrAl 12		17 125	403 S 17		F-3152			10Ch13SJj	
		1.4742	X 10 CrAl 18	Z 10 CAS 18	X 8 Cr 17			430 S 15		F-3153	SUS 430; SUH21			430
	1.4761	G-X 120 CrSi 23												
	1.4762	X 10 CrAl 24	Z 10 CAS 24	X 16 Cr 26		17 153			F-3154			S 44600	446	
	1.4931	G-X 22 CrMoV 12 1												
	1.4962	X 12 CrNiWTi 16 3												
	1.6982	G-X 3 CrNi 13 4												
	P.4.2	1.2316	X 36 CrMo 17	Z 38 CD 17	X 38 CrMo 16 1 KU									
		1.4000	X 6 Cr 13	Z 6 C 13	X 6 Cr 13		17 020	403 S 17	2301		SUS 403	08Ch13	S 40300	403
		1.4021	X 20 Cr 13	Z 20 C 13	X 20 Cr 13		17 022	420 S 37	2303	F-3402	SUS 420 J 1	20Ch13	S 42000	420
		1.4024	X 15 Cr 13	Z 13 C 13			17 021	420 S 29			SUS 410 J 1			
		1.4028	X 30 Cr 13	Z 30 C 13	X 30 Cr 13		17 023	420 S 45	2304		SUS 420 J 2	30Ch13		
		1.4031	X 38 Cr 13	Z 40 C 14	X 40 Cr 14		17 024		2304	F-3404	SUS 420 J 2	40Ch13		
		1.4034	X 46 Cr 13	Z 40 C 14	X 40 Cr 14		17 029	420 S 45		F-3405		40Ch13		
		1.4057	X 20 CrNi 17 2	Z 15 CN 16.02	X 16 CrNi 16		17 145	431 S 29	2321	F-3427	SUS 431	20Ch17N2	S 43100	431
		1.4059	G-X 22 CrNi 17											
1.4086		G-X 120 Cr 29												
1.4108		X 100 CrMo 13												
1.4112		X 90 CrMoV 18										S 44003		
1.4116		X 45 CrMoV 15							F-3422					
1.4120		G-X 20 CrMo 13												
1.4122		G-X 35 CrMo 17				17 137								
1.4138		G-X 120 CrMo 29 2												
1.4313		X 5 CrNi 13 4	Z 5 CN 13.4	X 6 CrNi 13 04			425 C 11	2385			SCS 5		CA 6-NM	
1.4340		G-X 40 CrNi 27 4												
1.4464		G-X 40 CrNiMo 27 5												
1.4542		X 7 CrNiCu 16 4 4	Z 7 CNU 17 04 04 (17-4PH)								SCS 24; SUS 630		S 17400	630
1.4545		X 5 CrNiCu 15-5	E-Z5 CNU 15 05 (15-5PH)											
1.4710		G-X 30 CrSi 6												
1.4718		X 45 CrSi 9 3	Z 45 CS 9	X 45 CrSi 8		17 115	401 S 45		F-3220	SUH 1	40Ch9S2	S 65007	HNV 3	
1.4729		G-X 40 CrSi 13												
1.4740	G-X 40 CrSi 17													
1.4743	G-X 160 CrSi 18													

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P	P.4.2	1.4745	G-X 40 CrSi 23											
		1.4747	X 80 CrNiSi 20	Z 80 CSN 20.02	X 80 CrSiNi 20		443 S 65			SUH 4		S 65006	HNV 6	
		1.4776	G-X 40 CrSi 29											
		1.4823	G-X 40 CrNiSi 27 4											
		1.4923	X 22 CrMoV 12 1				17 134	762						
		1.4928	G-X 12 CrNiMoCoVN 12											
		1.4935	X 20 CrMoWV 12 1										S 42200	
M	M.1.1	1.3941	G-X 4 CrNi 18 13											
		1.3944	G-X 5 CrNi 18 11											
		1.3952	G-X 4 CrNiMoN 18 14											
		1.3953	G-X 2 CrNiMo 18 15											
		1.3955	G-X 12 CrNi 18 11											
		1.3959	G-X 10 CrNiNb 16 13											
		1.4301	X 5 CrNi 18 10	Z 6 CN 18-09	X 5 CrNi 18 10	17 240	304 S 15	2332; 2333	F-3504	SUS 304	08Ch18N10	S 30400	304; 304 H	
		1.4303	X 5 CrNi 18 12	Z 8 CN 18.12	X 8 CrNi 19 10		305 S 19			SUS 305	06Ch18N11	S 30500	308; 305	
		1.4305	X 10 CrNiS 18 9	Z 8 CNF 18-03	X 10 CrNi 18 09	17 243	303 S 21	2346		SUS 303		S 30300	303	
		1.4306	X 2 CrNi 19 11	Z 3 CN 18-10	X 2 CrNi 18 11	17 249	304 S 12	2352; 2333	F-3503	SCS 19	03Ch18N11	S 30403	304 L	
		1.4308	G-X 6 CrNi 18 9	Z 6 CN 18.10 M		42 2930	304 C 15	2333	F-8411	SCS 13	07Ch18N9L		CF-8	
		1.4311	X 2 CrNiN 18 10	Z 2 CN 18.10	X 2 CrNiN 18 11	17 249	304 S 62	2371		SUS 304 LN		S 30453	304 LN	
		1.4312	G-X 10 CrNi 18 8			42 2931								
		1.4401	X 5 CrNiMo 18 10	Z 6 CND 17 12 02	X 5 CrNiMo 17 12	17 346	316 S 16	2347	F-3543	SUS 316		S 31600	316	
		1.4404	X 2 CrNiMo 17 13 2	Z 3 CND 17 12 02	X 2 CrNiMo 17 12	17 349	316 S 11	2348	F-3533	SUS 316 L		S 31603	316 L	
		1.4406	X 2 CrNiMoN 17 12 2	Z 2 CND 17.12 Az	X 2 CrNiMoN 17 12		316 S 61			SUS 316 LN		S 31653	316 LN	
		1.4408	G-X 6 CrNiMo 18 10			42 2940			F-8414					
