Complete Machining Solutions
MATERIALS AND GRADES

Member IMC Group

ISCAR

ISCAR Milling Grades Chart

Grades	ISO	Coating Layers
IC300	P20-P40 M20-M35 S15-S30	TiCN
IC328	P25-P40 M30-M40 S20-S30	TiCN
S.T. IC330	P25-P40 M30-M40 S20-S30	TiN TiCN
S.T. IC380	S15-S20 H15-H25	TiN TiCN
IC608	P10-P20 M10-M20 K10-K25 H15-H25	TiSiN TiAlSiN AlTiN
S.T. IC808	P15-P30 M20-M30 K20-K30 S10-S25 H20-H30	TiN AlTiN
S.T. IC810	K15-K35 P15-P30	TiN AlTiCrN
S.T. IC830	P20-P40 M25-M35 S15-S30	TiN AlTiN
S.T. IC840	M20-M35 S15-S25	TiSiN TiAlSiN AlTiN
S.T. IC845	P25-P45	TiN AlTiN
S.T. IC882	M25-M40 S20-S30	TiSiN TiAlSiN AlTiN
IC900	P15-P30 M20-M30 K20-K30 S10-S25 H20-H30 AL-TEC	AlTiN
IC902	P05-P15 M10-M15 K05-K15 S05-S10 H05-H15 AL-TEC	AlTiN
IC903	H10-H20 P10-P20 M15-M25 K10-K20 S10-S20 AL-TEC	AlTiN
IC908	P15-P30 M20-M30 K20-K30 S10-S25 H20-H30	TiAlN
IC910	P15-P30 K15-K35 AL-TEC	AlTiN
IC928	P20-P40 M25-M35 S15-S30	TiAlN

S.T. SUMO TEC | PVD COATED | CVD COATED | UNCOATED | CERMET | CBN | PCD | SILICON NITRIDE

Recommended Applications
A tough submicron TiCN **PVD** coated grade. Suitable for milling heat resistant alloys, austenitic stainless steel and steel at unfavorable conditions, at low to medium cutting speeds.
A TiCN **PVD** coated tough grade. Used for a wide range of workpiece materials, at low to medium cutting speeds.
A TiCN **PVD** coated tough grade. Used for milling, grooving, parting and drilling a wide range of workpiece materials, at low to medium cutting speeds.
A tough submicron substrate, TiCN **PVD** coated and a special surface treatment. Designed for machining titanium and heat resistant alloys, austenitic stainless steel, at medium to high cutting speeds, interrupted cut and unfavorable conditions. Excellent notch wear and built-up edge resistance. High resistance to mechanical and thermal shock – therefore milling with coolant may be applied.
Tough submicron substrate with hard **PVD** coating. Suitable for milling hardened steel (45-60 HRC), alloy steel and stainless steel at moderate to high cutting speed.
A tough submicron substrate, AlTiN **PVD** coated multi-purpose grade. Designed for machining hard alloy and carbon steel, heat resistant alloys and austenitic stainless steel, at medium to high cutting speeds, interrupted cut and unfavorable conditions. Excellent notch wear and built-up edge resistance.
A PVD AlTiCrN coated grade. First choice for milling nodular cast iron at medium to high cutting speeds.
A PVD AlTiN coated tough grade. Suitable for milling steel, stainless steel and high temperature alloys. Recommended for interrupted cut and heavy operations.
A hard multilayered **PVD** coating with tough substrate. For successful milling of stainless steel, titanium and high-temperature alloys.
A PVD AlTiN coated tough substrate. This grade recommended for milling steel at moderate to high cutting speeds and for interrupted applications.
A hard multilayered **PVD** coating with tough substrate. For successful milling of stainless steel, titanium and high-temperature alloys espicaly for interrupted applications.
A tough, submicron **PVD** AlTiN coated grade. Suitable for milling heat resistant alloys, austenitic stainless steel, hard alloys and carbon steel at medium to high cutting speeds.
Ultra-fine grain carbide with AlTiN **PVD** coating. Used for up to 62 HRC hardened steel, titanium, nickel-based alloys and stainless steel at high speeds and medium feeds
A carbide grade with ultra-fine grain substrate and AlTiN **PVD** coating. Used for up to 62 HRC hardened steel, titanium, nickel-based alloys and stainless steel at high speeds and medium feeds. A tough and highly wear resistant grade.
A tough submicron substrate, TiAlN **PVD** coated multi-purpose grade. Designed for machining carbon steel and austenitic stainless steel, at medium to high cutting speeds, interrupted cut and unfavorable conditions. Excellent notch wear and built-up edge resistance.
A PVD AlTiN coated grade. Suitable for milling nodular cast iron at medium to high cutting speeds.
A PVD TiAlN coated tough grade. Suitable for milling alloy steel, stainless steel. Recommended for interrupted cut and heavy operations.

ISCAR Milling Grades Chart

Grades	ISO		Coating Layers
S.T. IC5100	K10-K25	a-TEC	TiN, Al_2O_3, TiCN
S.T. IC5400	P01-P20 M10-M25		TiN, Al_2O_3, TiCN
S.T. IC5500	P20-P35		TiN, Al_2O_3, TiCN
S.T. IC5820	M20-M35 S15-S25		TiN, Al_2O_3, TiCN
DT7150 CVD+PVD COATED	K10-K25 H20-H30	DO-TEC	AlTiN, TiN, Al_2O_3, TiCN
IC07	M10-M20 S10-S30 N05-N20		
IC08	N10-N20		
IC30N	P10-P30 M10-M20 H10-H25		
IB55	K05-K15 H10-H25		
IB85	K01-K15 H05-H10 S05-S10		
ID5	N01-N10		
IS8 SILICON NITRIDE	K01-K15		

S.T. SUMO TEC ■ PVD COATED ■ CVD COATED ■ UNCOATED ■ CERMET ■ CBN ■ PCD ■ SILICON NITRIDE

Recommended Applications
A tough substrate with a **MTCVD** and TiCN/Al_2O_3 coating. Recommended for milling grey cast iron at high cutting speeds, providing extended tool life.
A tough substrate with a **MTCVD** and alpha Al_2O_3 coating. Recommended for milling steel at high cutting speed providing excellent tool life.
A tough substrate with a **MTCVD** and alpha Al_2O_3 coating. Recommended for milling martensitic stainless steel at high cutting speed.
A tough substrate with a **MTCVD** and alpha Al_2O_3 coating and a special surface treatment. Designed for machining austenitic stainless steel, titanium and high temperature alloys, especially for applying high-pressure coolant (**HPC**) supply.
A tough substrate with a dual **MTCVD** Al_2O_3 and TiAlN **PVD** coating. Recommended for medium to high cutting speeds for machining cast iron, especially hard special-purpose cast iron grades. Features high wear and chipping resistance.
An uncoated, fine grain carbide grade for machining mainly **ISO N** materials in a wide range of cutting speeds. Used for high temperature alloys and stainless steel at low to medium cutting speeds.
An uncoated, fine grain carbide grade. Used for stainless steel and high temperature alloys at low to medium cutting speeds.
A cermet grade. Provides excellent resistance to wear and plastic deformation even at high cutting speeds and medium feeds. Useful for turning and milling of semi-finishing and finishing applications.
A 55**% CBN** brazed tip, used for finishing hardened steel and cast iron (45-65 HRC) in continuous cutting.
An 85**% CBN** brazed tip, used for high speed machining of cast iron, cemented tungsten carbide, sintered metals and heavy alloys. Excellent for interrupted cutting of hardened steel.
A **PCD** brazed tip, suitable for machining aluminum (Si < 12%) and copper alloys and general cutting of nonferrous materials.
A silicon nitride grade, intended mainly for medium-duty turning and milling applications. Can be used for interrupted cuts.

