

Technical Information Material Groups

ISO	VDI 3323	Material Description	Composition / Structure / Heat Treatment		HB	HRC	Examples
P	1	Non-alloyed steel	About 0.15% C	Annealed	125		S15C, C15, 1015
	2		About 0.45% C	Annealed	190	13	S45C, C45, 1045
	3		About 0.45% C	Quenched & Tempered	250	25	
	4		About 0.75% C	Annealed	270	28	SK5, CK75, 1080
	5		About 0.75% C	Quenched & Tempered	300	32	
	6	Low-alloyed Steel		Annealed	180	10	SCM440, 42CrMo4, 410
	7			Quenched & Tempered	275	29	
	8			Quenched & Tempered	300	32	
	9			Quenched & Tempered	350	38	
	10	High-alloyed steel, and tool steel		Annealed	200	15	SKD, D2
	11			Quenched & Tempered	325	35	SKH, SUH, M42
M	12	Stainless Steel	Ferritic / Martensitic	Annealed	200	15	SUS 420, X40Cr13, 420
	13		Martensitic	Quenched & Tempered	240	23	
	14		Austenitic		180	10	
K	15	Grey cast iron	Pearlitic / Ferritic		180	10	FC, GG, EN-GJL-250
	16		Pearlitic (Martensitic)		260	26	
	17	Nodular cast iron	Ferritic		160	3	FCD, GGG, EN-GJS-500-7
	18		Pearlitic		250	25	
	19	Malleable cast iron	Ferritic		130		FCMW, FCMF, GTS, GJMB350-10
20	Pearlitic			230	21		
N	21	Aluminum-wrought alloy	Not Curable		60		SAE 1000, AlMg 1, 3.3315
	22		Curable	Hardened	100		SAE 7050, AlCuMg 1, 3.1325
	23	Aluminum-cast, alloyed	≤ 12% Si, Not Curable		75		ADC12, G-AlSi12, 3.2581
	24		≤ 12% Si, Curable	Hardened	90		C4BS, G-AlSi10Mg, 3.2381
	25		> 12% Si, Not Curable		130		
	26		Cutting Alloys, PB>1%		110		CuZn36Pb 3, 2.0375
	27	Copper and copper alloys (Bronze / Brass)	CuZn, CuSnZn (Brass)		90		CuZn 15, 2.0240
	28		CuSn, lead-free copper and electrolytic copper		100		G-CuZn40Fe, 2.0590
	29	Non-metallic materials	Duroplastic, Fiber Reinforced Plastic				CFRP
	30		Rubber, Wood, etc.				
S	31	Heat resistant super alloys	Fe Based	Annealed	200	15	X12 NiCrSi 36-16, 1.4864
	32			Aged	280	30	
	33			Annealed	250	25	Inconel 718, NiCr20TiAl, 2.4631
	34		Ni or Co Based	Aged	350	38	NiCu30Al, 2.4375
	35			Cast	320	34	G-X120Mn12, 1.3401
H	36	Titanium alloys	Pure Titanium		400 Rm		
	37		Alpha + Beta Alloys	Hardened	1050Rm		TiAl6V4, 3.7165
H	38	Hardened steel		Hardened	550	55	SK3
	39			Hardened	630	60	
	40	Chilled cast iron	Cast	400	42		
	41	Hardened cast iron	Hardened	550	55		

Technical Information Material Groups

Mat'l No.	JIS	DIN	Material Description			Composition / Structure / Heat Treatment					HB	HRC
			VDI 3323	Non-alloyed steel	About 0.15% C, Annealed							
Mat'l No.	JIS	DIN	AISI/ASTM/SAE	BS	EN	AFNOR	SS	UNI	UNE / IHA	UNS	GOST	Brands
1.0037	STKM 12 C	St 37-2	-	4360 40 B	S235JR	E24-2	1311	Fe 360 B			16D	
1.0038	STKM 12 A	St 37-3	A570.36	4360 40 C	S275J2G3	E28-3	1312	Fe 360 DFF			ST14KP	
1.0045	SM 490 YA	S 355 JR	-	-	S 1207	E36-2	-	Fe 510 BFN				
1.0050	SS 50	St 50-2	A570 Gr. 50	4360 50 B	E 295	A50-2	2172	Fe 490			ST3PS	
1.0060	SM 58	St 60-2	A572 Gr. 65	4360 55 E	-	A60-2	1650	Fe 60-2			ST6PS	
1.0114		S 235 J0	-	En 40C	S 235 J0	E24-3		Fe 360 CFN				
1.0143		S 275 J0	-	-	S 275 J0	E28-3	1414	Fe 430 C				
1.0144	SM41C, SM400	St 44-3 N	A573 Gr. 81	4360 43C	S 275 J2 G3	E28-3	1412	Fe 430 DFF			ST14KP	
1.0149		Ro St 44-2	-	43C	S 275 J0 H	-	1412	Fe430C				
1.0301	S10C	C10	1010	045M10	C10	34C10, XC10		C10	F.1511	G10100	10	
1.0330	SPCC	St 12	-	DC 01	Fe P01	DC 01/Fe P01	1142	Fe P01			15KP	
1.0335	SPHE	DD 13 (SW 24)	A622(1008)	H 5.3	DD 13	3C		FeP13			08KP	
1.0338	SPCE	St 4	A620(1008)	14491CR	Fe P04	Fe 14	1147	DC04/FeP04			08JU	
1.0345	SPV 50	P235 GH	A516 Gr. 65	P 235 GH	P 235 GH	A 37 CP	1330	Fe E 235			K02503	
1.0401	S15C	C15	1015	080M15	-	C18RR, XC18	1350	C15, C16	F.1110	G10170	15	
1.0402	S20C	C22	1020	050 A 20	1 C 22	C20	1450	C 20	F.1120	G10200	20	
1.0425	SPV315	P265GH/HII				A42CP	1430	Fe4101KW			K02801	16K
1.0443	SC 450	GS-45	A2765-35	A1		E23-45M	1305					
1.0539		S355NH				TSE355-4	2134	Fe510B				
1.0545		S355N		4360-50E		E355R	2334	FeE355KG				
1.0546		S355NL		4360-50EE		E355FP	2135	FeE355KT				
1.0547		S355J0H		4360-50C		TSE355-3	2172	Fe510C				
1.0549		S355NLH					2135	Fe510D				
1.0553	SM 520 M	S152-3U	A14880-40	4360-50C		320-560M	1606	Fe510C				
1.0562	SM490A	St E 355	A633 Gr. C	P 355 N		FeE355KGN	2132	Fe E 355 KG			K12000	15GF
1.0565		W St E 355		P 355 NH		P 355 NH	2106	Fe E 355 KW			K01600	
1.0566	SLA 37	T St E 355		P 355 NL1		P 355 NL1	2107	Fe E 355 KT				
1.0570	SM 50 YA	St 52-3	1	4360-50 C	S355JR	E36-3	2172	Fe 510 B			17G15	
1.0715	SUM22	95Mn28	1213	230M07		S250	1912	CF5Mn28	F.2111	G12130		
1.0718	SUM22L	95MnPb28	12L13			S250Pb	1914	CF95MnPb28	F.2112	G12134		
1.0721		10S20	1108	10S20		10S20		CF10S20	F.2121	G11080		
1.0722		10SPb20	11L08			10PbF2		CF10SPb20	F.2121	G11084		
1.0736	SUM25	95Mn36	1215			S300		CF9Mn36	F.2113	G12150		
1.0737		95MnPb36	12L14			S300Pb	1926	CF95MnPb36	F.2114	G12144		
1.0972		S315MC		1501-40F30		E315D						
1.0976		S355MC		1501-43F35		E355D	2642	FeE355TM				
1.0982		S460MC		1501-50F45								
1.0984		S500MC				E490D	2662	FeE490TM				
1.0986		S500MC		1501-60F55		E560D		FeE560TM				
1.1121	S10C	CK10	1010	040A10		XC10	1265	C10	F.1510	G10100	10	
1.1141	S15	CK15	1015	040A15	32C	XC15	1370	C15	F.1110	G10150	15	
1.1151	S20C	CK2E	1020	055M15		2C22	1450	C20	F.1120	G10230	20	
1.8900	S25C	StE380	A572-60	436055E			2145	FeE390KG				
		St44-2	A36	436043A		NFA35-501E28	1411					
		StE320-3Z		1501160			1421					