		1.4413	G-X 4 CrNiMo 13-4											
		1.4429	X 2 CrNiMoN 17 13 3	Z 3 CND 17 11 03 Az	X 2 CrNiMoN 17 13		316 S 62	2375		SUS 316 LN		S 31653	316 LN	
		1.4435	X 2 CrNiMo 18 14 3	Z 2 CND 17.13	X 2 CrNiMo 17 13		316 S 12	2353		SCS 16; SUS 316 L	03Ch17N 14M2	S 31603	316 L	
		1.4436	X 5 CrNiMo 17 13 3	Z 6 CND 17.12	X 5 CrNiMo 17 13		316 S 16	2343		SUS 316		S 31600	316	
		1.4437	G-X 6 CrNiMo 18 12			42 2940								
		1.4438	X 2 CrNiMo 18 16 4	Z 2 CND 19.15	X 2 CrNiMo 18 15		317 S 12	2367		SUS 317 L		S 31703	317 L	
		1.4439	G-X 3 CrNiMo 17 13 5						F-3544					
		1.4446	G-X 2 CrNiMo 17 13 4											
		1.4448	G-X 6 CrNiMo 17 13											
		1.4449	X 3 CrNiMo 18 12 3											
		1.4507	X 2 CrNiMoCuN 25 6 3	Z 3 CNDU 25 07 Az (Uranus 52 N)									S 32750	F61
		1.4541	X 6 CrNiTi 18 10	Z 6 CNT 18.10	X 6 CrNiTi 18 11	17 248	321 S 12	2337		SUS 321	12Ch18N 10T	S 32100	321	
		1.4546	X 5 CrNiNb 18 10		X 6 CrNiNb 18 11		347 S 18					S 34800	348	
		1.4550	X 6 CrNiNb 18 10	Z 10 CNNb 18-10	X 6 CrNiNb 18 11	17 245	347 S 17	2338	F-3552 / F-3524	SUS 347	08Ch18N 12B	S 34700	347	
		1.4552	G-X 5 CrNiNb 18 9			42 2933			F-8413					
		1.4571	X 6 CrNiMoTi 17 12 2	Z 6 CNT 17.12	X 6 CrNiMoTi 17 12	17 348	320 S 31	2350	F-3535		10Ch17N-13M2T	S 31635	316 Ti	
		1.4573	X 10 CrNiMoTi 18 12		X 6 CrNiMoTi 17 13		320 S 33				10Ch17N-13M3T	S 31635	316 Ti	
		1.4580	X 6 CrNiMoNb 17 12 2	Z 6 CNDNb 17.12	X 6 CrNiMoNb 17 12		318 S 17		F-3536		08Ch16N-13M2B	S 31640	316 Nb	
		1.4581	G-X 5 CrNiMoNb 18 10	Z 4 CNDNb 18.12 M	GX 6 CrMoNb 20 11	42 2941	318 C 17			SCS 22				
		1.4583	X 10 CrNiMoNb 18 12		X 6 CrNiMoNb 17 13									318
		1.4821	X 15 CrNiSi 25-4	Z 20 CNS 25 04										
		1.4825	G-X 25 CrNiSi 18 9			42 2932								
		1.4826	G-X 40 CrNiSi 22 9			42 2934								
		1.4828	X 15 CrNiSi 20 12	Z 15 CNS 20.12		17 251	309 S 24			F-3312	SUH 309	20Ch20N 14S2	S 30900	309
		1.4832	G-X 25 CrNiSi 20 14											
		1.4876	X 10 NiCrAlTi 32 20	Z 10 NCAT 32-21 (Incoloy 800)		17 358	NA 15 (H)			F-3314	NCF 800			B 163
1.4878	X 12 CrNiTi 18 9	Z 6 CNT 18.12 (B)	X 6 CrNiTi 18 11	17 246	321 S 20	2337		SUS 321	12Ch18N 10T			321		

	Index	Material number	DIN	AFNOR	UNI	ČSN	BS	SIS	UNE	JIS	ГОСТ	UNS	USA		
M	M.1.1	1.4968	G-X 7 CrNiNb 16 13												
		1.4988	G-X 8 CrNiMoVNb 16 1												
		1.6901	G-X 8 CrNi 18 10												
		1.6902	G-X 6 CrNi 18 10												
		1.6905	G-X 5 CrNiNb 18 10												
	M.2.1	1.3964	G-X 4 CrNiMnMoN 19 1												
		1.4310	X 12 CrNi 17 7	Z 12 CN 17.07	X 12 CrNi 17 07			301 S 21			SUS 301		S 30100	301	
		1.4465	G-X 2 CrNiMoN 25 25												
		1.4536	G-X 2 NiCrMoCuN 25 2												
		1.4539	X 1 NiCrMoCu 25 20 5	Z2 NCDU 25 20 (Uranus B6)									N 08904	904L	
		1.4547	X 1 CrNiMoCuN 20 18 17	Z1 CNDU 20 18 06 Az (254 SMO)										F44	
		1.4568	X 7 CrNiAl 17 7											17-7 PH	
		1.4837	G-X 40 CrNiSi 25 12				42 2936								
		1.4840	G-X 15 CrNi 25 20												
		1.4841	X 15 CrNiSi 25 20	Z 15 CNS 25.20	X 16 CrNiSi 25 20	17 255				F-3310	SUH 310	20Ch25N 20S2	S 31000	314; 310	
		1.4845	X 12 CrNi 25 21	Z 12 CN 25.20	X 6 CrNi 26 20	17 255	310 S24	2361			SUH 310;		S 31008	310 S	
		1.4848	G-X 40 CrNiSi 25 20		GX 40 CrNi 26 20	42 2952									
		1.4849	G-X 40 NiCrSiNb 38 1												
		1.4852	G-X 40 NiCrNb 35 25												
		1.4855	G-X 30 CrNiSiNb 24 2												
		1.4857	G-X 40 NiCrSi 35 25												
		1.4864	X 12 NiCrSi 36 16	Z 12 NCS 37.18			17 253	NA 17		F-3313	SUH 330		N 08330	330	
		1.4865	G-X 40 NiCrSi 38 18		GX 50 NiCr 39 19			330 C 40			SCH 15; SCH 16				