MATERIAL GROUPS

According to DIN / ISO 513 and VDI 3323

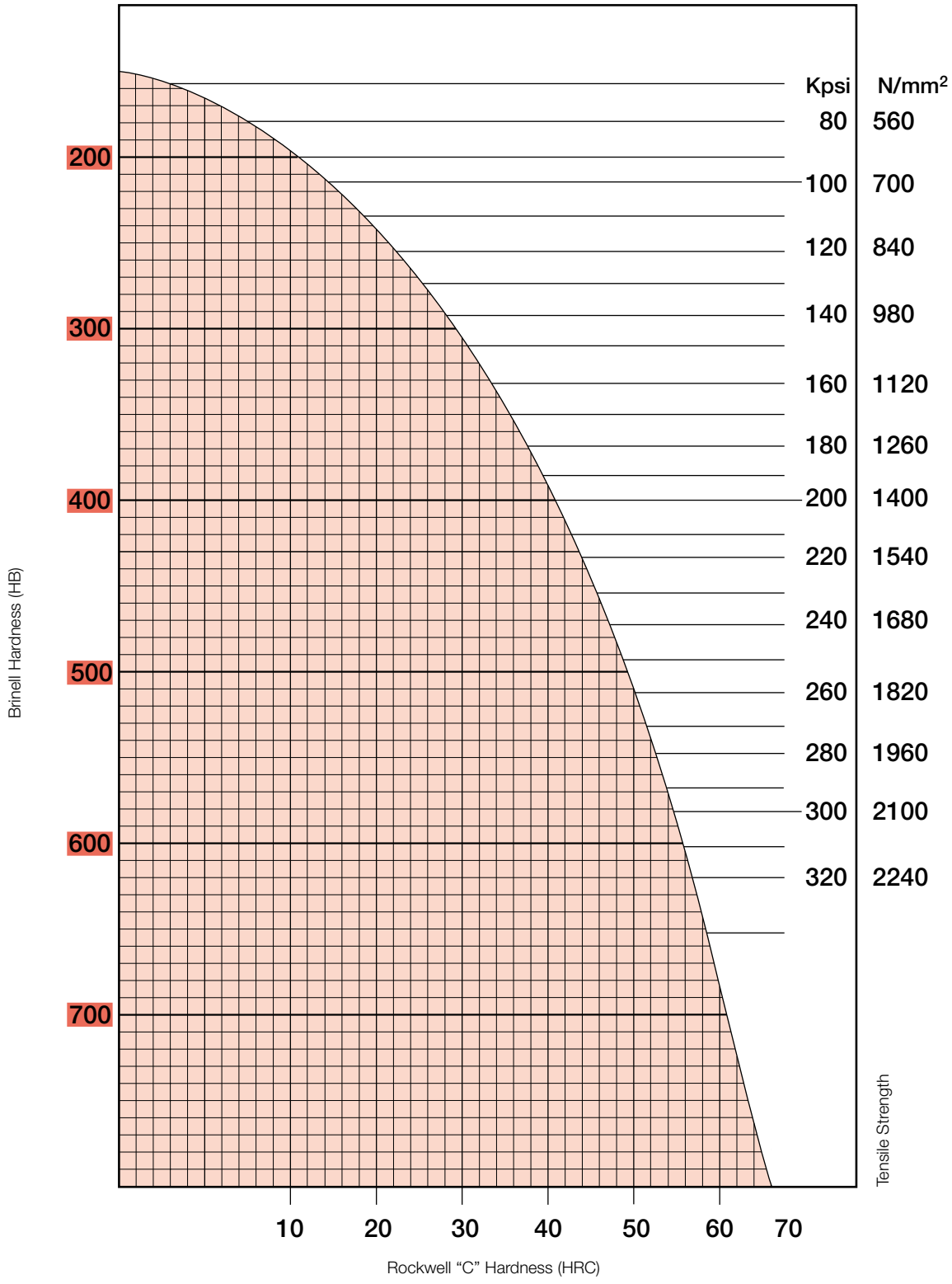
ISO	Material		Condition	Tensile Strength [N/mm²]	Kc1(1) [N/mm²]	mc(2)	Hardness HB	Material No.
P	Non-alloy steel and cast steel, free cutting steel	< 0.25 %C	Annealed	420	1350	0.21	125	1
		>= 0.25 %C	Annealed	650	1500	0.22	190	2
		< 0.55 %C	Quenched and tempered	850	1675	0.24	250	3
		>= 0.55 %C	Annealed	750	1700	0.24	220	4
			Quenched and tempered	1000	1900	0.24	300	5
	Low alloy steel and cast steel (less than 5% of alloying elements)		Annealed	600	1775	0.24	200	6
			Quenched and tempered	930	1675	0.24	275	7
				1000	1725	0.24	300	8
				1200	1800	0.24	350	9
	High alloyed steel, cast steel, and tool steel		Annealed	680	2450	0.23	200	10
			Quenched and tempered	1100	2500	0.23	325	11
	Stainless steel and cast steel		Ferritic/martensitic	680	1875	0.21	200	12
			Martensitic	820	1875	0.21	240	13
M	Stainless steel		Austenitic, duplex	600	2150	0.20	180	14
K	Grey cast iron (GG)		Ferritic/pearlitic		1150	0.20	180	15
			Pearlitic		1350	0.28	260	16
	Nodular cast iron (GGG)		Ferritic		1225	0.25	160	17
			Pearlitic		1350	0.28	250	18
	Malleable cast iron		Ferritic		1225	0.25	130	19
			Pearlitic		1420	0.3	230	20
N	Aluminum-wrought alloy		Not hardenable		700	0.25	60	21
			Hardenable		800	0.25	100	22
	Aluminum-cast, alloyed	<=12% Si	Not hardenable		700	0.25	75	23
			Hardenable		700	0.25	90	24
		>12% Si	High temperature		750	0.25	130	25
	Copper alloys	>1% Pb	Free cutting		700	0.27	110	26
			Brass		700	0.27	90	27
			Electrolytic copper		700	0.27	100	28
	Non metallic		Duroplastics, fiber plastics					29
			Hard rubber					30
S	High temperature alloys	Fe based	Annealed		2600	0.24	200	31
			Hardened		3100	0.24	280	32
		Ni or Co based	Annealed		3300	0.24	250	33
			Hardened		3300	0.24	350	34
			Cast		3300	0.24	320	35
	Titanium alloys		Pure	RM 400	1700	0.23		36
			Alpha+beta alloys hardened	RM 1050	2110	0.22		37
H	Hardened steel		Hardened		4600		55 HRC	38
			Hardened		4700		60 HRC	39
	Chilled cast iron		Cast		4600		400	40
	Cast iron		Hardened		4500		55 HRC	41

Steel | Stainless Steel | Cast Iron

Nonferrous | High Temp. and Titanium Alloys | Hardened Steel and Cast Iron

(1) Specific cutting force for 1 mm² chip section. (see page 523).
(2) Chip thickness factor. (see page 523).

Hardness Conversion Table



MATERIAL GROUPS

According to VDI 3323 Standard

	USA	GERMANY		Great Britain	
Mtl. No.	AISI/SAE	Werkstoff	DIN	BS	EN
1		1.0028	Ust 34-2 (S250G1T)		
1		1.0034	RSt 34-2 (S250G2T)	1449 34/20HR; 1449 34/20HS; 1449 34/20CR; 1449 34/20CS	
1		1.0035	St185 (Fe 310-0); St 33	Fe 310-0; 1449 15HR; 1449 15HS	
1	A 570 Gr. 33; A 570 Gr. 36	1.0036	S235JRG1; (Fe 360 B); Ust 37-2	Fe 360 B; 4360-40 B	
1		1.0037	S235JR (Fe 360 B); St 37-2	Fe 360 B; 4360-40 B	
1	A 570 Gr. 40	1.0044	S275JR (Fe 430 B); St44-2	Fe 430 B FN; 1449 43/25 HR; 1449 43/25HS; 4360-43 B	
1		1.0045	S355JR	4360-50 B	
1	A 570 Gr.50; A 572 Gr.50	1.0050	E295 (Fe 490-2); St 50-2	Fe 490-2 FN; 4360-50 B	
1	A 572 Gr. 65	1.0060	E335 (Fe 590-2); St 60-2	Fe 60-2; 4360-55 E; 4360-55 C	
1		1.0112	P235S	1501-164-360B LT20	
1		1.0114	S235JU; St 37-3 U	4360-40C	
1		1.0130	P265S	1501-164-400B LT 20	
1		1.0143	S275J0; St 44-3 U	4360-43C	
1	A 573 Gr. 70; A 611 Gr.D	1.0144	S275J2G3 (Fe 430 D 1); St 44-3	Fe 430 D1 FF; 4360-43 C; 4360-43 D	
1		1.0149	S275JOH; RoSt 44-2	4360-43C	
1		1.0226	DX51D; St 02 Z	Z2	
1	M 1010	1.0301	C10	040 A 10; 045 M 10; 1449 10 CS	
1	A 621 (1008)	1.0330	DC 01; St 2; St 12	1449 4 CR; 1449 3 CS	
1	A 619 (1008)	1.0333	Ust 3 (DC03G1); Ust 13	1449 2 CR;1449 3 CR	

France AFNOR	Sweden SS	Italy UNI	Spain UNE	Japan JIS	Russia GOST
A 34-2		Fe 330; Fe 330 B FU		SS 330	
A 34-2 NE		Fe 330 B FN			St2sp; St2ps
A 33	1300	Fe 320	Fe 310-0		St0
	1311; 1312	FE37BFU	AE 235 B; Fe 360 B		16D; 18kp; St3kp
E 24-2	1311	Fe 360 B; 1449 37/23 HR	AE 235 B; Fe 360 B	STKM 12 A; STKM 12 AC	
E 28-2	1412	Fe 430 B; Fe 430 B FN	AE 275 B; Fe 430 B FN	SM 400 A; SM 400 B; SM 400 C	St4ps; St4sp
E 36-2	2172	Fe 510 B	AE 355 B		
A 50-2	1550; 2172	Fe 490	a 490-2; Fe 490-2 FN	SS 490	ST5ps; ST5sp
A 60-2	1650	Fe 60-2; Fe 590	A 590-2; Fe 590-2 FN	SM 570	St6ps; St6sp
A37AP		Fe 360 C	AE 235 C		
E 24-3		Fe 360 C	AE 235 C		
A 42 AP			SPH 265		
E 28-3	1414-01	Fe 430 D	AE 275 D		
E 28-3; E 28-4	1411; 1412; 1414	Fe 430 B; Fe 430 C (FN); Fe 430 D (FF)	AE 275 D; Fe 430 D1 FF	SM 400 A; SM 400 B; SM 400 C	St4kp; St4ps; St4sp
	1412-04	Fe 430 C	Fe 430 C		
GC	1151 10	FeP 02 G	FeP 02 G		
AF 34 C 10; XC 10		C 10; 1 C 10	F.1511; F.151.A	S 10C	10
TC	1142	FeP 00; FeP 01	AP 11	SPHD	15 kp
E		FeP 02	AP 02	SPCD	

MATERIAL GROUPS

According to VDI 3323 Standard

	USA	GERMANY		Great Britain	
Mtl. No.	AISI/SAE	Werkstoff	DIN	BS	EN
1	A 621 (1008)	1.0334	UStW 23 (DD12G1)		
1	A 622 (1008)	1.0335	DD13; StW 24	1449 1 HR	
1	A 620 (1008)	1.0338	DC04; St 4; St 14	1449 1 CR; 1449 2 CR	
1	A 516 Gr. 65; 55 A 515 Gr. 65; 55 A 414 Gr. C; A 442 Gr.55	1.0345	P235GH/H I	1501 Gr. 141-360; 1501 Gr. 161-360; 151-360 1501 Gr. 161-400; 154-360 1501 Gr. 164-360; 161-360	
1	(M) 1020; M 1023	1.0402	C22	055 M 15; 070 M 20; 1499 22 HS; 1499 22 CS	2C/2D
1	1020	1.0402	C22	050A20	2C/2D
1	1020; 1023	1.0402	C22	055 M 15; 070 M 20	2C
1		1.0425	P265GH/H II	1501 Gr. 161-400; 151-400 1501 Gr. 164-360; 161-400 1501 Gr. 164-400; 154-400	
1	A27 65-35	1.0443	GS-45	A1	
1		1.0539	S355NH;StE 335		
1		1.0545	S355N; StE 355	4360-50E	
1		1.0546	S355NL;TStE 355	4360-50EE	
1		1.0547	S355JOH	4360-50C	
1		1.0549	S355 NLH;TStE 355		
1		1.0553	S355JO;St 52-3U	4360-50C	
1	A 633 Gr.C; A 588	1.0562	P355N; StE 355	1501 Gr.225-490A LT 20	
1		1.0565	P355NH; WStE 355	1501-225-490B LT 20	
1		1.0566	P355NL1; TStE 355	1501-225-490A LT 50	
1	1	1.0570	S355J2G3; St 52-3	Fe 510 D1 FF; 1449 50/35 HR›HS; 4360-50 D	
1	1213	1.0715	9 SMn 28 (1SMn30)	230 M 07	