Technical Information Material Groups

P	VDI 3323 2		Material Description Non-alloyed steel			Composition / Structure / Heat Treatment About 0.45% C, Annealed					HB 190	HRc 13
	Mat'l No.	JIS	DIN	AISI/ASTM/SAE	BS	EN	AFNOR	SS	UNI	UNE / IHA	UNS	GOST
1.0501	S35C	C35	1035	080A32		1C35	1572	C35	F.113	G10350	35	
1.0503	S45C	C45	1045	060A47		XC42H1TS	1672	C45	F.114	G10450	45	
1.0511	S40C	C40	1040	080M40		1C40		C40	F.114.A	G10400	40	
1.0540	S50C	C50					1674	C50		G10500		
1.0551		GS-52	A2770-36	A2		280-480M	1505					
1.0553	SM520M	S152-3U	A14880-40	4360-50C		320-560M	1606	Fe510C				
1.0577		S355J2G4	A738	Fe 510 D 2 FF		A52FP	2107					
1.0726		35520	1140	212M36	8M	35MF6	1957			G11400	40	
1.0727		45520	1146			45MF4	1973			G11460		
1.1157		40Mn4	1039	150M36	15	40M5				G10390	40G	
1.1158	S25C	C25E	1025	070M25		XC25		C25	F.1120	G10250	25	
1.1166	SMn433H	34Mn5	1536						TO.B	G15360		
1.1167	SMn438(H)	36Mn5	1335	150M36		40M5	2120	36Mn6	F.1203	G13350	35G2	
1.1170	SCMn1	28Mn6	1330	150M28	14A	20M5		C28Mn	28Mn6	G13300	30G	
1.1178	S30C	C30E		080M30		XC32		C30	2C30	G10300		
1.1180		C35R	1035	080A35		3C35	1572		F.1135	G10350		
1.1181	S35C	C35E	1035	080A35		XC38	1572	C36	F.1130	G10340	35	
1.1191	S45C	Cl45	1045	080A46		XC45	1672	C45	F.1140		45	
1.1206	S50C	C50E	1050	080M50		2C50	1674	C50		G10500	50	
1.1213	S50C	C53	1050	070M55		XC48HTS	1674	C53		G10500	50	

P	VDI 3323 3		Material Description Non-alloyed steel			Composition / Structure / Heat Treatment About 0.45% C, Annealed					HB 250	HRc 25
	Mat'l No.	JIS	DIN	AISI/ASTM/SAE	BS	EN	AFNOR	SS	UNI	UNE / IHA	UNS	GOST
1.0481	SG365	17 Mn 4/P 295 GH	A516 Gr. 70	224-460B	P 295 GH	A 48 CP	2102	Fe E 295	A47RC1	K03501	14G2	
1.0501	S35C	C35	1035	080A32		1C35	1572	C35	F.1130	G10350	35	
1.0503	S45C	C45	1045	060A47		XC42H1TS	1672	C45	F.1140	G10450	45	
1.0614		C76D	1074			XC75				G10750		
1.0616		C86D	1086			XC80		C85		G10860		
1.0618		C92D	1095			XC90				G10950		
1.0726		35520	1140	212M36	8M	35MF6	1957			G11400	40	
1.1157		40Mn4	1039	150M36	15	40M5				G10390	40G	
1.1165	SMn433H	30Mn5	1036	120M36		35M5		30Mn5	F8211	K13300	30G2	
1.1167	SMn438(H)	36Mn5	1335	150M36		40M5	2120	36Mn6	F.1203	G13350	35G2	
1.1186	S40C	C40E	1040	060A40		2C40		C40		G10400		
1.1191	S45C	Cl45	1045	080M46		2C45	1672	C45	F.1140		45	
1.1201	S50C	C45R	1049	080M46		3C45	1660	C45	F.1145		38HM	
1.1213	S50C	C53	1050	070M55		XC48HTS	1674	C53		G10500	50	
1.7242	SCM 418 H	18CrMo4										
1.7337		16CrMo4-4	A387 Gr.12			A18CrMo45KW				K11564	15C M	
1.7362	SCMV 6	12CrMo195		3606-625		Z10CD5-05		16CrMo205		K41545		
		17MnV6	A572-60	43605E		NFA35-501E36	2142					

Technical Information Material Groups

P	VDI 3323 4		Material Description Non-alloyed steel			Composition / Structure / Heat Treatment About 0.75% C, Annealed					HB 270	HRc 28	
	Mat'l No.	JIS	DIN	AISI/ASTM/SAE	BS	EN	AFNOR	SS	UNI	UNE / IHA	UNS	GOST	Brands
1.0603	S70C-CSP	C67	107	080A67			XC65		C67		G10700		
1.0605		C75	1075	144980HS					C75		G10740	75	
1.1203	S55C	Cl55	1055	060A57			2C55	1655	C55	F.1150	G10550	55	
1.1209		C55R	1055	070M55			3C55		C55	F.1155	G10550		
1.1221	S58C	Cl60	1060	060A62	43D		2C60	1678	C60	F.1150	G10640	60	
1.1231	S70C-CSP	C67E	1070	060A67			XC68	1770	C70	F.5103	G10700	65GA	
1.1248	C75	C75E	1074	060A78			XC75	1774	C75	F.5107	G10800	75(A)	
1.1269	SK5-CSP	C85E	1086				XC90		C90		G10900	85(A)	
1.1274	SUP4	Cl101	1095	060A96	C1005		XC100	1870	C100	F.5117	G10950		
1.1545	SK3	C105W1	W1	BW2	C105U		Y1105	1880	C100KU	F.5118		U10A	
1.1663	SK2	C125W	W112				Y2120					U13	