		1.4871	X 53 CrMnNiN 21 9	Z 52 CMN 21.09	X 53 CrMnNiN 21 9			349 S 54		F-3217	SUH 35; SUH 36	55Ch-20G9AN4	S 63008	EV 8	
		1.4873	X 45 CrNiW 18 9	Z 35 CNWS 20.09	X 45 CrNiW 18 9			331 S 40			SUH 31				
	M.3.1	1.4339	G-X 32 CrNi 28 10												
		1.4347	G-X 8 CrNi 26 7												
		1.4410	X 2 CrNiMoN 25 7 4	Z2 CND 25 07 04 Az						F-3552				F53	
		1.4460	X 8 CrNiMo 27 5	Z5 CND 25 05 AZ					2324		SUS 329 J 1		S 32900	329 LN	
		1.4462	X 2 CrNiMoN 22 5 3	Z2 CND 22 05 03 AZ (Uranus 45 N)			17 381			F-3308			S 31803	329 A (F51)	
		1.4463	G-X 6 CrNiMo 24 8 2												
		1.4501	X 2 CrNiMoCuWN 25 7 4	Z2 CNDUW 25 07 04 Az (Zeron 100)									S 32760	F55	
		1.4815	G-X 8 CrNi 19 10												
1.4822		G-X 40 CrNi 24 5													
K	K.1.1	0.6010	GG-10	Ft 10 D	G 10	42 2410		01 10-00		FC 10	Sc 10		A48-20 B		
		0.6015	GG-15	Ft 15 D	G 15	42 2415	Grade 150	01 15-00	FG-15	FC 15	Sc 15		A48-25 B		
		0.6020	GG-20	Ft 20 D	G 20	42 2420	Grade 220	01 20-00	FG-20	FC 20	Sc 20		A48-30 B		
		0.6025	GG-25	Ft 25 D	G 25	42 2425	Grade 260	01 25-00	FG-25	FC 25	Sc 25		A48-40 B		
	K.1.2	0.6030	GG-30	Ft 30 D	G 30	42 2430	Grade 300	01 30-00	FG-30	FC 30	Sc 30		A48-45 B		
		0.6035	GG-35	Ft 35 D	G 35	42 2435	Grade 350	01 35-00	FG-35	FC 35	Sc 35		A48-50 B		
		0.6040	GG-40	Ft 40 D		42 2440	Grade 400	01 40-00			Sc 40		A48-60 B		
		0.6652	GGL-NiMn 13 7	L-NM 13 7			L-NiMn 13 7								
		0.6655	GGL-NiCuCr 15 6 2	L-NUC 15 6 2			L-NiCuCr 15 6 2						A 436 Type 1		
		0.6656	GGL-NiCuCr 15 6 3	L-NUC 15 6 3			L-NiCuCr 15 6 3						A 436 Type 1b		
		0.6660	GGL-NiCr 20 2	L-NC 20 2			L-NiCr 20 2	05 23-00					A 436 Type 2		
		0.6661	GGL-NiCr 20 3	L-NC 20 3			L-NiCr 20 3						A 436 Type 2b		
		0.6667	GGL-NiSiCr 20 5 3	L-NSC 20 5 3			L-NiSiCr 20 5 3						A 436 Type 3		
		0.6676	GGL-NiCr 30 3	L-NC 30 3			L-NiCr 30 3						A 436 Type 4		
		0.6680	GGL-NiSiCr 30 5 5	L-NSC 30 5 5			L-NiSiCr 30 5 5								
		K.2.1	0.7033	GGG-35.3				42 2303							
			0.7040	GGG-40	FGS 400-12	GS 400-12	42 2304	SNG 420/12	0717-02	FGE 38-17	FCD 40	VC 42-12			60 40 18

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<b>K</b>	<b>K.2.1</b>	0.7043	GGG-40.3	FGS 370-17	GS0 42/17	42 2314	SNG 370/17	0717-15			VC 42-12			
		0.7050	GGG-50	FGS 500-7	GS 500/7	42 2305	SNG 500/7	0727-02	FGE 50-7	FCD 50	VC 50-2		65-45-12	
		0.7060	GGG-60	FGS 600-3	GS 600/3	42 2306	SNG 600/3	0732-03		FCD 60	VC 60-2		80-55-06	
	<b>K.2.2</b>	0.7070	GGG-70	FGS 700-2	GS 700-2	42 2307	SNG 700/2	0737-01	FGS 70-2	FCD 70	VC 70-2		100-70-03	
		0.7080	GGG-80	FGS 800-2	GS 800-2	42 2308	SNG 800/2				VC 80-2		120-90-02	
		0.7652	GGG-NiMn 13 7	S-NM 13 7			S-NiMn 13 7							
		0.7660	GGG-NiCr 20 2	S-NC 20 2			S-NiCr 20 2						A 439 Type D-2	
		0.7661	GGG-NiCr 20 3	S-NC 20 3			S-NiCr 20 3						A 439 Type D-2B	
		0.7665	GGG-NiSiCr 20 5 2	S-NSC 20 5 2			S-NiSiCr 20 5 2							
		0.7670	GGG-Ni 22	S-N 22			S-Ni 22							A 439 Type D-2C
		0.7673	GGG-NiMn 23 4	S-NM 23 4			S-NiMn 23 4							A 439 Type D-2M
		0.7676	GGG-NiCr 30 3	S-NC 30 3			S-NiCr 30 3							A 439 Type D-3
		0.7677	GGG-NiCr 30 1	S-NC 30 1			S-NiCr 30 1							A 439 Type D-3A
		0.7680	GGG-NiSiCr 30 5 5	S-NSC 30 5 5			S-NiSiCr 30 5 5							A 439 Type D-4
		0.7683	GGG-Ni 35	S-N 35			S-Ni 35							A 439 Type D-5
		0.7685	GGG-NiCr 35 3	S-NC 35 3			S-NiCr 35 3							A 439 Type D-5B
		0.8065	GTW-65											
		<b>K.3.1</b>	0.8035	GTW-35-04				42 2536			GTW 35			
	0.8040		GTW-40-05				42 2540							
	0.8045		GTW-45-07											
	0.8055		GTW-55											
	0.8135		GTS-35-10	MN 35-10			42 2533	B 340/12		GTS 35				
	0.8145		GTS-45-06				42 2545	P 440/7		GTS 45				