France AFNOR	Sweden SS	Italy UNI	Spain UNE	Japan JIS	Russia GOST
S C		FeP 12	AP 12	SPHE	10kp
3 C		FeP 13	AP 13	SPHE	08kp
ES	1147	FeP 04	AP 04	SPCE	08Ju; JuA
A 37 CP; A 37 AP	1331; 1330	FeE235; Fe 360 1 KW; Fe 360 1KG; Fe 360 2 KW; Fe 360 2 KG	A 37 RC I; RA II	SGV 410; SGV 450; SGV 480; SPV 450; SPV 480	
AF 42 C 20; XC 25; 1 C 22	1450	C 20; C 21; C 25	1 C 22; F.112	S20C	20
CC20	1450	C20; C21	F.112	S22 C	20
AF 42 C 20; XC 25; 1 C 22	1450	C 20;C 21;C 25	1 C 22F.112	S 20 C; S 22 C	
A 42 CP; A 42 AP	1431; 1430; 1432	Fe 410 1KW; Fe 410 1KG; Fe 410 1KT; Fe 410 2KW; Fe 410 2KG	A 42 RC I; A 42 RC II	SPV 315; SPV 355; SG 295; SGV 410; SGV 450; SGV 480	16K; 20K
E 23-45 M	1305				
TSE 355-4	2134-04	Fe 510 B	Fe 355 KGN		
E 355 R	2334-01	FeE 355 KG	AE 355 KG		
E 355 FP	2135-01	FeE 355 KT	AE 355 KT		
TSE 355-3	2172-04	Fe 510 C	Fe 510 C		
	2135	Fe 510 D	FeE 355 KTM		
E 36-3		Fe 510 C			
FeE 355 KG N; E 355 R/FP; A 510 AP	2106	FeE 355 KG; FeE 355 KW	AEE 355 KG; AEE 355 DD	SM 490 A; SM 490 B; SM 490 C; SM 490 YA; SM 490YB	15GF
A 510 AP	2106	FeE 355-2			
A 510 FP	2107-01	FeE 355-3			
E 36-3; E 36-4	2132; 2133; 2134; 2174	17GS; 17G1S	AE 355 D; Fe 510 D1 FF	SM 490 A; SM 490 B; SM 490 C; SM 490 YA; SM 490YB	17GS; 17G1S
S 250	1912	CF SMn 28	F.2111 - 11 SMn 28	SUM 22	

MATERIAL GROUPS

According to VDI 3323 Standard

	USA	GERMANY		Great Britain	
Mtl. No.	AISI/SAE	Werkstoff	DIN	BS	EN
1	1213	1.0715	9 SMn 28	230 M 07	
1	12 L 13	1.0718	9 SMnPb 28 (11SMnPb30)		
1	1108; 1109	1.0721	10 S 20	10S20	
1	11 L 08	1.0722	10 SPb 20		
1	11 L 08	1.0722	10 SPb 20		
1	1215	1.0736	9 SMn 36 11SMn37)		
1	12 L 14	1.0737	9 SMnPb 36 (11SMnPb37)		
1		1.0972	S315MC; QStE 300 TM	1501-40F30	
1		1.0976	S355MC; QStE 360 TM	1501-43F35	
1		1.0982	S460MC; QStE 460 TM	1501-50F45	
1		1.0984	S500MC; QStE 500 TM		
1		1.0986	S500MC; QStE 500 TM	1501 - 60F55	
1	1010	1.1121	CK 10; (C10E)	040 A 10	
1		1.1121	St 37-1	4360 40 A	
1	1015	1.1141	CK 15; (C15E)	040 A 15; 080 M 15	32C
1	1020; 1023	1.1151	C22E; CK 22	055 M 15; (070 M 20)	
1		1.2083			
1	A572-60	1.8900	StE 380	4360 55 E	
1	A36		St 44-2	4360 43 A	
1			StE 320-3Z	1 501 160	
2	(M) 1025	1.0406	C 25	070 M 26	
2		1.0416	GS-38		
2	A 537 Cl.1; A 414 Gr. G; A 612	1.0473	P355GH; 19 Mn 6		
2	1035	1.0501	C35	080 A 32; 080 A 35; 080 M 36; 1449 40 CS	
2	1045	1.0503	CF 45; (C45G)	060 A 47; 080 M 46	

France AFNOR	Sweden SS	Italy UNI	Spain UNE	Japan JIS	Russia GOST
S 250	1912	CF 9 SMn 28	11 SMn 28	SUM 22	
S 250 Pb	1914	CF 9 SMnPb 28	F.2112-11 SMnPb 28	SUM 22 L; SUM 23 L; SUM 24 L	
10S20; 10 F 2		CF 10 S 20	F. 2121 - 10 S 20		
10PbF 2		CF 10 SPb 20	F.2122-10 SPb 20		
10 PbF 2		CF 10 SPb 20	10 SPb 20		
S 300		CF 9 Mn 36	F.2113 - 12 SMn 35	SUM 25	
S 300 Pb	1926	CF 9 SMnPb 36	F.2114- 12 SMnPb 35		
E 315 D					
E 355 D	2642	FeE 355TM			
E 490 D	2662	FeE 490 TM			
E 560 D		FeE 560 TM			
XC 10	1265	C 10; 2 C 10; 2 C 15	F-1510-C 10 K	S 9 CK; S 10 C	08;10
	1300				
XC 12; XC 15; XC 18	1370	C 15; C 16	F.1110-C 15 K; F.1511-C 16 K	S 15; S 15 CK	15
2 C 22; XC 18; XC 25	1450	C 20; C 25	F.1120-C 25 K	S 20 C; S 20 CK; S 22 C	20
	2314				
	2145	FeE390KG		S25C	
NFA 35-501 E 28	1411				
	1421				
1 C 25		C 25; 1 C 25			
20-400 M	1306				
A 52 CP	2101; 2102	Fe E 355-2	A 52 RC I, RA II	SGV 410; SGV 450; SGV 480	
1 C 35; AF 55 C 35; XC 38	1572; 1550	C 35; 1 C 35	F.113	S 35 C	35
XC 42 H 1 TS	1672	C 43; C 46		S 45 C	45

MATERIAL GROUPS

According to VDI 3323 Standard

	USA	GERMANY		Great Britain	
Mtl. No.	AISI/SAE	Werkstoff	DIN	BS	EN
2	1040	1.0511	C40	080 M 40	
2		1.0540	C 50		
2	A27 70-36	1.0551	GS-52	A2	
2	A148 80-40	1.0553	GS-60	A3	
2	A738	1.0577	S355J2G4 (Fe 510 D 2)	Fe 510 D2 FF; 1501 Gr.224-460; 1501 Gr. 224-490	
2	1140	1.0726	35 S 20	212 M 36	8M
2	1146	1.0727	45 S 20 (46S20)		
2	1035; 1041	1.1157	40Mn4	150 M 36	15
2	1025	1.1158	C25E; CK 25	(070 M 25)	
2	1536	1.1166	34Mn5		
2	1330	1.1170	28Mn6	(150 M 28); (150 M 18)	14A
2		1.1178	C30E; CK 30	080M30	
2	1035	1.1180	C35R; Cm 35	080 A 35	
2	1035; 1038	1.1181	C35E; CK 35	080 A 35; (080 M 36)	
2	1035	1.1181	C35E; CK 35	080 A 35; (080 M 36)	
2	1035	1.1183	Cf 35 (C35G)	080 A 35	
2	1042	1.1191	GS- Ck 45	080 A 46	
2	1049; 1050	1.1206	C50E; CK 50	080 M 50	
2	1050; 1055	1.1213	Cf 53; (C53G)	070 M 55	
2	4520	1.5423	22Mo4	1503-245-420	
3	A 516 Gr.70; A 515 Gr. 70; A 414 Gr.F; A 414 Gr.G	1.0481	P295GH; 17 Mn 4	1501 Gr. 224	

France AFNOR	Sweden SS	Italy UNI	Spain UNE	Japan JIS	Russia GOST
1 C 40; AF 60 C 40		C40; 1 C 40	F.114.A		
	1674	C 50	1 C 50		
280-480 M	1505				
320-560 M	1606				
A 52 FP	2107		A 52 RB II; AE 355 D		
35MF 6	1957		F.210.G		
45 MF 4	1973				
35 M 5; 40 M 5					40G
2 C 25; XC 25		C25	F.1120 - C 25 K	S 25 C; S 28 C	25
			TO.B	SMn 433 H	
20 M 5; 28 Mn 6		C 28 Mn	28 Mn 6	SCMn 1	30G
XC 32		C 30	2 C 30		
3 C 35; XC 32	1572		F.1135-C 35 K-1		
2 C 35; XC 32; XC 38 H 1	1550; 1572	C 35	F.1130-C 35 K	S 35 C	35
XC 38	1572	C36		S35C	
XC 38 H 1 TS	1572	C 36; C 38		S 35 C	35
XC 45	1660	C45	F-1140		
2 C 50; XC 48 H 1; XC 50 H1	1674	C 50			50
XC 48 H TS	1674	C 53		S 50 C	50
		16 Mo 5 KG; 16 Mo 5 KW	F.2602- 16 Mo 5	SB 450 M; SB 480 M	
A 48 CP; A 48 AP		Fe 510 KG; Fe 510 KT; Fe 510 KW; Fe 510-2 KG; Fe 510-2KT; Fe 510-2KW; FeE 295	A 47 RC I; RA II	SG 365; SGV 410; SGV 450; SGV 480	14G2

MATERIAL GROUPS

According to VDI 3323 Standard

	USA	GERMANY		Great Britain	
Mtl. No.	AISI/SAE	Werkstoff	DIN	BS	EN
3	1043	1.0503	C35	060 A 47; 080 M 46; 1449 50 HS, 1449 50 CS	
3	1074	1.0614	C 76 D; D 75-2		
3	1086	1.0616	C 86 D; D 85-2		
3	1095	1.0618	C 92 D; D 95-2		
3	1036; 1330	1.1165	30Mn5	120 M 36; (150 M 28)	
3	1335	1.1167	36Mn5	150 M 36	
3	1040	1.1186	C40E; CK 40	060 A 40; 080 A 40; 080 M 40	
3	1045	1.1191	C45E; CK 45	080 M 46; 060 A 47	
3	1049	1.1201	C45R; Cm 45	080 M 46	
3		1.7242	18 CrMo 4		
3	A 387 Gr. 12 Cl	1.7337	16 CrMo 4 4		
3		1.7362	12 CrMo 19 5	3606-625	
3	A572-60		17 MnV 6	436055 E	
4	1055	1.0535	C55	070 M 55	
4	1060	1.0601	C60	060 A 62; 1449 HS; 1449 CS	43D
4	107	1.0603	C67	080 A 67; 1449 70 HS	
4	1074; 1075	1.0605	C75	1449 80 HS	
4	1055	1.1203	C55E; CK 55	060 A 57; 070 M 55	
4	1055	1.1209	C55R; Cm 55	070 M 55	
4	1060; 1064	1.1221	C60E; CK 60	060 A 62	43D
4	1070	1.1231	Ck 67; (C67E)	060 A 67	
4	1074; 1075; 1078	1.1248	CK 75; (C75E)	060 A 78	
4	1086	1.1269	CK 85 (C85E)		