P	VDI 3323 5		Material Description Non-alloyed steel			Composition / Structure / Heat Treatment About 0.75% C, Quenched & Tempered					HB 300	HRc 32	
	Mat'l No.	JIS	DIN	AISI/ASTM/SAE	BS	EN	AFNOR	SS	UNI	UNE / IHA	UNS	GOST	Brands
1.0070		St70-2	1055	Fe690-2FN	-		A70-2	1655	Fe690	F.1150		55	
1.0535	S55C	C55	1055	070M55			1C55	1655	C55		J05000	55	
1.0601	S58C	C60	1060	060A62	43D		1C60		C60		G10600	60(G)	
1.1203	S55C	Cl55	1055	060A57			2C55	1655	C55	F.1150	G10550	55	
1.1221	S58C	Cl60	1060	060A62	43D		2C60	1678	C60	F.1150	G10640	60	
1.1274	SUP4	Cl101	1095	060A96	C1005		XC100	1870	C100	F.5117	G10950		
1.1545	SK3	C105W1	W1	BW2	C105U		Y1105	1880	C100KU	F.5118		U10A	
1.1663	SK2	C125W	W112				Y2120					U13	
1.5120		38MnSi4											
1.5710	SNC236	36NiCr6	3135	640A35	111A		35NC6						
1.7701		51CrMoV4								51CrMoV4			

Technical Information Material Groups

Mat'l No.	JIS	DIN	AISI/ASTM/SAE	BS	EN	Composition / Structure / Heat Treatment					HB	HRC	
						AFNOR	SS	UNI	UNE / IHA	UNS			Material Description
P			VDI 3323	6	Low-alloyed Steel					Annealed		180	10
1.0116		St 37-3	A570 Gr.36	4360-40C	S 235 J2 G3	E24-3	1312	Fe 360 D1(2)	AE235D		ST3KP		
1.0904	SKH 1, SKT 4	55Si7	92S5	250A53	45	55S7	2085	55Si8	56S7	G92550	55S2		
1.0961	SUP 7	60SiCr7	9262			60SC6		60SiCr8	60SiCr8	G92620			
1.2067		100Cr6	L3	BL3		Y100C6			100Cr6				
1.2108		90CrSi5	L1				2092	105WCR5					
1.2210		115CrV3	L2			100C3		107CrV3KU	F.520L		11KHF		
1.2241		51CrV4											
1.2330	SCM435TK	35CrMo4	4135	708A37		34CD4	2234	35CrMo4			35KHM		
1.2419	SKS31	105WC6		105WC13		105WC13	2140	10WC6			CWG		
1.2510	SKS3	100MnCrW4	O1	BO1		90 MWCV 5	2140	95 MnCr 5 KU	F.5220		9KHVG		
1.2542		45WCrV7	S1	BS1			2710	45WCrV8KU			5CW25F		
1.2550		60WCrV7	S1			55WC20	2710	58WCr9KU			5KHV25F		
1.2713	SKT4	55NiCrMoV6	L6			55NCDV7			F.5205		5C NM		
1.2721		50NiCr13	L6			55NCV6	2550		F.528				
1.2842		90MnCrV8	O2	BO2		90MV8			T31502		9G2F		
1.3501		100Cr2	E50100										
1.3505	SUJ2	100Cr6	52100	25135	31	100C6	2258	100Cr6	F.1310		SC C 15		
1.5024		46Si7				45S7		46Si7	F.1451				
1.5025		51Si7	9259H		50Si7	51S7	2090	50Si7	F.1450				
1.5026		55Si7			56Si7	55S7	2085	55Si7	F.1440	G92550	55S2		
1.5027		60Si7	9260	251A60	60Si7	60S7		60Si7	F.1441	G92600	60S2		
1.5028	SUP7	65Si7	9260H										
1.5415	STFA 12	15Mo3	A204GrA	1503-243B		15D3	2912	16Mo3(KG)	F.2601	K11820			
1.5419	SCPH11	20Mo4	4419	1503-243-430		2512		G20Mo5	G44190				
1.5423	SB450M	16Mo5	4520	1503-245-420				16Mo5(KG)	F.2602	K11522			
1.5622		14Ni6	A350-LF5			16N6		14Ni6(KG)	F.2641				
1.5732	SNC415(H)	14NiCr10	3415			14NC11		16NiCr11					
1.5752	SNC815(H)	14NiCr14	3310	655M13	36A	12NC15					20X2HA4		
1.6511	SUP10	36CrNiMo4	9840	816M40	110	40NCD3		36NiCrMo4(KB)			40CN2MA		
1.6523	SNCM220(H)	21NiCrMo2	8620	805M20	362	20NCD2	2506	20NiCrMo2			20C GNM		
1.6546	SNCM240	40NiCrMo2-2	8740	311-Tyre7				40NiCrMo2(KB)			38C GNM		
1.6566		17NiCrMo6-4											
1.6587		17CrNiMo6		820A16		18NCD6		14NiCrMo13					
1.6657		10NiCrMo13-4						14NiCrMo131					
1.7015	SCr415(H)	10Cr3	5015	523M15		12C3				G50150	15C		
1.7033	SCr430(H)	34Cr4	5132	530A32	18B	32C4		34Cr4(KB)		G51300	35C		
1.7035	SCr440(H)	41Cr4	5140	530M40	18	42C4	2245	41Cr4		G51400	40H		
1.7131	SCR 415	16MnCr5	5115	527M17		16MC5	2511	16MnCr5		G51150	12KHN2		
1.7139		16MnCr55					2127				18HG		
1.7176	SUP9(A)	55Cr3	5155	527A60	48	55C3	2253	55Cr3			50C GA		
1.7218	SCM420	25CrMo4	4130	CDS110		25CD4	2225	25CrMo4(KB)			20C M		
1.7220	SCM432	34CrMo4	4135	708 A 37		35CD4	2234	34CrMo4			35C M		
1.7223	SNB22-1	41CrMo4	4142					41CrMo4			40C FA		
1.7225	SCM 440 (H)	42CrMo4	4140	708 M 40	42 CrMo 4	42 CD 4	2244	42 CrMo 4	F.1252		38HM		
1.7228		55NiCrMoV6G		823M30	33		2512	653M31					
1.7262	SCM415(H)	15CrMo5				12CD4	2216	12CrMo4					
1.7321		20mCr4					2625						
1.7335	SCM415(H)	13CrMo4-4	A182-F11	1501-620		15CD4-5	2216	14CrMo45			12C M		
1.7361		32CrMo12		722M24	40B	30CD12	2240	30CrMo12	F.124A				
1.7380		10CrMo9-10	A182F22	1501-622		12CD9-10	2218	12CrMo9			12KH8		