	0.8155		GTS-55-04	MP 50-5			42 2555	P 510/4		GTS 55				
	0.8165	GTS-65-02	MP 60-3				P 570/3		GTS 65					
<b>K.3.2</b>	0.8170	GTS-70-02	IP 70-2				P 690/2		GTS 70					
<b>N</b>	<b>N.1.1</b>	3.3307	Al99.85Mg0.5											
		3.3308	Al99.9Mg0.5											
		3.3315	AlMg1	5005 (AlMg1)						L-3350				
		3.3316	AlMg1.5											
		3.3317	Al99.85Mg1											
		3.3318	Al99.9Mg1											
		3.3326	AlMg1.8											
		3.3523	AlMg2.5											
		3.3525	AlMg2Mn0.3											
		3.3527	AlMg2Mn0.8											
		3.3535	AlMg3	5754										
		3.3537	AlMg2.7Mn											
		3.3555	AlMg5	5056 A										
		3.3561	G-AlMg5											
		3.3591	G-AlMg10											
		3.0205	Al99	1200 (A4)	9001/1	42 4009				L-3001				
		3.0255	Al99.5	1050 A	9001/2	42 4004				L-3051				
		3.0275	Al99.7	1070 A		42 4003				L-3071				
		3.0285	Al99.8	1080 A (A8)		42 4002				L-3081				
		3.0305	Al99.9											
		3.0505	AlMn0.5Mg0.5											
		3.0506	AlMn0.6											
		3.0515	AlMn1			42 4432				L-3810				
3.0517	AlMnCu													
3.0525	AlMn1Mg0.5	3005												

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N	N.1.1	3.0526	AlMn1Mg1												
		3.0615	AlMgSiPb												
		3.0915	AlFeSi												
	N.1.2	3.2307	Al99.85MgSi												
		3.2315	AlMgSi1	6082	9006/4	42 4400								6082	
		3.3206	AlMgSi0,5	6060 (AGS)			42 4401			L-3441				6063	
		3.3208	Al99.9MgSi												
		3.3210	AlMgSi0.7	6005 A											
		3.3211	AlMg1SiCu	6061											
		3.3345	AlMg4.5												
		3.3545	AlMg4Mn	5086 (AG4MC)	9005/5					L-3322					5083
		3.3547	AlMg4,5Mn0,7	5083 (AlMg5Mn0,7)				N8		L-3321	A 5083				A95083
		3.3549	AlMg5Mn												
		3.4335	AlZn4,5Mg1	7020 (AZ5G)	9007/1	42 4441				L-3741					7020
		3.4337	Al99.8ZnMg												
		3.4345	AlZnMgCu0.5												
		3.4365	AlZnMgCu1.5	7075 (AZ5GU)			42 4222			L-3710					7075
		2.1086	G-CuSn10Zn												
		3.1255	AlCuSiMn	2014	9002/3										2014
		3.1305	AlCu2.5Mg0.5												
		3.1325	AlCuMg1	2017 A (AU4G)						L-3120					2017 A
		3.1355	AlCuMg2	2024 (AU4G1)	9002/4	42 4203				L-3140					2024
		3.1645	AlCuMgPb	2030 (AU4PB)			42 4254			L-3121					
	3.1655	AlCuBiPb	2011 (AU5PbBi)	9002/5					L-3192					2011	
		MFK													
	N.2.1	3.2581	G-AlSi12				42 4330								
		3.2583	G-AlSi12(Cu)				42 4330								
		3.3261	G-AlMg5Si				42 4515								
		3.3292	GD-AlMg9				42 4519								
		3.3541	G-AlMg3												
		3.3543	G-AlMg3(Cu)												
	N.2.2	3.2134	G-AlSi5Cu1Mg												
		3.2151	G-AlSi6Cu4				42 4357								
		3.2161	G-AlSi8Cu3												
		3.2341	G-AlSi5Mg												
		3.2371	G-AlSi7Mg				42 4334								
		3.2373	G-AlSi9Mg				42 4331								
		3.2381	G-AlSi10Mg				42 4331								
		3.2383	G-AlSi10Mg(Cu)				42 4331								
		3.3241	G-AlMg3Si												
		3.1371	G-AlCu4TiMg												
		3.1841	G-AlCu4Ti												
N.3.1	2.0040	OF-Cu				42 3000									
	2.0060	E-Cu57				42 3001									
	2.0065	E-Cu58				42 3001									
	2.0070	SE-Cu													
	2.0076	SW-Cu													
	2.0090	SF-Cu				42 3003									
	2.0220	CuZn5				42 3200									
	2.0230	CuZn10				42 3201									
2.0240	CuZn15				42 3202										

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N	N.3.1	2.0250	CuZn20			42 3203								
		2.0261	CuZn28											
		2.0265	CuZn30				42 3210							
		2.0280	CuZn33				42 3212							
		2.0321	CuZn37			C2700	42 3213							
		2.0335	CuZn36											
		2.0360	CuZn40				42 3220							
		2.0460	CuZn20Al2											
		2.0470	CuZn28Sn1											
		2.0510	CuZn37Al1				42 3231							
		2.0530	CuZn38Sn1				42 3237							
		2.0730	CuNi12Zn24											