France AFNOR	Sweden SS	Italy UNI	Spain UNE	Japan JIS	Russia GOST
1 C 45; AF 65 C 45	1672; 1650	C 45; 1 C 45	F.114	S 45 C	45
XC 75					
XC 80		C 85			
XC 90					
35 M 5			F.8211-30 Mn 5; f.8311-AM 30 Mn 5	SMn 433 H; SCMn 2	27ChGSNMDTL 30GSL
40 M 5	2120		F. 1203-36 Mn 6; F. 8212-36 Mn 5	ssmN 438 (H); SCMn 3	35G2; 35GL
2 C 40; XC 42 H 1		C 40		S 40 C	
2 C 45; XC 42 H 1; XC 45; XC 48 H 1	1672	C 45; C 46	F.1140-C 45 K; F.1142-C48 K	S 45 C; S 48 C	45
3 C 45; XC 42 H 1; XC 48 H 1	1660	C 45	F.1145-C 45K-1; F.1147C 48 K-1	S 50 C	
		A 18 CrMo 4 5 KW			15ChM
Z 10 CD 5.05		16 CrMo 20 5			
NFA 35-501 E 36	2142				
1 C 55; AF 70 C 55	1655	C 55; 1 C 55		S 55 C	55
1 C 60; AF 70 C 55		C 60; 1 C 60		S 58 C	60(G)
XC 65		C 67			
		C 75			75
2 C 55; XC 55 H 1	1655	C 55	F.1150-C 55 K	S 55 C	55
3 C 55; XC 55 H 1		C 55	F.1155-C 55K-1		
2 C 60; XC 60 H 1	1665; 1678	C 60		S 58 C	60; 60G; 60GA
XC 68	1770	C70			65GA; 68GA; 70
XC 75	1774	C 75			75(A)
XC 90		C 90			85(A)

MATERIAL GROUPS

According to VDI 3323 Standard

	USA	GERMANY		Great Britain	
Mtl. No.	AISI/SAE	Werkstoff	DIN	BS	EN
4	1095	1.1274	Ck 101 (C101E)		
4	W 112	1.1663	C 125 W		
4					
5		1.0070	E360 (Fe 690-2); St 70-2	Fe 690-2 FN	
5		1.7238	49 CrMo 4		
5		1.7701	51 CrMoV 4		
6	A 284 Gr.D; A 573 Gr.58; A 570 Gr 36; A 570 Gr C; A 611 Gr. C	1.0116	S235J2G3 (Fe 360 D 1); St 37-3	Fe 360 D1 FF; 1449 37/23 CR; 4360-40 D	
6	5120	1.0841	St 52-3	150 M 19	
6	9255	1.0904	55 Si 7	250A53	45
6	9254	1.0904	55 Si 7	250 A 53	
6	9262	1.0961	60SiCr7		
6	L3	1.2067	100Cr6	BL3	
6	L1	1.2108	90 CrSi 5		
6	L2	1.2210	115CrV3		
6		1.2241	51CrV4		
6		1.2311	40 CrMnMo 7		
6	4135	1.2330	35 CrMo 4	708 A 37	
6		1.2419	105WCr6	105WC 13	
6	0 1	1.2510	100 MnCrW 4	BO1	
6	S1	1.2542	45 WCrV7	BS1	
6	S1	1.2550	60WCrV7		
6	L6	1.2713	55NiCrMoV6		
6	L 6	1.2721	50NiCr13		
6	O2	1.2842	90MnCrV8	BO2	
6	E 50100	1.3501	100 Cr 2		
6	52100	1.3505	100Cr6	2 S 135; 535 A 99	31
6		1.5024	46Si7		
6	9255	1.5025	51Si7		
6	9255	1.5026	55Si7	251 a 58	

France AFNOR	Sweden SS	Italy UNI	Spain UNE	Japan JIS	Russia GOST
XC 100	1870	C 100	F-5117	SUP 4	
Y2 120					
	2223				
A 70-2	1655	Fe 70-2; Fe 690	A 690-2; Fe 690-2 FN		
		51 CrMoV 4			
E 24-3; E 24-4	1312; 1313	Fe 360 D1 FF; Fe 360 C FN; Fe 360 D FF; Fe 37-2	AE 235 D; Fe 360 D1 FF		St3kp; St3ps; St3sp; 16D
20 MC 5	2172	Fe 52	F-431		
55S7	2085	55Si8	56Si7		
55 S 7	2090				
60SC6		60SiCr8	60SiCr8		
Y100C6			100Cr6		
	2092	105WCR 5			
100C3		107CrV3KU			
		35 cRmO 8 KU			
34 CD 4	2234	35CrMo4	34CrMo4	SCM435TK	
105WC13	2140	10WCr6	105WCr5		ChWG
8 MO 8	2140	10WCr6	105WCr5	SKS31	
	2710	45 WCrV8 KU	45WCrSi8		5ChW25F
55WC20	2710	58WCr9KU			
55NCDV7			F.520.S	SKT4	5ChNM
55 NCV 6	2550		f-528		
90 MV8					
100 C 6	2258	100Cr6	F.1310 - 100 Cr 6	SUJ2	SchCh15
45 S 7; Y 46 7; 46 SI 7			F. 1451 - 46 SI 7		
51 S 7; 51 Si 7	2090	48 Si 7; 50 Si 7	F.1450-50 Si 7		
55 S 7	2085; 2090	55 Si 7	F.1440 - 56 Si 7		55S2

MATERIAL GROUPS

According to VDI 3323 Standard

	USA	GERMANY		Great Britain	
Mtl. No.	AISI/SAE	Werkstoff	DIN	BS	EN
6	9260	1.5027	60Si7	251 A 60; 251 H 60	
6	9260 H	1.5028	65Si7		
6		1.5120	38 MnSi 4		
6	A 204 Gr.A; 4017	1.5415	16Mo3; 15 Mo 3	1503-243 B	
6	4419	1.5419	20Mo4	1503-243-430	
6	A 350-LF 5	1.5622	14Ni6		
6	3415	1.5732	1 NilCr10		
6	3310; 3314	1.5752	14NilCr14	655M13	36A
6		1.6587	17CrNiMo6	820A16	
6		1.6657	14NiCrMo134		
6	5015	1.7015	15 Cr 3	523 M 15	
6	5132	1.7033	34Cr4	530A32	18B
6	5140	1.7035	41C r4	530M40	18
6	5140	1.7045	42Cr41	530 A 40	
6	5115	1.7131	16MnCr5	527 M 17	
6		1.7139	16MnCr5		
6	5155	1.7176	55Cr3	527 A 60	48
6	4135; 4137	1.7220	34CrMo4	708 Aa 37	
6	4142	1.7223	41CrMo4		
6	4140	1.7225	42CrMo4	708 M 0	
6		1.7228	55NiCrMoV6G	823M30	33
6		1.7262	15CrMo5		
6		1.7321	20 mOcR 4		
6	ASTM A182 F12	1.7335	13CrMo4 4	1501-620Gr27	
6	A 182-F11; A 182-F12	1.7335	13 CrMo 4 4	1 501 620 Gr. 27	
6	ASTM A 182 F22	1.7380	10CrMo9 10	1501-622gR31; 1501-622gR45	
6	A182 F22	1.7380	10 CrMo 9 10	1501-622	
6		1.7715	14MoV6 3	1503-660-440	

France AFNOR	Sweden SS	Italy UNI	Spain UNE	Japan JIS	Russia GOST
60 S 7		60 Si 7	F. 1441 - 60 Si 7		60S2
60 S 7				50 P 7; SUP 6	
15 D 3	2912	16Mo3 KG; 16Mo3KW	F. 2601 - 16 Mo 3		
	2512	G 20 Mo 5; G 22 Mo5		SCPH 11	
16N6		14 Ni 6 KG; 14 Ni 6 KT	F.2641 - 15 Ni 6		
14 NC 11		16NiCr11	15NiCr11	SNC415(H)	
12NC15				SNC815(H)	
18NCD6			14NiCrMo13		
			14NiCrMo131		
12 C 3				SCr415(H)	15Ch
32C4		34Cr4(KB)	35Cr4	SCr430(H)	35Ch
42C4		41Cr4	42Cr4	SCr440(H)	
42 C 4 TS	2245	41Cr4	42Cr4	SCr440	
16 MC 5	2511	16MnCr5	16MnCr5		
	2127				
55 C 3	2253			SUP9(A)	50ChGA
35 CD 4	2234				35ChM
		41CrMo4	42CrMo4	SNB 22-1	40ChFA
42 CD 4	2244				
	2512	653M31			
12 CD 4	2216		12CrMo4		
	2625				
		14CrMo4 5	14CrMo45		
15 CD 4.5	2216		12CrMo4	SCM415(H)	12ChM; 15ChM
12 CD 9.10	2218	12CrMo9, 12CrMo10	TU.H		
			13MoCrV6		

MATERIAL GROUPS

According to VDI 3323 Standard

	USA	GERMANY		Great Britain	
Mtl. No.	AISI/SAE	Werkstoff	DIN	BS	EN
6	A355A	1.8509	41CrAlMo 7	905 M 39	41B
7	A570.36	1.0038	S235JRG2 (Fe 360 B); RSt 37-2	Fe 360 B FU; 1449 27/23 CR; 4360-40 B	
7	3135	1.5710	36NiCr6	640A35	111A
7		1.5755	31 NiCr 14	653 M 31	
7	8620	1.6523	2 NiCrMo2	805M20	362
7	8740	1.6546	40 NiCrMo 22	311-Tyre 7	
7	4340	1.6565	40NiCrMo6	817 M 40	24
7	4130	1.7218	25CrMo4	CDS 110	
7		1.7733	24 CrMoV 5 5		
7		1.7755	GS-45 CrMOV 10 4		
7		1.8070	21 CrMoV 5 11		
8	C 45 W	1.173	C 45 W3		
8	4142	1.2332	47 CrMo 4	708 M 40	19A
8	A128 (A)	1.3401	G-X120 Mn 12		
8	3435	1.5736	36 NiCr 10		
8	9840	1.6511	36CrNiMo4	816M40	110
8		1.7361	32 CeMo12	722 M 24	40B
8	6150	1.8159	50 CrV 4	735 A 50	47
8		1.8161	58 CrV 4		
8		1.8515	32 CrMo 12	722 M 24	40B
8		1.8523	39CrMoV13 9	897M39	40C
9		1.4882	X 50 CrMnNiNbN 21 9		
9		1.5864	35 niCr 18		
9			31 NiCrMo 13 4	830 m 31	
10	A 619	1.0347	DCO3; RRSt; RRSt 13	1449 3 CR; 1449 2 CR	
10	M 1015; M 1016; M 1017	1.0401	C15	080 M 15; 080 M 15; 1449 17 CS	
10		1.0723	15 S22; 15 S 20	210 A 15; 210 M 15	