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Mat'l No.	JIS	DIN	AISI/ASTM/SAE	BS	EN	Composition / Structure / Heat Treatment					HB	HRC	
						AFNOR	SS	UNI	UNE / IHA	UNS			Material Description
P			VDI 3323	6	Low-alloyed Steel					Annealed		180	10
1.7715		14MoV6-3						1503-660-440			13MoCrV6		
1.8159	SUP 10	50CrV4	6150	735A50	47	50CrV4	2230	50CrV4		G61500	50C GFA		
1.8161		58CrV4											
1.8509	SACM 645	41CrAlMo7	A355A	905M39	41B	40CAD6-12	2940	41CrAlMo7					
1.8523		39CrMoV13-9		897M39	40C						36CrMoV12		

Mat'l No.	JIS	DIN	AISI/ASTM/SAE	BS	EN	Composition / Structure / Heat Treatment					HB	HRC	
						AFNOR	SS	UNI	UNE / IHA	UNS			Material Description
P			VDI 3323	7	Low-alloyed Steel					Quenched & Tempered		275	29
1.5415	STFA 12	15Mo3	A204GrA	1503-243B		15D3	2912	16Mo3(KG)	F.2601	K11820			
1.5423	SB450M	16Mo5	4520	1503-245-420				16Mo5(KG)	F.2602	K11522			
1.5622		14Ni6	A350-LF5			16N6		14Ni6(KG)	F.2641				
1.5732	SNC415(H)	14NiCr10	3415			14NC11		16NiCr11					
1.5752	SNC815(H)	14NiCr14	3310	655M13	36A	12NC15					20X2HA4		
1.5755	SNC236	31NiCr14	3310	655M13	36A	18NC13	2534		F.1270				
1.6565	SNCM447	40NiCrMo6	4340	817M40	24	35NCD6	2541	35NiCrMo6(KB)			38C 2N2MA		
1.6587		17CrNiMo6		820A16		18NCD6		14NiCrMo13					
1.6657		10NiCrMo13-4						14NiCrMo131					
1.6957		26NiCrMoV14-5											
1.7015	SCr415(H)	10Cr3	5015	523M15		12C3				G50150	15C		
1.7262	SCM415(H)	15CrMo5				12CD4	2216	12CrMo4					
1.7335	SCM415(H)	13CrMo4-4	A182-F11	1501-620		15CD4-5	2216	14CrMo45			12C M		
1.7380		10CrMo9-10	A182F22	1501-622		12CD9-10	2218	12CrMo9			12KH8		
1.7715		14MoV6-3						1503-660-440			13MoCrV6		
1.7733		24CrMoV55				20CDV6		21CrMoV511					
1.7755		GS-45CrMoV10-4											
1.8070		21CrMoV511						35NiCr9					

Mat'l No.	JIS	DIN	AISI/ASTM/SAE	BS	EN	Composition / Structure / Heat Treatment					HB	HRC	
						AFNOR	SS	UNI	UNE / IHA	UNS			Material Description
P			VDI 3323	8	Low-alloyed Steel					Quenched & tempered		300	32
1.1730		C45W3	C45W								XC48		
1.2332	SCM(440)	47CrMo4	4142	708M40	19A	42CD4	2244	42CrMo4					
1.5736	SNC 631 (H)	36NiCr10	3435			30NC11							
1.6523	SNCM220(H)	21NiCrMo2	8620	805M20	362	20NCD2	2506	20NiCrMo2			20C GNM		
1.7033	SCr430(H)	34Cr4	5132	530A32	18B	32C4		34Cr4(KB)		G51300	35C		
1.7218	SCM420	25CrMo4	4130	CDS110		25CD4	2225	25CrMo4(KB)			20C M		
1.8515		32CrMo12		722M24	40B	30CD12	2240	32CrMo12	F.124A				

Technical Information Material Groups

Mat'l No.	JIS	DIN	Material Description			Composition / Structure / Heat Treatment					HB	HRC	
			AISI/ASTM/SAE	BS	EN	Quenched & Tempered							
1.0904	SKH 1, SKT 4	55Si7	9255	250A53	45	55S7	2085	55Si8		G92550	55S2		
1.0961	SUP 7	60SiCr7	9262			60SC6		60SiCr8		G92620			
1.2067		100Cr6	L3	BL3		Y100C6		100Cr6					
1.2419	SKS31	105WC6		105WC13		105WC13	2140	10WC6			CWG		
1.2542		45WCr7	S1	B51			2710	45WCrV8KU			5CW25F		
1.2713	SKT4	55NiCrMoV6	L6						F5205		5C NM		
1.4882		X50CrMnNiNbN219				Z50CMNNb21-09							
1.5120		38MnSi4											
1.5710	SNC236	36NiCr6	3135	640A35	111A	35NC6							
1.5755	SNC236	31NiCr14		830m31		18NC13	2534		F1270				
1.6511	SUP10	36CrNiMo4	9840	816M40	110	40NCD3		36NiCrMo4(KB)			40C N2MA		
1.6546	SNCM240	40NiCrMo2-2	8740	311-Tyre7				40NiCrMo2(KB)			38C GNM		
1.7035	SCr440(H)	41Cr4	5140	530M40	18	42C4	2245	41Cr4		G51400	40H		
1.7176	SUP9(A)	55Cr3	5155	527A60	48	55C3	2253	55Cr3			50C GA		
1.7220	SCM432	34CrMo4	4135	708Aa37		35CD4	2234	34CrMo4			35C M		
1.7223	SNB22-1	41CrMo4	4142					41CrMo4			40C FA		
1.7225	SCM 440 (H)	42CrMo4	4140	708 M 40	42 CrMo 4	42 CD 4	2244	42 CrMo 4	F1252		38HM		
1.7361		32CrMo12		722M24	40B	30CD12	2240	30CrMo12	F124A				
1.8159	SUP 10	50CrV4	6150	735A50	47	50CrV4	2230	50CrV4	51CrV4	G61500	50C GFA		
1.8161		58CrV4											
1.8509	SACM 645	41CrAlMo7	A355A	905M39	41B	40CAD6-12	2940	41CrAlMo7					
1.8523		39CrMoV13-9		897M39	40C			36CrMoV12					