		2.0740	CuNi18Zn20											
		2.0830	CuNi25											
		2.0842	CuNi44Mn1											
		2.0853	CuNi1.5Si											
		2.0855	CuNi2Si				42 3054							
		2.0857	CuNi3Si											
		2.0872	CuNi10Fe1Mn											
		2.0875	CuNi9Sn2											
		2.0882	CuNi30Mn1Fe											
		2.0883	CuNi30Fe2Mn2											
		2.0918	CuAl5As											
		2.0920	CuAl8											
		2.0932	CuAl8Fe3											
		2.0936	CuAl10Fe3Mn2											
		2.0960	CuAl9Mn2											
		2.0966	CuAl10Ni5Fe4											
		2.0971	CuAl9Ni3Fe2											
		2.1016	CuSn4											
		2.1020	CuSn6											
		2.1030	CuSn8											
		2.1080	CuSn6Zn6											
		2.1191	CuAg0.1P											
		2.1203	CuAg0.1											
		2.1245	CuBe1.7											
		2.1247	CuBe2											
		2.1293	CuCrZr				42 3039							
		2.1310	CuFe2P											
		2.1522	CuSi2Mn											
		2.1525	CuSi3Mn											
		Ampco 16	CuAl10Fe3											
		Ampco 18	CuAl10.5Fe3.5											
		Ampco 8	CuAl6.5Fe2.5Sn											
			Ampco 8-16											
		2.0331	CuZn36Pb1.5				42 3214							
2.0332	CuZn37Pb0.5													
2.0372	CuZn39Pb0.5				42 3221									
2.0540	CuZn35Ni2													
2.0550	CuZn40Al2													
2.0561	CuZn40Al1				42 3231									

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N	N.3.2	2.0572	CuZn40Mn1			42 3234								
		2.0580	CuZn40Mn1Pb											
		2.0780	CuNi12Zn30Pb1											
		2.0790	CuNi18Zn19Pb1											
		2.1498	CuSP											
		2.1504	NiAlBz											
		2.1546	CuTeP											
		Ampco 12	CuAl9Fe3											
		Ampco 20	CuAl11Fe4											
	N.3.3	2.0371	CuZn38Pb1.5				42 3222							
		2.0375	CuZn36Pb3											
		2.0380	CuZn39Pb2				42 3223							
		2.0401	CuZn39Pb3											
		2.0402	CuZn40Pb2				42 3223							
		2.0410	CuZn44Pb2											
		2.0490	CuZn31Si1											
		2.0500	CuZn23Al6Mn-4Fe3											
		2.0771	CuNi7Zn39Mn-5Pb3											
		2.0978	CuAl11Ni6Fe5											
		2.1093	G-CuSn6ZnNi											
		2.1096	G-CuSn5ZnPb											
		2.1285	CuCo2Be											
		Ampco 21	CuAl13Fe4.5											
		Ampco 22	CuAl14Fe5											
		Ampco 25												
		Ampco 26												
			Ampco 18-26											
	N.4.1	3.5101	G-MgZn4SE1Zr1											
		3.5102	G-MgZn5Th2Zr1											
		3.5103	G-MgSE3Zn2Zr1											
		3.5105	G-MgTh3Zn2Zr1											
		3.5106	G-MgAg3Se2Zr1											
		3.5200	MgMn2											
3.5312		MgAl3Zn												
3.5470		GD-MgAl4Si1												
3.5612		GD-MgAl6Zn1												
3.5662		G-MgAl6												
3.5812		G-MgAl8Zn1				42 4911								
3.5912		GD-MgAl9Zn1				42 4911								
S		S.1.2	1.4980	X 5 NiCrTi 26 15									S66286	
	S.2.1	1.3924	Ni54											
		1.3926	RNi12				42 3484							
		1.3927	RNi8				42 3484							
		2.4360	NiCu30Fe	Monel 400			42 3431							
		2.4610	NiMo16Cr16Ti	Hastelloy C-4										
		2.4617	NiMo28	Hastelloy B-2										
		2.4630	NiCr20Ti	Nimonic 75				HR 5						
		2.4668	NiCr19Fe18Nb5Mg	Inconel 718										
		2.4812	NiCr17Mo17FeW	Hastelloy C										
		2.4819	NiMo16Cr15W	Hastelloy C-276										
		2.4851	NiCr23Fe, Inconel 601	Inconel 601										



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S	S.2.1	2.4856	NiCr22Mo9Nb	Inconel 625										
		2.4858	NiCr21Mo				NA 16			NCF 825		N 08825		
		2.4951	NiCr20Ti	Nimonic 75			HR 5							
		2.4964	CoCr20W15Ni											
		2.4989	CoCr20NiW											
	S.2.2	2.4375	NiCu30Al	Monel K 500										
		2.4631	NiCr20TiAl	Nimonic 80 A				HR 401; 601			NCF 80 A		N 07080	
		2.4634	NiCo20Cr15MoAlTi	Nimonic 105										
		2.4640	NiCr15Fe	Inconel 600										
		2.4654	NiCr20Co13Mo- 4Ti4Al	Waspaloy										
		2.4662	NiCr13Mo6Ti3	Nimonic 901										