France AFNOR	Sweden SS	Italy UNI	Spain UNE	Japan JIS	Russia GOST
40 CAD 6.12	2940	41CrAlMo7	41CrAlMo7		
E 24-2NE	1312	Fe 360 B FN	AE 235 B FN; AE 235 B FU; Fe 360 B FN; Fe 360 B FU		St3ps; St3sp
35NC6				SNC236	
18 NC 13					
20 NCD 2	2506	20NiCrMo2	20NiCrMo2	SNCM220(H)	20ChGNM
		40NiCrMo2(KB)	40NiCrMo2	SNCM240	38ChGNM
35 NCD 6	2541	35NiCrMo6(KB)		SNCM 447	38Ch2N2MA
25 CD 4	2225	25CrMo4(KB)	55Cr3	SCM420; SCM430	20ChM; 30ChM
20 CDV 6		21 CrMoV 5 11			
		35 NiCr 9			
XC 48					
42 CD 4	2244	42CrMo4	42CrMo4	SCM (440)	
Z 120 M 12	2183	GX120Mn12	F. 8251-AM-X120Mn12	SCMnH 1; SCMn H 11	110G13L
30 NC 11					
40NCD3		36nlcRmO4(KB)	35NiCrMo4	SUP10	40ChN2MA
30 CD 12	2240	30CrMo12	F.124.A		
50CrV4	2230	50CrV4	51CrV4		50ChGFA
30 CD 12	2240	32CrMo12	F.124.A		
		36CrMoV12			
Z 50 CMNNb 21.09					
	2534		f-1270		
E		Fep 02	AP 02		08JU
AF 37 C12; XC 18	1350	C15; C16; 1 C 15	F.111	S 15 C	
	1922		F.210.F	SUM 32	

ISCAR MATERIAL GROUPS

According to VDI 3323 Standard

	USA	GERMANY		Great Britain	
Mtl. No.	AISI/SAE	Werkstoff	DIN	BS	EN
10	D 3	1.2080	X 210 Cr 12	BD 3	
10	420	1.2083	X 42 Cr 13		
10		1.2085	X 33 CrS 16		
10		1.2162	21 MnCr 5		
10	L2	1.2210	115 Cr V3		
10		1.2311	40 CrMnMo7		
10	P20+S	1.2312	40CrMnMoS 8.6		
10		1.2316	X36CrMo17		X38CrMo16
10	H 11	1.2343	x 38 CrMoV 5 1	BH 11	
10		1.234	X 38 CrMoV 5 1		
10	H 13	1.2344	X 40 CrMoV 5 1	BH 13	
10	A 2	1.2363	X100 CrMoV 5 1	BA 2	
10		1.236	X 100 CrMo V5-1		
10	D 2	1.2379	X 155 CrVMo 12 1	BD2	
10		1.238	X 155 CrVMo 12 1		
10	HNV3	1.2379	X210Cr12G	BD2	
10	D 4 (D 6)	1.2436	X 210 CrW 12	BD6	
10		1.244	X 210 CrW 12		
10	O1	1.251	100 MnCrW 4	B0 1	
10	H 21	1.2581	X 30 WCrV 9 3	BH 21	
10		1.2601	X 165 CrMoV 12		
10	H 12	1.2606	X 37 CrMoW 5 1	BH 12	
10		1.277	X 45 NiCrMo 4		
10	O2	1.284	90 MnCrV 8	B0 2	
10	D3	1.3343	S 6-5-2	BM2	
10	ASTM A353	1.5662	X8Ni9	1501-509; 1501-510	
10	ASM A353	1.5662	X8Ni9	502-650	
10	2517	1.568	12Ni19	12Ni19	
10	2515	1.5680	12 Ni 19		
10		1.713	16 MnCr 5		
10		1.276	X 19 NiCrMo 4		
11		1.3202	S 12-1-4-5	BT 15	

France AFNOR	Sweden SS	Italy UNI	Spain UNE	Japan JIS	Russia GOST
Z 200 C 12					
Z40 C14	2314			SUS 420 J 2	
Z35V CD 17.S					
20 MC 5					
100 C3		107 CrV3 KU	F.520 L		
40 CMD 8		35 cRmO 8 KU			
40CMD8S					
Z 38 CDV 5		X 37 CrMoV 5 1 KU			4Ch5MFS
Z 38 CDV 5		X 37 CrMoV 51 KU			
Z 40 CDV 5	2242	X40CrMoV511KU	F-5318	SKD61	4Ch5MF1S
Z 100 CDV 5	2260	X100CrMoV51KU	F-5227	SKD12	
Z 160 CDV 12	2310	X165CrMoW12KU	X160CrMoW12KU	SKD11	
Z 160 CDV 12		X 155 CrVMo 12 1 KU			
Z160CDV12	2736				
Z 200 CD 12	2312	X215CrW 12 1 KU	F-5213		
90 MnWRrV5		95MnWCr 5 KU	95 MnCrW 5		
Z 30 WCV 9		X30WCrV 9 3 KU	F-526	SKD5	3Ch2W8F
	2310				
Z 35 CWDV 5		X 35 CrMoW 05 KU	F.537		5ChNM
45 NCD 16		40 NiCrMoV 8 KU			
90 MV 8		90 MnVCr 8 KU			
Z200C12	2715	X210Cr13KU	X210Cr12	SUH3	R6M5
		14 Ni 6 KG; 14 Ni 6 KT	XBNiO9		
9 Ni		X10Ni9	F-2645	SL9N60[53]	
Z18N5					
Z 18 N 5					
16 MC 5					
		HS 12-1-5-5	12-1-5-5		

ISCAR MATERIAL GROUPS

According to VDI 3323 Standard

	USA	GERMANY		Great Britain	
Mtl. No.	AISI/SAE	Werkstoff	DIN	BS	EN
11		1.3207	S 10-4-3-10	BT42	
11	T 15	1.3243	S 6-5-2-5		
11		1.3246	S 7-4-2-5		
11		1.3247	S 2-10-1-8	BM 42	
11	M 42	1.3249	S 2-9-2-8	BM 34	
11	T 4	1.3255	S 18-1-2-5	BT 4	
11	M 2	1.3343	S6-5-2	BM2	
11	M 7	1.3348	S2-9-2		
11	T 1	1.3355	S 18-0-1	BT 1	
11	HNV 3	1.4718	X45CrSi 9 3	401S45	52
11	422	1.4935	x20 CrMoWV 12 1		
12	403	1.4000	X6Cr13	403 S 17	
12		1.4001	X6Cr14		
12	(410S)	1.4001	X7 Cr 13	(403 S 7)	
12	405	1.4002	X6CrA12	405S17	
12	405	1.4002	X6 CrAl 13	405 S 17	
12	416	1.4005	X12CrS 13	416 S 21	
12	410; CA-15	1.4006	(G-)X10 Cr 13	410S21	56A
12	430	1.4016	X8Cr17	Z8C17	
12	430	1.4016	X6 Cr 17	430 S 15	60
12		1.4027	G-X20Cr14	420C29	
12	420	1.4028	X30 Cr 13	420 S 45	
12		1.4086	G-X120Cr29	452C11	
12	430 F	1.4104	X12CrMoS17	420 S 37	
12	440B	1.4112	X90 CrMoV 18		
12	434	1.4113	X6CrMo 17	434 S 17	
12		1.4340	G-X40CrNi27 4		
12	S31500	1.4417	X2CrNiM0Si19 5		
12	S31500	1.4417	X2 CrNoMoSi 18 5 3		

France AFNOR	Sweden SS	Italy UNI	Spain UNE	Japan JIS	Russia GOST
Z130WKCDV					
KCV 06-05-05-04-02	2723	HS 6-5-2-5	6-5-2-5	SKH55	R6M5K5
Z110 WKCDV 07-05-04	7-4-2-5	HS 7-4-2-5	M 35		
Z110 DKCWV 09-08-04	2-10-1-8	HS 2-9-1-8	M 41		
			2-9-2-8		R6M5
Z 80 WKCV 18-05-04-0					
Z 85 WDCV	2722	HS 6 5 2	F-5604	SKH 51	
Z 100 DCWV 09-04-02-	2782	HS 2 9 2	F-5607		
Z 80 WCV 18-4-01					R18
Z45CS9		X45CrSi8	F322	SUH1	40Ch9S2
Z 6 C 13	2301	X6Cr13	F.3110	SUS403	08Ch13
			F8401		08Ch13
Z 8 C 13	2301				08Ch13
Z8CA12		X6CrAl13			
Z6CA13	2302	X6CrAl13			
Z11 CF 13	2380	X12 CrSC13	F-3411	SUS 416	
Z10 C 13	2302	X12Cr13	F.3401	SUS410	12Ch13
430S15	2320	X8Cr17	F.3113		12Ch17
Z 8 C 17	2320	X8Cr17	F3113	SUS430	12Ch17
Z20C13M					20Ch13L
Z 30 C 13	2304				20Ch13
Z 10 CF 17	2383	X10CrS17	F.3117	SUS430F	
Z 8 CD 17.01	2325	X8CrMo17		SUS434	
	2376				
	2376				

ISCAR MATERIAL GROUPS

According to VDI 3323 Standard

	USA	GERMANY		Great Britain	
Mtl. No.	AISI/SAE	Werkstoff	DIN	BS	EN
12		1.4418	X4 CrNiMo16 5		
12	XM 8; 430 Ti; 439	1.4510			
12	430tl	1.4510	X6 CrTi 17		
12		1.4511	X 6 CrNb 17		
12	409	1.4512	X 6 CrTi 12; (X2CrTi12)	LW 19; 409 S 19	
12		1.4720	X20CrMo13		
12	405	1.4724	X10CrA113	403S17	
12	430	1.4742	X10CrA118	439S15	60
12	HNV6	1.4747	X80CrNiSi20	443S65	59
12	446	1.4749	x18 cRn 28		
12	446	1.4762	X10CrA124		
12	EV 8	1.4871	X 53 CrMnNiN 21 9	349 S 54	
12	302		x12 CrNi 18 9	302 S 31	
12	429		X10 CrNi 15		
13	420	1.4021	X20Cr13	420S37	
13	420	1.4031	X40 Cr 13		
13		1.4034	X46Cr13	420 S 45	
13	431	1.4057	X20CrNi172	431 S 29	57
13	CA6-NM	1.4313	G-X4 CrNi 13 4	425 C 11	
13		1.4544		S. 524; S. 526	
13	348	1.4546	X5CrNiNb 18-10	347 S 31; 2 S. 130; 2 S. 143; 2 S. 144; 2 S. 145; S.525; S.527	
13		1.4922	x20cRmV12-1		
13		1.4923	X22 CrMoV12 1		
14	304	1.4301	X 5 CrNi 18 9	304 S 15	
14	303	1.4305	X10 CrNiS 18 9	303 S 21	58M
14	304L	1.4306	X2CrNi18 9	304S12	
14	304L	1.4306	X2 CrNi 18 10	304 S 11	
14	CF-8	1.4308	X6 CrNi 18 9	304 C 15	58E
14	301	1.4310	X12CrN i17 7	301 S 21	
14	304 LN	1.4311	X2 CrNiN 18 10	304 S 62	
14		1.4312	G-X10CrNi18 8	302C25	
14	305	1.4312	X8 CrNi 18 12	305 s 19	