Mat'l No.	JIS	DIN	Material Description			Composition / Structure / Heat Treatment					HB	HRC	
			AISI/ASTM/SAE	BS	EN	Annealed							
1.0347	SPCD	RRSt 3	A619	CR 3	Fe P03	F 13		DC03/FeP03			08JU		
1.0723	SUM32	15S22		210A15			1922		F210F				
1.2080	SKD1	X210Cr12	D3	BD3	X210Cr12	Z200C12		X205Cr12KU		T30403	KH12		
1.2162	SCR 420 H	21MnCr5				20MCS							
1.2311		40CrMnMo7				40CMD8		35CrMnO8KU					
1.2312		40CrMnMoS8.6	P20+S			40CMD8S							
1.2316		X36CrMo17			X38CrMo16								
1.2343	SKD 6	X38CrMoV5-1	H11	BH11		Z38CDV5		X37CrMoV51KU		T20811	4C 5MFS		
1.2344	SKD61	X40CrMoV5-1	H13	BH13		Z40CDV5	2242	X40CrMoV511KU	F5318	T20813	4C 5MFI5		
1.2363	SKD12	X100CrMoV5-1	A2	BA2		Z100CDV5	2260	X100CrMoV51KU	F5227		9KH5VF		
1.2363	SKD12	X100CrMoV5-1	A2	BA2		Z100CDV5	2260	X100CrMoV51KU	F5227		9KH5VF		
1.2379	SKD11	X155CrVMo121	D2	BD2		Z160CDV12	2310	X165CrMoW12KU		T30402	KH12MF	KRUPP2379	
1.2436	SKD 2	X210CrW12	D4(D6)	BD6		Z200CD12	2312	X215CrW121KU	F5213		KH12		

[NEXT PAGE](#)

Technical Information Material Groups

Mat'l No.	JIS	DIN	Material Description			Composition / Structure / Heat Treatment					HB	HRC	
			AISI/ASTM/SAE	BS	EN	Annealed							
1.2510	SKS3	100MnCrW4	O1	BO1		90MWCV 5	2140	95MnWCr 5 KU	F5220		9KHVG		
1.2581	SKD5	X30WCrv9-3	H21	BH21		Z30WCv9		X30WCv93KU	F526	T20821	3C 2W8F		
1.2601		X165CrMoV12					2310	X160CrMoV12			KH12MF		
1.2606	SKD 62	X37CrMoW51	H12	BH12		Z35CWdV5		X35CrMoW05KU	F537	T20812	5C NM		
1.2764		X19NiCrMo4											
1.2767		X45NiCrMo4				45NCD16		40NiCrMoV8KU					
1.2842		90MnCrV8	O2	B02		90MV8		90MnVCr8KU		T31502	9G2F		
1.3243	SKH55	S6-5-2-5	T15			KCV06-05-05-04-02	2723	H56-5-2-5			R6M5K5		
1.3249	SKH 3	S18-1-2-5	T4	BT4		Z80WKCV18-05-04					R18K5F2		
1.3343	SKH51, SKH9	S6-5-2	M2	BM2		Z85WDCV	2722	H5652	F5604		R6M5		
1.3348	SKH 58	S2-9-2	M7			Z100DCWV09-04-02	2782	H5292	F5607				
1.3355	SKH2	S18-0-1	T1	BT1		Z80WCv18-4-01					R18		
1.4718	SUH1	X45CrSi9-3	HNv3	401545	52	Z45CS9		X45CrSi8	F322		40C 952		
1.5662	SL9N60(53)	X8Ni9	ASMA353	502-650		9Ni		X10Ni9	F2645				
1.5680		12Ni19	2515	12Ni19		Z18N5							

Mat'l No.	JIS	DIN	Material Description			Composition / Structure / Heat Treatment					HB	HRC	
			AISI/ASTM/SAE	BS	EN	Quenched & Tempered							
1.2080	SKD1	X210Cr12	D3	BD3	X210Cr12	Z200C12		X205Cr12KU		T30403	KH12		
1.2344	SKD61	X40CrMoV5-1	H13	BH13		Z40CDV5	2242	X40CrMoV511KU	F5318	T20813	4C 5MFI5		
1.2363	SKD12	X100CrMoV5-1	A2	BA2		Z100CDV5	2260	X100CrMoV51KU	F5227		9KH5VF		
1.2436	SKD 2	X210CrW12	D4(D6)	BD6		Z200CD12	2312	X215CrW121KU	F5213		KH12		
1.2581	SKD5	X30WCrv9-3	H21	BH21		Z30WCv9		X30WCv93KU	F526	T20821	3C 2W8F		
1.2601		X165CrMoV12					2310	X160CrMoV12			KH12MF		
1.2714	SKT 4	55NiCrMoV7	6F3/L6						F5205		5KHNV		
1.3202		S12-1-4-5		BT15							HS12-1-5-5		
1.3207		S10-4-3-10		BT42		Z130WKCDV							
1.3243	SKH55	S6-5-2-5	T15			KCV06-05-05-04-02	2723	H56-5-2-5			R6M5K5		
1.3246		S7-4-2-5	M35			Z110WKCDV07-05-04		H57-4-2-5					
1.3247	SKH 51	S2-10-1-8	M42	BM42		Z110DKCW09-08-04		H52-9-1-8			R2AM9K5		
1.3255	SKH 3	S18-1-2-5	T4	BT4		Z80WKCV18-05-04					R18K5F2		
1.3343	SKH51, SKH9	S6-5-2	M2	BM2		Z85WDCV	2722	H5652	F5604		R6M5		
1.3348	SKH 58	S2-9-2	M7			Z100DCWV09-04-02	2782	H5292	F5607				
1.3355	SKH2	S18-0-1	T1	BT1		Z80WCv18-4-01					R18		
1.4718	SUH1	X45CrSi9-3	HNv3	401545	52	Z45CS9		X45CrSi8	F322		40C 952		
1.4935	SUH 616	X20CrMoWV121	422							S42200			
1.5680		12Ni19	2515	12Ni19		Z18N5							

Technical Information
Material Groups

Technical Information
Material Groups

TURNING

PARTING & GROOVING

MILLING

DRILLING

TECHNICAL INFORMATION

TURNING

PARTING & GROOVING

MILLING

DRILLING

TECHNICAL INFORMATION

Table with columns: M, VDI 3323 12, Material Description (Stainless steel), Composition / Structure / Heat Treatment (Ferritic / Martensitic, Annealed), HB (200), HRC (15), and a detailed table of material specifications including JIS, DIN, AISI/ASTM/SAE, BS, EN, AFNOR, SS, UNI, UNE / IHA, UNS, GOST, and Brands.

Table with columns: M, VDI 3323 13, Material Description (Stainless steel), Composition / Structure / Heat Treatment (Martensitic, Quenched & Tempered), HB (240), HRC (23), and a detailed table of material specifications including JIS, DIN, AISI/ASTM/SAE, BS, EN, AFNOR, SS, UNI, UNE / IHA, UNS, GOST, and Brands.

Table with columns: M, VDI 3323 14, Material Description (Stainless steel), Composition / Structure / Heat Treatment (Austenitic), HB (180), HRC (10), and a detailed table of material specifications including JIS, DIN, AISI/ASTM/SAE, BS, EN, AFNOR, SS, UNI, UNE / IHA, UNS, GOST, and Brands.