		2.4668	NiCr19Fe18Nb5Mg	Inconel 718										
		2.4816	NiCr15Fe	Inconel 600				NA 14			NCF 600		N 06600	
		2.4952	NiCr20TiAl	Nimonic 80 A										
		2.4973	NiCr19Co11MoTi											
		2.4983	NiCr18Co18MoAlTi	Udimet 500										
	S.2.3	2.4670	G-NiCr13Al6MoNb	Nimocast 713										
		2.4674	NiCo15Cr10MoAlTi	Nimocast PK 24										
		2.4979	CoCr28MoNi											
	S.3.1	3.7024	Ti99,5											
		3.7025	Ti99,8											
		3.7034	Ti99,7											
		3.7055	Ti99,4											
		3.7064	Ti99,2											
		3.7124	TiCu2											
	S.3.2	3.7114	TiAl5Sn2											
		3.7144	TiAl6Sn2Zr4Mo2											
		3.7154	TiAl6Zr5											
		3.7165	TiAl6V4	T-A 6 V				TA 10 – TA 13					R 56400	
		3.7174	TiAl6V6Sn2											
3.7184		TiAl4Mo4Sn2					TA 45 – TA 51							
H	H.1.1	1.2311	40 CrMnMo 7			19 520								
		1.2312	40 CrMnMoS 8 6	40 CMD 8 + S										
		1.2316	X 36 CrMo 17	Z 38 CD 17	X 38 CrMo 16 1 KU									
		1.2365	X 32 CrMoV 3 3	32 DCV 28	30 CrMoV 12 27 KU	19 541	BH 10			SKD 7	3Ch3M3F	T 20810	H 10	
		1.2567	X 30 WCrV 5 3	Z 32 WCV 5	X 30 WCrV 5 3 KU	19 720				SKD 4				
		1.2581	X 30 WCrV 9 3	Z 30 WCV 9	X 30 WCrV 9 3 KU	19 721	BH 21			SKD 5	3Ch2W8F	T 20821	H 21	
		1.2738	40 CrMnNiMo 8							F-5303				
		1.2885	X 32 CrMoCoV 3 3 3	30 DCKV 28										
		1.4028	X 30 Cr 13	Z 30 C 13	X 30 Cr 13	17 023	420 S 45	2304		SUS 420 J 2	30Ch13			
		1.4031	X 38 Cr 13	Z 40 C 14	X 40 Cr 14	17 024		2304	F-3404	SUS 420 J 2	40Ch13			
		1.4034	X 46 Cr 13	Z 40 C 14	X 40 Cr 14	17 029	420 S 45		F-3405		40Ch13			
		1.4112	X 90 CrMoV 18										S 44003	
		1.5122	37 MnSi 4				13 240							
		1.6358	X 2 NiCoMoTi 18 9 5											
		1.6582	34 CrNiMo 6	35 NCD 6	35 NiCrMo 6 (KW)	16 342	817 M 40	2541	F-128 / F-1270	SNCM 447	38Ch2N2MA			4340
		1.7003	38 Cr 2	38 C 2	38 Cr 2									
		1.7006	46 Cr 2	42 C 2	45 Cr 2									5045
		1.7030	28 Cr 4					530 A 30			30Ch			5130
		1.7176	55 Cr 3	55 C 3	55 Cr 3			527 A 60	2253	F-1431	SUP 9 (A)	50ChGA	G 51550	5155
		1.0961	60 SiCr 7	60 SC 7	60 SiCr 8						SUP 7			

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		1.1273	90 Mn 4												
	H.1.2	1.2083	X 42 Cr 13	Z 40 C 14	X 41 Cr 13 KU	19 435				F-5263	SUS 420 J 2				
		1.2323	GS-48 CrMoV 6 7												
		1.2343	X 38 CrMoV 5 1	Z 38 CDV 5	X 37 CrMoV 5 1 KU	19 552	BH 11			F-5317	SKD 6	4Ch5MFS	T 28811	H 11	
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		1.2550	60 WCrV 7	55 WC 20	55 WCrV 8 KU	19 735									
		1.2606	G-X 37 CrMoW 5 1												
		1.2711	54 NiCrMoV 6	55 NCDV 6		19 662									
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		1.4109	X 65 CrMo 14												
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		1.1157	40 Mn 4	35 M 5				150 M 36				40G	G 10390	1039	
		1.1231	Ck 67	XC 68	C 70	12 071	060 A 67	1770				70	G 10700	1070	
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			1.2162	21 MnCr 5	20 NC 5		19 487					SCR 420 H			
	1.2201		G-X 165 CrV 12												
	1.2210		115 CrV 3	100 C 3	107 CrV 3 KU	19 421							T 61202	L 2	
	1.2341		X 6 CrMo 4												
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	1.2419		105 WCr 6	105 WC 13	107 WCr 5 KU						SKS 31	ChWG			
	1.2601		X 165 CrMoV 12		X 165 CrMoW 12 KU	19 572		2310							
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	1.2842		90 MnCrV 8	90 MV 8	90 MnVCr 8 KU	19 314	B0 2						T 31502	O 2	
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		0.9625	G-X 330 NiCr 4 2					Grade 2 B	0513-00					A 532 I A NiCr-HC
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76 140 ...	Turning Tools	9 / 45	76 277 ...	Turning Tools	9 / 164	84 664 ...	Turning Tools	9 / 40