France AFNOR	Sweden SS	Italy UNI	Spain UNE	Japan JIS	Russia GOST
Z6CND16-04-01	2387				
Z 4 CT 17		X 6 CrTi 17	F.3115 -X 5 CrTi 17	SUS 430 LX	08 Ch17T
Z 4 CT 17					08Ch17T
Z 4 CNb 17		X 6 CrNb 17	F.3122-X 5 CrNb 17	SUS 430 LK	
Z 3 CT 12		X 6 CrTi 12		SUH 409	
Z10C13		X10CrA112	F.311		10Ch13SJu
Z10CAS18		X8Cr17	F.3113	SUS430	15Ch13SJu
Z80CSN20.02		X80CrSiNi20	F.320B	SUH4	
Z10CAS24	2322	X16Cr26		SUH446	
Z 52 CMN 21.09		X53CrMnNiN21 9		SUH35, SUH36	55Ch20G9AN4
Z 10 CN 18-09	2330				
Z 20 C 13	2303	14210			20Ch13
Z 40 C 14	2304				40Ch13
Z40 C 14		X40Cr14	F.3405	SUS420J2	
Z 15 CN 16.02	2321	X16CrNi16	F.3427	SUS431	20Ch17N2
Z 4 CND 13-04 M	2385	(G)X6CrNi304		SCS5	
		X 6 CrNiTi 18 11			08Ch 18N12T
		X 6 CrNiNb 18 11			
	2317	x20cRmOnI 12 01			
Z 5 CN 18.09	2332; 2333				08Ch18N10
Z 8 CNF 18-09	2346	X10CrNiS18.09	F.3508	SUS303	30Ch18N11
Z2CrNi18 10	2352	x2cRnI18 11	F.3503	SCS19	
Z 3 CN 19-11	2352	X2CrNi18 11			
Z 6 CN 18-10 M	2333			SUS304L	
Z 12 CN 17.07	2331	X2CrNi18 07	F.3517		
Z 2 CN18.10	2371	X2CrNiN18 10		SUS304LN	
Z10CN18.9M					10Ch18N9L
					10Ch18N9L

ISCAR MATERIAL GROUPS

According to VDI 3323 Standard

	USA	GERMANY		Great Britain	
Mtl. No.	AISI/SAE	Werkstoff	DIN	BS	EN
14	304	1.4350	X5CrNi18 9	304S15	58E
14	S32304	1.4362	X2 CrNiN 23 4		
14	202	1.4371	X3 CrMnNiN 188 8 7	284 S 16	
14	316	1.4401	X 5 CrNiMo 17 12 2; (X4 CrNiMo 17 -12-2)	316 S 13; 316 S 17; 316 S 19; 316 S 31; 316 S 33	
14	316L	1.4404	X2 CrNiMo 17 13 2; (X2 CrNiMo 17-12-2); GX 2 CrNiMoN 18-10	316 S 11; 316 S 13; 316 S 14; 316 S 31; 316 S 42; S.537; 316 C 12; T.75; S. 161	
14	316LN	1.4406	X2 CrNiMoN 17 12 2; (X2CrNiMoN 18-10)	316 S 61; 316 S 63	
14	CF-8M	1.4408	GX 5 CrNiMoN 7 12 2; G-X 6 CrNiMo 18 10	316 C 16 (LT 196); ANC 4 B	
14		1.4410	G-X10CrNiMo18 9		
14	316 Ln	1.4429	X2 CrNiMo 17 -13-3	316 S 62	
14	316L	1.4435	X2 CrNiMo18 14 3	316 S 11; 316 S 13; 316 S 14; 316 S 31; LW 22; LWCF 22	
14	316	1.4436	X 5 CrNiMo 17 13 3; (X4CRNIMO 17-13-3	316 S 19; 316 S 31; 316 S 33; LW 23; LWCF 23	
14	317L	1.4438	X2 CrNiMo 18 16 4; (X2CrNiMo 18-15-4)	317 S 12	
14	(s31726)	1.4439	X2 CrNiMoN 17 13 5		
14		1.444	X 2 CrNiMo 18 13		
14	317	1.4449	X5 CrNiMo 17 13 3	317 S 16	
14	329	1.4460	X 4 CrNiMo 27 5 2; (X3CrNiMo27-5-2)		
14	329	1.4460	X8CrNiMo27 5		

France AFNOR	Sweden SS	Italy UNI	Spain UNE	Japan JIS	Russia GOST
Z6CN18.09	2332	X5CrNi18 10	F.3551	SUS304	
Z 2 CN 23-04 AZ	2327				
Z 8 CMN 18- 08-05					
Z 3 CND 17 -11-01; Z 6 CND 17-11; Z 6 CND 17-11-02; Z 7 CND 17-11-02; Z 7 CND 17-12-02	2347	X 5 CrNiMo 17 12	F.3534-X 5 CrNiMo 17 12 2	SUS 316	
Z 2 CND 17-12; Z 2 CND 18-13; Z 3 CND 17-11-02; Z 3 CND 17-12-02 FF; Z 3 CND 18-12-03; Z 3 CND 19.10 M	2348	X 2 CrNiMo 17 12; G-X 2 CrNiMo 19 11	F.3533 - X 2 CrNiMo 17 13 2; F.3537 - X 2 CrNiMo 17 13 3	SUS 316 L	
Z2 CND 17-12 AZ		X 2 CrNiMoN 17 12	F.3542-X 2 CrNiMoN 17 12 2	SUS316LN	07 Ch 18N
	2343		F.8414-AM-X 7 CrNiMo 20 10	SCS 14	10G2S2MSL
Z5CND20.12M	2328				
Z 2 CND 17-13 Az	2375	X 2 CrNiMoN 17 13	F.3543-X 2 CrNiMoN 17 13 3	SUS 316 LN	
Z 3 CND 17-12-03; Z 3 CND 18-14-03	2375	X2CrNiMoN 17 13	F.3533-X 2 CrNiMo 17 13 2	SUS 316 L	O3 Ch 17N14M3
Z 6 CND 18-12-03; Z 7 CND 18-12-03	2343	X 5 CrNiMo 117 13; X 8 cRnImO 17 13	F.3543-X 5 CrNiMo 17 12 2 F.3538-X 5 CrNiMo 17 13 3	SUS 316	
Z 2 CND 19-15-04; z 3 cnd 19-15-04	2367	X2CrNiMo18 16	f.3539-x 2 cRnImO 18 16 4	SUS317L	
Z 3 CND 18-14-06 AZ					
		X 5 CrNiMo 18 15		SUS 317	
(Z 3 CND 25-07 Az); Z 5 CND 27-05 Az	2324		F.3309-X 8 CrNiMo 17 12 2; F.3552-X 8 CrNiMo 18 16 4	SUS 329 J 1	
	2324				

ISCAR MATERIAL GROUPS

According to VDI 3323 Standard

	USA	GERMANY		Great Britain	
Mtl. No.	AISI/SAE	Werkstoff	DIN	BS	EN
14		1.4462	X2CrNiMoN22 5 3	318 S 13	
14		1.4500	G-X7NiCrMoCuNb25 20		
14	17-7PH	1.4504		316S111	
14	443 444	1.4521	X2CrMoTi18-2		
14	UNS N 08904	1.4539	X1NiCrMoCuN25-20-5		
14	CN-7M	1.4539	(G-)X1 NiCrMoCu 25 20 5		
14	321	1.4541	Z 6 CrNiTi 18-10	321 S 31; 321 S 51 (1010; 1105); LW 24; LWCF 24	
14	630	1.4542	X5 CrNiCuNb 17 4; (X5 CrNiChNb 16-4)		
14	15-5PH	1.4545	Z7 CNU15.05		
14	S31254	1.4547	X1 CrNiMoN 20 18 7		
14	347	1.4550	X6 CrNiNb 18 10	347 S 17	58F
14		1.4552	G-X7CrNiNb18 9		
14	17-7PH	1.4568		316S111	
14	316tTi	1.4571	X6 CrNiMoTi 17 12 2	320 S 31	
14	316 Ti	1.4571	x 6 CrNiMoTi 17 12 2	320 S 31	58J
14		1.4581	G-X 5 CrNiMoNb	318 C 17	
14	318	1.4583	X 10CrNiMoNb 18 12	303 S 21	
14		1.4585	G-X7CrNiMoCuNb18 18		
14		1.4821	X20CrNiSi25 4		
14		1.4823	G-X40CrNiSi27 4		
14	309	1.4828	X15CrNiSi20 12	309 S 24	58C
14	309S	1.4833	X6 CrNi 22 13	309 S 13	
14	310 S	1.4845	X12 CrNi 25 21	310S24	
14	321	1.4878	X6 CrNiTi 18 9	32 1 S 20	58B

France AFNOR	Sweden SS	Italy UNI	Spain UNE	Japan JIS	Russia GOST
Z 3 CND 22-05 Az; (Z 2 CND 24 -08 Az); (Z 3 CND 25-06-03 Az)	2377			SUS 329 J3L	
23NCDU25.20M					
		Z8CNA17-07	X2CrNiMo1712		
	2326		F.3123-X 2 CrMoTiNb 18 2	SUS 444	
Z 2 NCDU 25-20	2562				
Z1 NCDU 25-02 M	2564				
Z 6 CNT 18-10	2337	X 6 CrNiTi 18 11	F.3523 - X 6 CrNiTi 18 10	SUS 321	06Ch18N10T; 08Ch18N10T; 09Ch18N10T; 12Ch18N10T
Z 7 CNU 15-05; Z 7 CNU 17-04				SCS 24; SUS 630	
	2378				
Z 6 CNNb 18.10	2338	X6CrNiNb18 11	F.3552	SUS347	08Ch18N12B
Z4CNNb19.10M					
		Z8CNA17-07	X2CrNiMo1712		09Ch17NJu1
Z 6 CNDT 17-12002	2350				10Ch17N13M2T
Z 6 NDT 17.12	2350	X6CrNiMoTi17 12	F.3535		10Ch17N13M2T
Z 4 CNDNb 18.12 M					
Z15CNS20.12		x15cRnlsl2 12			
		X6CrNiMoTi17 12			
Z20CNS25.04					
Z15CNS20.12			F.8414	SCS17	20Ch20N14S2
Z 15 CN 24-13					
Z 12 CN 25-20	2361	X6CrNi25 20	F.331	SUH310	20Ch23N18
Z 6 CNT 18-12 (B)	2337	X6CrNiTi18 11	F.3553	SUS321	