Technical Information Material Groups

Mat'l No.	JIS	DIN	Material Description			Composition / Structure / Heat Treatment					HB	HRc
			AISI/ASTM/SAE	BS	EN	AFNOR	SS	UNI	UNE / IHA	UNS		
K VDI 3323 15 Grey cast iron Pearlitic / Ferritic 180 10												
0.6010	FC100	GG10	A48 20 B	Grade 100	GJL-100	Ft 10 D	0100	G10	FG10		Sc 10	
0.6015	FC150	GG15	A48 25 B	Grade 150	GJL-150	Ft 15 D	0115	G15	FG15		Sc 15	
0.6020	FC200	GG20	A48 30 B	Grade 220	GJL-200	Ft 20 D	0120	G20	FG20	W06020	Sc 20	
0.6025	FC250	GG25	A48 40 B	Grade 260	GJL-250	Ft 25 D	0125	G25	FG25		Sc 25	
0.6660		GGL-NiCr 20.2	1050/700/7	Grade F2	GJLA-XNiCr 20-2	L-NC 202	0523	-		F41002	Ni-Resist 2	
1.4449	SUS317	X5CrNiMo17133	317	317S16				X5CrNiMo1815		S31700	ATI 317	

Mat'l No.	JIS	DIN	Material Description			Composition / Structure / Heat Treatment					HB	HRc
			AISI/ASTM/SAE	BS	EN	AFNOR	SS	UNI	UNE / IHA	UNS		
K VDI 3323 16 Grey cast iron Pearlitic (Martensitic) 260 26												
0.6025	FC250	GG25	A48 40 B	Grade 260	GJL-250	Ft 25 D	0125	G25	FG25		Sc 25	
0.6030	FC300	GG30	A48 45 B	Grade 300	GJL-300	Ft 30 D	0130	G30	FG30		Sc 30	
0.6035	FC350	GG35	A48 50 B	Grade 350	GJL-350	Ft 35 D	0135	G35	FG35		Sc 35	
0.6040	FC400	GG40	A48 60 B	Grade 400	GJL-400	Ft 40 D	0140	G40	FC40		Sc 40	

Mat'l No.	JIS	DIN	Material Description			Composition / Structure / Heat Treatment					HB	HRc
			AISI/ASTM/SAE	BS	EN	AFNOR	SS	UNI	UNE / IHA	UNS		
K VDI 3323 17 Nodular cast iron Ferritic 160 3												
0.7033	FCD350-22L	GGG35.3	-	350/22L40	GJS-350-22-LT	FGS 370-17	0717-15	-				
0.7040	FCD400	GGG40	60-40-18	SNG 420-12	GJS-400-15	FCS 400-12	0717-02	GS 400-12	FG E38-17	F32800	Vc 42-12	
0.7043	FCD 370	GGG40.3	60-40-18	SNG 370-17	GJS-400-18-LT	FGS 370-17	0717-12	GSO 42-17			Vc 42-12	
0.6040	FC400	GG40	A48 60 B	Grade 400	GJL-400	Ft 40 D	0140	G40	FC40		Sc 40	

Mat'l No.	JIS	DIN	Material Description			Composition / Structure / Heat Treatment					HB	HRc
			AISI/ASTM/SAE	BS	EN	AFNOR	SS	UNI	UNE / IHA	UNS		
K VDI 3323 18 Nodular cast iron Pearlitic 250 25												
0.7050	FCD500	GGG50	80-55-06	SNG 500-7	GJS-500-7	FGS 500-7	0727-02	GS 500-7	FG E50-7	F33100	Vc 50-2	
0.7060	FCD600	GGG60	80-55-06	SNG 600-3	GJS-600-3	FGS 600-3	0732-03	GS 600-3	FG E60-2		Vc 60-2	
0.7070	FCD700	GGG70	100-70-03	SNG 700-2	GJS-700-2	FGS 700-2	0737-01	GS 700-2	FG S70-2	F34800	Vc 70-2	
0.7652	FCDANiMn 13.7	GGG NiMn 13.7	-	Grade 56	GJSA-XNiMn 13-7	FGS Ni13 Mn7	0772	-			Nodumag	
0.7660		GGG NiCr 20.2	A436 D2	Grade 52	GJSA-XNiCr 20-2	FGS Ni20 Cr2	0776	-			Ni-Resist D-2	

Technical Information Material Groups

Mat'l No.	JIS	DIN	Material Description			Composition / Structure / Heat Treatment					HB	HRc
			AISI/ASTM/SAE	BS	EN	AFNOR	SS	UNI	UNE / IHA	UNS		
K VDI 3323 19 Malleable cast iron Ferritic 130												
0.8135	FCMW330	GTS-35	32510	B 340-12	GJMB350-10	MN 35-10	0815	GMN 35	GTS35		Kc 35-10	

Mat'l No.	JIS	DIN	Material Description			Composition / Structure / Heat Treatment					HB	HRc
			AISI/ASTM/SAE	BS	EN	AFNOR	SS	UNI	UNE / IHA	UNS		
K VDI 3323 20 Malleable cast iron Pearlitic 230 21												
0.8145	FCMW370	GTS-45	A220-40010	P 440-7	GJMB450-6	MN 450	0852	GMN 45				
0.8155	FCMP490	GTS-55	50005	P 510-4	GJMB-550-4	MP 50-5	0854	GMN 55			Kc 60-3	
0.8165	FCMP590	GTS-65	70003	P 570-3	GJMB-650-2	MN 650-3	0856	GMN 65				
0.8170	FCMP690	GTS-70	90001	P 690-2	GJMB-700-2	MN 700-2	0862	GMN 70			Kc 70-2	

Technical Information Material Groups

Mat'l No.	JIS	DIN	AISI/ASTM/SAE	BS	EN	AFNOR	SS	UNI	UNE / IHA	UNS	GOST	Brands	N	VDI 3323 21	Material Description Aluminum-wrought alloy	Composition / Structure / Heat Treatment Not Curable	HB 60	HRc
3.0255	(A1050)	Al99.5	1000	L31		A59050C					D1							
3.3315		AlMg1																

Mat'l No.	JIS	DIN	AISI/ASTM/SAE	BS	EN	AFNOR	SS	UNI	UNE / IHA	UNS	GOST	Brands	N	VDI 3323 22	Material Description Aluminum-wrought alloy	Composition / Structure / Heat Treatment Curable, Hardened	HB 100	HRc
3.1655	A2011	AlCuSiPb																
3.2315		AlMgSi1										AK9						
3.4345		AlZnMgCuO.5	7050	L86		AZ4GU/9051				811-04								
3.4365	7075	AlZnMgCu1.5	7075	7075		7075		AlZn5.8MgCuCr			B95							