76 142 ...	Turning Tools	9 / 56	76 278 ...	Turning Tools	9 / 165	84 665 ...	Turning Tools	9 / 40
76 146 ...	Turning Tools	9 / 55	76 279 ...	Turning Tools	9 / 164	84 666 ...	Turning Tools	9 / 128
76 149 ...	Turning Tools	9 / 55	76 284 ...	Turning Tools	9 / 153	84 667 ...	Turning Tools	9 / 128
76 152 ...	Turning Tools	9 / 56	76 285 ...	Turning Tools	9 / 164	84 668 ...	Turning Tools	9 / 40
76 153 ...	Turning Tools	9 / 28	76 288 ...	Turning Tools	9 / 165	84 669 ...	Turning Tools	9 / 40
76 154 ...	Turning Tools	9 / 56	76 290 ...	Turning Tools	9 / 10	84 670 ...	Turning Tools	9 / 180
76 155 ...	Turning Tools	9 / 56	76 291 ...	Turning Tools	9 / 28	84 671 ...	Turning Tools	9 / 180
76 156 ...	Turning Tools	9 / 62	76 292 ...	Turning Tools	9 / 164	84 672 ...	Turning Tools	9 / 67
76 157 ...	Turning Tools	9 / 69	76 294 ...	Turning Tools	9 / 62	84 673 ...	Turning Tools	9 / 67
76 165 ...	Turning Tools	9 / 29	76 295 ...	Turning Tools	9 / 70	84 674 ...	Turning Tools	9 / 99
76 166 ...	Turning Tools	9 / 30	80 950 ...	Milling tools with indexable inserts	15 / 137	84 675 ...	Turning Tools	9 / 24
76 171 ...	Turning Tools	9 / 69	84 050 ...	Solid Carbide milling cutters	14 / 185	84 676 ...	Turning Tools	9 / 41
76 177 ...	Turning Tools	9 / 69	84 051 ...	Solid Carbide milling cutters	14 / 185	84 677 ...	Turning Tools	9 / 128
76 182 ...	Turning Tools	9 / 142	84 052 ...	Solid Carbide milling cutters	14 / 186	84 678 ...	Turning Tools	9 / 181
76 194 ...	Turning Tools	9 / 79	84 053 ...	Solid Carbide milling cutters	14 / 187	84 679 ...	Turning Tools	9 / 68
76 195 ...	Turning Tools	9 / 106	84 143 ...	Turning Tools	9 / 193	84 680 ...	Turning Tools	9 / 41
76 196 ...	Turning Tools	9 / 10	84 144 ...	Turning Tools	9 / 193	84 681 ...	Turning Tools	9 / 181
76 197 ...	Turning Tools	9 / 29	84 145 ...	Turning Tools	9 / 194	84 682 ...	Turning Tools	9 / 68
76 198 ...	Turning Tools	9 / 70	84 146 ...	Turning Tools	9 / 194	84 683 ...	Turning Tools	9 / 42
76 225 ...	Turning Tools	9 / 46	84 147 ...	Turning Tools	9 / 193	84 950 ...	Turning Tools	9 / 42
76 245 ...	Turning Tools	9 / 105	84 148 ...	Turning Tools	9 / 193			
76 246 ...	Turning Tools	9 / 105	84 159 ...	Turning Tools	9 / 191			
76 247 ...	Turning Tools	9 / 78	84 160 ...	Turning Tools	9 / 191			
76 248 ...	Turning Tools	9 / 78	84 161 ...	Turning Tools	9 / 191			
76 249 ...	Turning Tools	9 / 79	84 162 ...	Turning Tools	9 / 191			
76 250 ...	Turning Tools	9 / 79	84 163 ...	Turning Tools	9 / 192			
76 251 ...	Turning Tools	9 / 78	84 164 ...	Turning Tools	9 / 192			
76 252 ...	Reaming and Countersinking	4 / 54	84 165 ...	Turning Tools	9 / 192			
76 252 ...	Turning Tools	9 / 79	84 166 ...	Turning Tools	9 / 192			

# ISO designation system

ISO attribute	Feature Description
<b>A</b>	
ADJRG	Adjustment range
ADJRGR	Adjustment range radial
ALP	Clearance angle axial
AN	Clearance angle major
APMX	Depth of cut maximum
<b>B</b>	
B	Shank width
BD	Body diameter
BD_1	Body diameter, 1st cutting step
BD_2	Body diameter, 2nd cutting step
BD_3	Body diameter, 3rd cutting step
BD_4	Body diameter, 4th cutting step
BDRED	Body diameter, reduced
BDX	Body diameter maximum
BHTA	Body half taper angle
BN	Face land width
BS	Wiper edge length
BTED	Body taper end diameter
<b>C</b>	
CDX	Cutting depth maximum
CF	Central flat
CHW	Corner chamfer width
CHWTL	Flank chamfer width left hand
CLDIS_1	centre line distance 1
CLDIS_2	centre line distance 2
CLDIS_3	centre line distance 3
CND	Coolant entry diameter
CNT	Coolant entry, thread size
CODX	Parting off diameter, max.