ISCAR MATERIAL GROUPS

According to VDI 3323 Standard

	USA	GERMANY		Great Britain	
Mtl. No.	AISI/SAE	Werkstoff	DIN	BS	EN
14	Ss30415	1.4891	X5 CrNiNb 18 10		
14	S30815	1.4893	X8 CrNiNb 11		
14	304H	1.4948	X6 CrNi 18 11	304 S 51	
14	660	1.4980	X5 NiCrTi 25 15		
14			X5 NiCrN 35 25		
14	S31753		X2 CrNiMoN 18 13 4		
14			X2 CrNiMoN 25 22 7		
15	CLASS20	0.6010	GG10		
15	A48-20B	0.6010	GG-10		
15	NO 25 B	0.6015	GG 15	Grade 150	
15	CLASS25	0.6015	GG15	GRADE150	
15	A48 25 B	0.6015	GG 15	Grade 150	
15	A48-30B	0.6020	GG-20	Grade 220	
15	NO 30 B	0.6020	GG 20	Grade 220	
15	A436 Type 2	0.6660	GGL-NiCr202	L-NiCuCr202	
15	60-40-18	0.7040	GGG 40	SNG 420/12	
15	No 20 B		GG 10		
16	CLASS30	0.6020	GG20	GRADE220	
16	A48-40 B	0.6025	EN- GJL-250 (GG25)	Grade260	
16	CLASS45	0.6030	GG30	GRADE300	
16	A48-45 B	0.6030		Grade 300	
16	A48-50	0.6035	GG-35	GRADE 350	
16	A48-60 B	0.6040	GG40	GRADE400	
16		1.4829	X 12 CrNi 22 12		
16					
16					
17		0.7033	GGG-35.3	350/22 L 40	
17	60/40/18	0.7043	GGG-40.3	370/7	
17	80-55-06	0.7050	EN- GJS-800-7 (GGG50)	SNG500/7	
17	65-45-12	0.7050	GGG-50	SNG 500/7	
17		0.7652	GGG-NiMn 13 7	S-NiMn 137	
17	A43D2	0.7660	GGG-NiCr 20 2	Grade S6	

France AFNOR	Sweden SS	Italy UNI	Spain UNE	Japan JIS	Russia GOST
	2372				
	2368				
Z 5 CN 18-09	2333				
Zz 8 nctv 25-15 b ff	2570				
Ft10D	110	G10			SCh10
FT 10 D	0110-00				SCh10
FT 15 D	0115-00	G 15	FG 15	FC150	SCh15
Ft15D	115	G 15	FG 15		SCh15
Ft 15 D	01 15-00	G14	FG15		SCh15
Ft 20 D	0120-00				SCh20
Ft 20 D	120	G 20		FC200	SCh20
L-NC 202	0523-00				
FCS 400-12	0717-02	GS 370-17	FGE 38-17	FCD400	VCh42-12
Ft 10 D	110			FC100	
Ft20D	120	G 20	FG 20		
Ft 25 D	125	G 25	FG 25	FC250	VCh60-2
Ft30D	130	G 30	FG 30	FC300	SCh20
Ft 30 D	01 30-00				SCh30
Ft35D	135	G 35	FG 35	FC350	SCh30
Ft 40 D	140				SCh40
					SCh25
FGS 370/17	0717-15				VCh42-12
FGS 370/17	0717-15				VCh50-2
FGS 500/7	0727-02	GGG 50		FCD500	VCh50-2
FGS 500-7	0727-02				
S-Mn 137	0772-00				
S-NC 202	0776-00				

ISCAR MATERIAL GROUPS

According to VDI 3323 Standard

	USA	GERMANY		Great Britain	
Mtl. No.	AISI/SAE	Werkstoff	DIN	BS	EN
17			GGG 40.3	SNG 370/17	
18		0.7060	GGG60	SNG600/3	
18	80/55/06	0.7060	GGG-60	600/3	
18	100/70/03	0.7070	GGG-70	SNG700/2	
18	A48 40 B				
19		0.8055	GTW55		
19	32510	0.8135	GTS-35-10	B 340/12	
19	A47-32510	0.8135	GTS-35-10	B 340/2	
19	A220-40010	0.8145	GTS-45-06	P 440/7	
19			GTS-35	B 340/12	
19				8 290/6	
19	32510		GTS-35	B340/12	
20		0.8035	GTM-35	W340/3	
20		0.8040	GTW-40	W410/4	
20		0.8045			
20		0.8065	GTMW-65		
20	A220-50005	0.8155	GTS-55-04	P 510/4	
20	50005	0.8155	GTS-55-04	P510/4	
20	70003	0.8165	GTS-65-02	P 570/3	
20	90001	0.8170	GTS-70-02	P 690/2	
20	A220-90001	0.8170	GTS-70-02		
20	1022; 1518	1.1133	20Mn5	120 M 19	
20	400 10		GTS-45	P440/7	
20	70003		GTS-65	P 570/3	
21	Al99	3.0205			
21	1000	3.0255	Al99.5	L31; L34; L36	
21		3.3315	AlMg1		
22		3.1325	AlCuMg 1		
22		3.1655	AlCuSiPb		
22		3.2315	AlMgSi1		
22	7050	3.4345	AlZnMgCuO,5	L 86	
22		3.437	AlZnMgCu 1,5		
23		3.2381	G-AlSi 10 Mg		
23		3.2382	GD-AlSi10Mg		

France AFNOR	Sweden SS	Italy UNI	Spain UNE	Japan JIS	Russia GOST
FGS 370-17	0717-12			FC250	
FGS600-3	07 32-03	GGG 60	GGG 60		
FGS 600/3	0727-03			FCD600	
FGS 700-2	07 37-01	GGG 70	GGG 70	FCD700	
			GTW 55		
MN35-10	810		GTS 35		KCh35-10
Mn 35-10	0815-00				KCh35-10
Mn 450-6	0852-00	GMN 45		FCMW370	
	0810-00				
MN 32-8	814			AC4A	
MN 35-10	08 15			FCMW330	
MB35-7	852		GTM 35		
MB40-10		GMB40	GTM 40		
		GMB45	GTM 45		KCh55-4
			GTW 65		KCh55-4
Mn 550-4	0854-00				KCh60-3
MP 50-5	854	GMN 55		FCMP490	KCh70-2
Mn 650-3	0856-00	GMN 65		FCMP590	KCh70-2
Mn 700-2	0862-00	GMN 70		FCMP690	KCh70-2
Mn 700-2	0864-00				20G
20 M 5	2132	G 22 Mn 3; 20 Mn 7	F.1515-20 Mn 6	SMnC 420	
	08 52				
MP 60-3	858			FCMP540	AD0
A59050C					D1
					AD35
					AK9
AZ 4 GU/9051		811-04			
					AK12

ISCAR MATERIAL GROUPS

According to VDI 3323 Standard

	USA	GERMANY		Great Britain	
Mtl. No.	AISI/SAE	Werkstoff	DIN	BS	EN
23	A360.2	3.2383	G-AlSi0Mg(Cu)	LM9	
23		3.2581	G-AlSi12		
23		3.3561	G-AlMg 5		
23	ZE 41	3.5101	G-MgZn4sE1Zr1	MAG 5	
23	EZ 33	3.5103	MgSE3Zn27r1	MAG 6	
23	AZ 81	3.5812	G-MgAl8Zn1	NMAG 1	
23	AZ 91	3.5912	G-MgAl9Zn1	MAG 7	
23	A356-72			2789; 1973	
23	356,1			LM25	
23	A413.2		G-AlSi12	LM 6	
23	A413.1		G-AlSi 12 (Cu)	LM 20	
23	A413.0		GD-AlSi12		
23	A380.1		GD-AlSi8Cu3	LM24	
24		2.1871	G-AlCu 4 TiMg		
24		3.1754	G-AlCu5Ni1,5		
24		3.2163	G-AlSi9Cu3		
24	4218 B	3.2371	G-AlSi 7 Mg		
24	SC64D	3.2373	G-AlSI9MGWA		
24		3.2373	G-AlSi 9 Mg		
24	QE 22	3.5106	G-MgAg3SE2Zr1	mag 12	
24	GD-AlSI12		G-ALMG5	LM5	
26	C93200	2.1090	G-CuSn 7 5 pb		
26	c 83600	2.1096	G-CuSn5ZnPb	LG 2	
26	C 83600	2.1098	G-CuSn 2 Znpb		
26	C23000	2.1182	G-CuPb15Sn	LB1	
26	C 93800	2.1182	G-CuPb15Sn		
27		2.0240	CuZn 15		
27	C27200	2.0321	CuZn 37	cz 108	
27	C27700	2.0321	CuZn 37	cz 108	
27		2.0590	G-CuZn40Fe		
27	C 86500	2.0592	G-CuZn 35 Al 1	U-Z 36 N 3	
27	C 86200	2.0596	G-CuZn 34 Al 2	HTB 1	
27	C 18200	2.1293	CuCrZr	CC 102	

France AFNOR	Sweden SS	Italy UNI	Spain UNE	Japan JIS	Russia GOST
	4253				
G-TR3Z2					
NF A32-201					
	4244			A5052	AK7
	4261				
	4260			ADC12	AK12
	4247			A6061	
	4250			A7075	
					VAL 8
					AK8
A-S7G	4251			C4BS	AK9
A-SU12	4252				
U-E 7 Z 5 pb 4					
U-pb 15 E 8					
Uu-PB 15e 8					
CuZn 36, CuZn 37		C 2700			L 63
CuZn 36, CuZn 37		C2720			L 63
HTB 1					
U-Z 36 N 3					LTs23AD; ZMts
U-Cr 0.8 Zr					