Mat'l No.	JIS	DIN	AISI/ASTM/SAE	BS	EN	AFNOR	SS	UNI	UNE / IHA	UNS	GOST	Brands	N	VDI 3323 23	Material Description Aluminum-cast, alloyed	Composition / Structure / Heat Treatment ≤ 12% Si, Not Curable	HB 75	HRc
3.2382		GD-AlSi10Mg																
3.2383		G-AlSi0Mg(Cu)	A360.2	LM9				4253										
3.2581		G-AlSi12																
3.3561		G-AlMg5																
3.5101		G-MgZn4sE1Zr1	ZE41	MAG5														
3.5103		MgSE3Zn27r1	EZ33	MAG6		G-TR3Z2												
3.5812		G-MgAl8Zn1	AZ81	NMAG1														
3.5912		G-MgAl9Zn1	AZ91	MAG7														
			A356-72	2789		NFA32-201												
A5052			356.1	LM25				4244			AK7							
		G-AlSi12	A413.2	LM6				4261										
ADC12		G-AlSi12(Cu)	A413.1	LM20				4260			AK12							
A6061		GD-AlSi12	A413.0					4247										
A7075		GD-AlSi8Cu3	A380.1	LM24				4250										

Technical Information Material Groups

Mat'l No.	JIS	DIN	AISI/ASTM/SAE	BS	EN	AFNOR	SS	UNI	UNE / IHA	UNS	GOST	Brands	N	VDI 3323 24	Material Description Aluminum-cast, alloyed	Composition / Structure / Heat Treatment ≤ 12% Si, Curable, Hardened	HB 90	HRc
3.1754		G-AlCu5Ni1.5																
3.2371		G-AlSi7Mg	4218B									AK8						
3.2373	C4BS	G-AlSi9MgWA	SC64D			A-S7G	4251					AK9						
3.2381		G-AlSi10Mg										AK12						
3.5106		G-MgAg3SEZr1	QE22	mag12														
		G-ALMG5	GD-AISI12	LM5		A-SU12	4252											

Mat'l No.	JIS	DIN	AISI/ASTM/SAE	BS	EN	AFNOR	SS	UNI	UNE / IHA	UNS	GOST	Brands	N	VDI 3323 26	Material Description Copper and Copper Alloys (Bronze / Brass)	Composition / Structure / Heat Treatment Cutting alloys, PB>1%	HB 110	HRc
2.1090		G-CuSn75pb	C93200			U-E7Z5pb4												
2.1096		G-CuSn5ZnPB	c83600	LG2														
2.1098		G-CuSn2Znpb	C83600															
2.1182		G-CuPb15Sn	C23000	LB1		U-pb15E8												

Mat'l No.	JIS	DIN	AISI/ASTM/SAE	BS	EN	AFNOR	SS	UNI	UNE / IHA	UNS	GOST	Brands	N	VDI 3323 27	Material Description Copper and copper alloys (Bronze / Brass)	Composition / Structure / Heat Treatment CuZn, CuSnZn (Brass)	HB 90	HRc
2.0321		CuZn37	C27200	cz108		CuZn36,CuZn37		C2700				L63						
2.0590		G-CuZn40Fe																
2.0592		G-CuZn35Al1	C86500	U-Z36N3		HTB1												
2.0596		G-CuZn34Al2	C86200	HTB1		U-Z36N3						LTs23AD						
2.1293		CuCrZr	C18200	CC102		U-Cr0-8Zr												

Mat'l No.	JIS	DIN	AISI/ASTM/SAE	BS	EN	AFNOR	SS	UNI	UNE / IHA	UNS	GOST	Brands	N	VDI 3323 28	Material Description Copper and copper alloys (Bronze / Brass)	Composition / Structure / Heat Treatment CuSn, lead-free copper and electrolytic copper	HB 100	HRc
2.0966		CuAl10Ni5Fe4	C63000	Ca104		U-A10N						BrAD						
2.0975		G-CuAl10Ni	B-148-52															
2.1050		G-CuSn10	c90700	CT1														
2.1052		G-CuSn12	C90800	pb2		UE12P												
2.1292		G-CuCrF35	C81500	CC1-FF														

Technical Information Material Groups

Mat'l No.	JIS	DIN	Material Description			Composition / Structure / Heat Treatment					HB	HRc
			AISI/ASTM/SAE	BS	EN	AFNOR	SS	UNI	UNE / IHA	UNS		
S VDI 3323 31 Heat resistant super alloys Fe Based, Annealed HB 200 HRc 15												
1.4558	NCF 800 TB	X2NiCrAlTi3220	N08800	NA15								
1.4562		X1NiCrMoCu32287	N08031									
1.4563		X1NiCrMoCu31274	N08028		Z1NCDU31-27-03	2584					EK77	
1.4864	SUH330	X12NiCrSi36-16	330	NA17	Z12NCS37-18						N08330	
1.4865	SCH15	GX40NiCrSi38-18		330C40			XG50NiCr3919				J94605	
1.4958		XSNiCrAlTi3120										

Mat'l No.	JIS	DIN	Material Description			Composition / Structure / Heat Treatment					HB	HRc
			AISI/ASTM/SAE	BS	EN	AFNOR	SS	UNI	UNE / IHA	UNS		
S VDI 3323 32 Heat resistant super alloys Fe Based, Aged HB 280 HRc 30												
1.4977		X40CoCrNi2020				Z42CNKDOWNb						

Mat'l No.	JIS	DIN	Material Description			Composition / Structure / Heat Treatment					HB	HRc
			AISI/ASTM/SAE	BS	EN	AFNOR	SS	UNI	UNE / IHA	UNS		
S VDI 3323 33 Heat resistant super alloys Ni or Co Based, Annealed HB 250 HRc 25												
2.4360		NiCu30Fe		NA13		NU30					N04400	Monel400
2.4603		NiCr30FeMo	5390A			NC22FeD						Hastelloy G-30
2.4610		NiMo16Cr16Ti									N26455	Hastelloy C-4
2.4630		NiCr20Ti		HRS,203-4		NC20T					N06075	Nimonic75
2.4631	NCF 80A	NiCr20TiAl		Hr40		NC20TA					N07080	KHN77TYuR Nimonic 80A
2.4642	NCF 690	NiCr29Fe				Nnc30Fe					N06690	Inconel 690
2.4856		NiCr22Mo9Nb		NA21		NC22FeDnb					N06625	Inconel 625
2.4858		NiCr21Mo		NA16		NC21FeDU					N08825	KHN38VT Incoloy 825