CRE	Spot radius
CRKS	Pull stud thread size
CW	Cutting width
CXD	Coolant exit diameter
<b>D</b>	
D1	Fixing hole diameter
DAXN	Axial groove outside diameter minimum
DAXX	Axial groove outside diameter maximum
DC	Cutting diameter
DC_1	Cutting diameter, 1st cutting step
DC_2	Cutting diameter, 2nd cutting step
DCD	Cutting diameter drilling part
DCINTF	Interference cutting diameter
DCN	Cutting diameter minimum
DCONMS	Mounting spigot diameter
DCONWS	Connection diameter workpiece side
DCONWS_1	Connection diameter workpiece side 1
DCONWS_2	Connection diameter workpiece side 2
DCSKX	Countersunk diameter, max
DCX	Cutting diameter maximum
DF	Flange diameter
DFC	Functional diameter
DHUB	Hub diameter
DLN	Diameter lock nut
DMIN	Minimum bore diameter
DN	Neck Diameter
DRVS	Drive size

ISO attribute	Feature Description
<b>G</b>	
GAN	Insert rake angle
GB	Face land angle
<b>H</b>	
H	Shank height
HDD	Head diameter
HDW	head width
HF	Functional height
HLN	Lock nut height
HSUP	Support height
<b>I</b>	
IC	Inscribed circle diameter
IH	Insert hand
INSL	Insert length
<b>K</b>	
KAPR	Tool cutting edge angle
KCH	Corner chamfer angle
<b>L</b>	
L	Cutting edge length
L_1	Cutting edge length 1
L_2	Cutting edge length 2
L_3	Cutting edge length 3
LB	Body length
LB_1	Body length 1
LB_2	Body length 2
LCF	Length chip flute
LCOL	Collet length
LDRED	Reduced body diameter length
LE	Cutting edge effective length
LF	Functional length
LF_1	Functional length 1
LF_2	Functional length 2
LF_3	Functional length 3
LFSF	Distance to face
LH	Head length
LPCON	Connection protruding length
LPR	Protruding length
LS	Shank length
LSC	Clamping length machine side
LSCN	Clamping length minimum machine side
LSCX	Clamping length maximum machine side
LTA	length tool assembly
LU	Usable length
LUX	Usable length maximum
<b>M</b>	
MXC_R	Clamping force maximum
<b>N</b>	
NOF	Flute count
NT	Tooth count
<b>O</b>	
OAH	Overall height
OAL	Overall length
OAW	Overall width

Continued on next page

## ISO designation system

ISO attribute	Feature Description
<b>P</b>	
PDPT	Profile depth insert
PDX	Profile distance ex
PDY	Profile distance ey
PHD	Premachined hole diameter
PL	Point length
PLGL	Plug length
PNA	Profile included angle
PRFA	Profile angle
PRFRAD	Profile radius
PRFRAD1	Profile radius 1
PRFRAD2	Profile radius 2
PRFRAD3	Profile radius 3
PSIR	Tool lead angle
<b>R</b>	
RA	Relief angle
RADH	Radial height
RADW	Radial width
RADWOF	Radial offset width
RAR	Relief angle rh
RCSK	Radius countersunk
RE	Corner radius
RE_1	Corner radius 1
RE_2	Corner radius 2
RE_3	Corner radius 3
REL	Corner radius left hand
RETL	Flank radius left hand
RETR	Flank radius right hand
RPMX	Rotational speed maximum
<b>S</b>	
S	Insert thickness
S1	Insert thickness total
SD	Step distance
SDL	Step diameter length
SDL_1	Step diameter length 1
SDL_2	Step diameter length 2
SZID	nominal size
<b>T</b>	
THID	Thread designation inside
THL	Thread cutting part length
THOD	Thread designation outside
THSZMS	Connection thread nominal size
THSZWS	Connection thread nominal size workpiece side
TP	Thread pitch
TPI	Threads per inch
TQX	Torque maximum
<b>W</b>	
W1	Insert width
WF	Functional width
WF2	Functional width 2
WT	Weight of item
<b>Z</b>	
ZEFP	Peripheral effective cutting edge count
ZNF	Face mounted insert count
ZNP	Peripheral mounted insert count