Mat'l No.	JIS	DIN	Material Description			Composition / Structure / Heat Treatment					HB	HRc
			AISI/ASTM/SAE	BS	EN	AFNOR	SS	UNI	UNE / IHA	UNS		
S VDI 3323 34 Heat resistant super alloys Ni or Co Based, Aged HB 350 HRc 38												
2.4375		NiCu30Al	4676	NA18		NU30AT					N05500	Monelk500
2.4662		NiFe35Cr14MoTi	5660			Z5NCDT42					N09901	Incoloy 901
2.4668		NiCr19Fe19NbMo	5383	HR8		NC19eNB					N07718	Inconel 718
2.4670		S-NiCr13Al16MoNb	5391	Mar-46		NC12AD						Nimocast 713
2.4694		NiCr16Fe7TiAl									N07751	Inconel 751
2.4955		NiFe25Cr20NbTi										
2.4964		CoCr20W15Ni	5772			KC20WN						Haynes 25
		CoCr22W14Ni	AMS 5772			KC22WN						

Technical Information Material Groups

Mat'l No.	JIS	DIN	Material Description			Composition / Structure / Heat Treatment					HB	HRc
			AISI/ASTM/SAE	BS	EN	AFNOR	SS	UNI	UNE / IHA	UNS		
S VDI 3323 35 Heat resistant super alloys Ni or Co Based, Cast HB 320 HRc 34												
2.4669		NiCr15Fe7TiAl									NC15TNbA	N07750 Inconel X750
2.4685		G-NiMo28										N10665 Hastelloy B
2.4810		G-NiMo30										Hastelloy C
2.4973		NiCr19Co11MoTi	AMS 5399								NC19KDT	VT5-1
3.7115		TiAl5Sn2										VT1-00 ATI Grade 6

Mat'l No.	JIS	DIN	Material Description			Composition / Structure / Heat Treatment					HB	HRc
			AISI/ASTM/SAE	BS	EN	AFNOR	SS	UNI	UNE / IHA	UNS		
S VDI 3323 36 Titanium alloys Pure Titanium HB 400 Rm												
2.4674		NiCo15Cr10MoAlTi	AMS 5397									N13100 IN 100
3.7025		Ti1	R50250	2TA1								R50250 ATI30 CP Gr.1
3.7225		Ti1pd	R52250	TP1								R52250

Mat'l No.	JIS	DIN	Material Description			Composition / Structure / Heat Treatment					HB	HRc
			AISI/ASTM/SAE	BS	EN	AFNOR	SS	UNI	UNE / IHA	UNS		
S VDI 3323 37 Titanium alloys Alpha + Beta Alloys, Hardened HB 1050 Rm												
3.7124		TiCu2				2TA21-24						
3.7145		TiAl6Sn2Zr4Mo2Si	R54620									R54620
3.7165		TiAl6V4	AMS R56400	TA10-13			T-A6V					VT6
3.7185		TiAl4Mo4Sn2		TA45-51								
3.7195		TiAl3V2.5										R56320 ATI 3-2.5
		TiAl4Mo4Sn4Si0.5										
		TiAl5Sn2.5	AMS R54520	TA14/17			T-A5E					
		Ti6Al4VELI	AMS R56401	TA11								

Technical Information

Material Groups

TURNING

PARTING & GROOVING

MILLING

DRILLING

TECHNICAL INFORMATION

H		VDI 3323 38	Material Description			Composition / Structure / Heat Treatment					HB	HRc
			Hardened steel			Hardened					550	55
Mat'l No.	JIS	DIN	AISI/ASTM/SAE	BS	EN	AFNOR	SS	UNI	UNE / IHA	UNS	GOST	Brands
1.1231	S70C-CSP	Ck67	1070	060 A 67	C 67S	XC 68	1770	C 70	F5103		70	
1.1248	C75	Ck75	1078, 1080	060 A 78	C 75S	XC 75	1774	C 75	F5107		75	
1.1274	SUP 4	Ck 101	1095	060 A 96	C 100S	XC100	1870	C100	F5117			
1.1545	SK 3	C 105 W1	W1	BW 2	C 105U	Y1 105	1880	C 100 KU	F5118		U10A	
1.2762		75CrMoNiW67	-	-	-	-	-	-	-			
1.3401	SCMnH1	GX120Mn12	A128(A)			Z120M12	2183	GX120Mn12	F8251		110G13L	
1.4021	SUS 420 J1	X 20 Cr 13	420	420 S 37	X 20 Cr 13	Z 20 C 13	2303	X 20 Cr 13	F5261		20KH13	ATI 420
1.4109	SUS 440 A	X 65 CrMo 14	440 A	-	X 70 CrMo 15	Z 70 D 14	-	-				ATI 440A
1.4112	SUS 440 B	X 90 CrMoV 18	440 B	409 S 19	X 90 CrMoV 18	Z 2 CND 18 05	2327	X CrTi 12				
1.4125	SUS 440 C	X 105 CrMo 17	440 C	-	X 105 CrMo 17	Z 100 CD 17	-	X 105 CrMo 17			95KH18	ATI 440C
1.6746		32NiCrMo14-5	-	832M31	32nCrMo145	35NCD14	-	-				
1.7176	SUP9(A)	55Cr3	5155	527A60	48	55C3	2253	55C3				
1.7225	SCM 440 (H)	42CrMo4	4140	708 M 40	42 CrMo 4	42 CD 4	2244	42 CrMo 4	F.1252		38HM	

H		VDI 3323 40	Material Description			Composition / Structure / Heat Treatment					HB	HRc
			Chilled cast iron			Cast					400	42
Mat'l No.	JIS	DIN	AISI/ASTM/SAE	BS	EN	AFNOR	SS	UNI	UNE / IHA	UNS	GOST	Brands
0.9620		GX260NiCr42	A532 IB	Grade 2 A	GJN-HV520	FB N4 C2 BC	0512	-		F45001		Ni-Hard2
0.9625		GX330NiCr42	A532 IA	Grade 2 B	GJN-HV550	FB N4 C2 HC	0513	-		F45000		Ni-Hard1
0.9630		GX300 CrNiSi9 5 2	A532 ID	Grade 2 C	GJN-HV600	FB Cr9 Ni5	0457	-		F45003		Ni-Hard 4
0.9640		GX300CrMoNi1521	-	-	-	-	-	-		F45005		
0.9650		GX260Cr27	-	Grade 3 D	-	-	0466	-				
0.9655		GX300CrNiMo271	-	Grade 3 E	-	-	-	-			20C25N20S2	
1.4841	SUH 310	X15CrNiSi25-20	310	314S31	X 15 CrNiSi 25 20	Z15CNS25-20	-	-		S31400		Cronifer 2520

H		VDI 3323 41	Material Description			Composition / Structure / Heat Treatment					HB	HRc
			Hardened cast iron			Hardened					550	55
Mat'l No.	JIS	DIN	AISI/ASTM/SAE	BS	EN	AFNOR	SS	UNI	UNE / IHA	UNS	GOST	Brands
0.9635		GX300 CrMo 15 3	-	-	-	-	-	-				
0.9645		GX260 CrMoNi 20 21	-	-	-	-	-	-		F45007		