ISCAR MATERIAL GROUPS

According to VDI 3323 Standard

	USA	GERMANY		Great Britain	
Mtl. No.	AISI/SAE	Werkstoff	DIN	BS	EN
28		2.0060	E-Cu57		
28		2.0375	CuZn36Pb3		
28	C 63000	2.0966	CuAl 10 Ni 5 Fe 4	Ca 104	
28	B-148-52	2.0975	G-CuAl 10 Ni		
28	c 90700	2.1050	G-CuSn 10	CT1	
28	C 90800	2.1052	G-CuSn 12	pb 2	
28	C 81500	2.1292	G-CuCrF 35	CC1-FF	
28		2.4764	CoCr20W15Ni		
31	N 08800	1.4558	X 2 NiCrAlTi 32 20	NA 15	
31	N 08031	1.4562	X 1 NiCrMoCu 32 28 7		
31	N 08028	1.4563	X 1 NiCrMoCuN 31 27 4		
31	N 08330	1.4864	X 12 NiCrSi 36 16	NA 17	
31	330	1.4864	X12 NiCrSi 36 16	NA 17	
31		1.4865	G-X40NiCrSi38 18	330 C 40	
31		1.4958	X 5 NiCrAlTi 31 20		
31	AMS 5544	2.4668	NiCr19NbMo		
32		1.4977	X 40 CoCrNi 20 20		
33	Monel 400	2.4360	NiCu30Fe	NA 13	
33	5390A	2.4603			
33	Hastelloy C-4	2.4610	NiMo16cR16Ti		
33	Nimonic 75	2.4630	NiCr20Ti	HR 5,203-4	
33		2.4630	NiCr20Ti	HR5,203-4	
33	Inconel 690	2.4642	NiC29Fe		
33	Inconel 625	2.4856	NiCr22Mo9Nb	NA 21	
33	5666	2.4856	NiCr22Mo9Nb		
33	Incoloy 825	2.4858	NiCr21Mo	NA 16	
34	Monel k-500	2.4375	NiCu30 Al	NA 18	
34	4676	2.4375	NiCu30Al	3072-76	
34		2.4631	NiCr20TiAl	Hr40; 601	
34	Inconel 718	2.4668	NiCr19FeNbMo		
34	Inconel 751	2.4694	NiCr16fE7TiAl		
34		2.4955	NiFe25Cr20NbTi		
34	5383	2.4668	NiCr19Fe19NbMo	HR8	
34	5391	2 4670	S-NiCr13A16MoNb	3146-3	

France AFNOR	Sweden SS	Italy UNI	Spain UNE	Japan JIS	Russia GOST
					LS60-2
U-A 10 N					BrAD; N10-4-4
UE 12 P					
Z1NCDU31-27-03	2584				EK 77
Z 12 NCS 35.16					
Z 12 NCS 37.18				SUH330	
		XG50NiCr39 19		SCH15	
NC20K14					
Z 42 CNKDWNb					
NU 30					
NC22FeD					
NC 20 T					
NC20T					
Nnc 30 Fe					
NC 22 FeDNb					
Inconel 625					
NC 21 Fe DU					KhN38VT
NU 30 AT					
NC20TA					KhN77TYuR
NC 19 Fe Nb					
NC19eNB					
NC12AD					

ISCAR MATERIAL GROUPS

According to VDI 3323 Standard

	USA	GERMANY		Great Britain	
Mtl. No.	AISI/SAE	Werkstoff	DIN	BS	EN
34	5660	2.4662	NiFe35Cr14MoTi		
34	5537C	2.4964	CoCr20W15Ni		
34	AMS 5772		C0Cr22W14Ni		
35	Inconel X-750	2.4669	NiCr15Fe7TiAl		
35	Hastelloy B	2.4685	G-NiMo28		
35	Hastelloy C	2.4810	G-NiMo30		
35	AMS 5399	2.4973	NiCr19Co11MoTi		
35		3.7115	TiAl5Sn2		
36	R 50250	3.7025	Ti 1	2 TA 1	
36	R 52250	3.7225	Ti 1 pd	TP 1	
36	AMS 5397	2.4674	NiCo15Cr10MoAlTi		
37		3.7124	TiCu2	2 TA 21-24	
37	R 54620	3.7145	TiAl6Sn2Zr4Mo2Si		
37		3.7165	TiAl6V4	TA 10-13; TA 28	
37		3.7185	TiAl4Mo4Sn2	TA 45-51; TA 57	
37		3.7195	TiAl 3 V 2.5		
37			TiAl4Mo4Sn4Si0.5		
37	AMS R54520		TiAl5Sn2.5	TA14/17	
37	AMS R56400		TiAl6V4	TA10-13/TA28	
37	AMS R56401		TiAl6V4ELI	TA11	
38	W 1	1.1545	C 105 W1	BW 1A	
38	W210	1.1545	C105W1	BW2	
38		1.2762	75 CrMoNiW 6 7		
38	440C	1.4125	X105 CrMo 17		
38		1.6746	32 nlcRmO 14 5	832 M 31	
40	Ni- Hard 2	0.9620	G-X 260 NiCr 4 2	Grade 2 A	
40	Ni- Hard 1	0.9625	G-X 330 Ni Cr 4 2	Grade 2 B	
40	Ni-Hard 4	0.9630	G-X 300 CrNiSi 9 5 2		
40		0.9640	G-X 300 CrMoNi 15 2 1		
40	A 532 III A 25% Cr	0.9650	G-X 260 Cr 27	Grade 3 D	
40	A 532 III A 25% Cr	0.9655	G-X 300 CrNMo 27 1	Grade 3 E	
40	310	1.4841	X15 CrNiSi 25 20	314 S31	
41		0.9635	G-X 300 CrMo 15 3		
41		0.9645	G-X 260 CrMoNi 20 2 1		

France AFNOR	Sweden SS	Italy UNI	Spain UNE	Japan JIS	Russia GOST
ZSNCDT42					
KC20WN					
KC22WN					
NC 15 TNb A					
NC19KDT					VT5-1
					VT1-00
T-A 6 V					VT6
T-A5E					
T-A6V					
Y1 105	1880	C 100 KU	F-5118	SK 3	
Y120	2900	C120KU	CF.515	SUP4	U10A
Z 100 CD 17		X 105 CrMo 17			95Ch18
35 NCD 14					
	0512-00				
	0513-00				
	0466-00				ChWG
					20Ch25N20S2
Z 15 CNS 25-20					

Alphabetical Index

C

D

E

E

E

H

H

H

M

M

M

S

S

T

T

ISCAR LTD.
Israel
Headquarters
Tel +972 (0)4 997 0311
Fax+972 (0)4 987 3741
www.iscar.com
headquarter@iscar.co.il

Argentina
ISCAR TOOLS ARGENTINA SA
Tel +54 114 912 2200
Fax+54 114 912 4411
admin@iscararg.com.ar
www.iscararg.com.ar

Australia
ISCAR AUSTRALIA PTY. LTD
Tel +61 (0) 2 8848 3500
Fax+61 (0) 2 8848 3511
iscaraus@iscar.com.au
www.iscar.com.au

Austria
ISCAR AUSTRIA GmbH
Tel +43 7252 71200-0
Fax+43 7252 71200-999
office@iscar.at
www.iscar.at

Belarus
JV ALC "TWING-M"
Tel +375 17 506-32-38
+375 17 506-33-31/65
Tel/Fax +375 17 506-32-37
info@twing.by
www.twing.by, www.iscar.by

Belgium
n.v. ISCAR BENELUX s.a.
Tel +32 (0) 2 464 2020
Fax+32 (0) 2 522 5121
info@iscar.be
www.iscar.be

Bosnia
(Representative Office)
Tel +387 32 201 100
Fax+387 32 201 101
info@iscar.ba

Brazil
ISCAR DO BRASIL COML. LTDA.
Tel +55 19 3826-7100
Fax+55 19 3826-7171
DDG 0800 701 8877
iscar@iscarbrasil.com.br
www.iscar.com.br

Bulgaria
ISCAR BULGARIA
Tel/Fax +359 431 62557
aa_iscar@infotel.bg
www.iscar.bg

Canada
ISCAR TOOLS INC.
Tel +1 905 829 9000
Fax+1 905 829 9100
admin@iscar.ca
www.iscar.ca

Chile
SANDE SA
Tel +56 2 695 1700
Fax +56 2 697 0332
logistica@sande.cl

China
ISCAR CHINA
Tel +86 10 6561 0261/2/3
Fax+86 10 6561 0264
iscar@iscar.com.cn
www.iscar.com.cn

Colombia
CIMEX S.A.
Tel: +57 (1) 530-9222
cimex@cimexsa.com

DUROMETAL COLOMBIA
Tel: +57 1 674 03 20
Fax: +57 1 674 04 03
dirventas@duro-metal.com

Croatia
ISCAR ALATI d.o.o.
Tel +385 (0) 1 33 23 301
Fax +385 (0) 1 33 76 145
iscar@zg.t-com.hr
www.iscar.hr

Cyprus
WAMET (Demetriades) Ltd.
Tel +357 (0) 2 336660/5498
Fax +357 (0) 2 333386
wamet@cytanet.com.cy

Czech Republic
ISCAR CR s.r.o.
Tel +420 377 420 625
Fax +420 377 420 630
iscar@iscar.cz
www.iscar.cz

Denmark
KJ VAERKTOEJ AS/ISCAR DENMARK
Tel +45 70 11 22 44
Fax++45 46 98 67 10
kj@kj.dk
www.iscar.dk

Estonia
KATOMSK AS
Tel +372 6775 671
Fax +372 6720 266
aleksei@katomsk.ee

Finland
ISCAR FINLAND OY
Tel +358-(0)9-439 1420
Fax +358-(0)9-466 328
info@iscar.fi
www.iscar.fi

France
ISCAR FRANCE SAS
Tel +33 (0)1 30 12 92 92
Fax+33 (0)1 30 12 95 82
info@iscar.fr
www.iscar.fr

Germany
ISCAR GERMANY GmbH
Tel +49 (0) 72 43 9908-0
Fax+49 (0) 72 43 9908-93
gmbh@iscar.de
www.iscar.de

Greece
INTERNATIONAL TOOLS
K.-X. GEORGOPOULOS & SIA O.E
Tel +30 210 346 0133
Fax +30 210 342 5621
info@internationaltools.gr

VIMA
V. MAZLOUMIAN & SONS
Tel +30 2310 517-117 / 544-521
Fax +30 2310 529-107
vimaco@otenet.gr
http://www.vimaco.gr

Hong Kong
MTC TOOLING SYSTEMS LTD
Tel +85-2-23054838
Fax +85-2-27988789
yoongkamsing@hotmail.com

Hungary
ISCAR HUNGARY KFT.
Tel +36 28 887 700
Fax +36 28 887 710
iscar@iscar.hu
www.iscar.hu

India
ISCAR India Ltd.
Tel +91 77009 63707
crao@iscar.in

Indonesia
CV MULTI TEKNIK
Tel. +62-21-29206242/44/45/59
Fax. +62-21-29206243
contact@multi-teknik.co.id

Ireland
HARDMETAL MACHINE TOOLS
Tel +353 (0) 1 286 2466
Fax +353 (0) 1 286 1514
phannigan@hardmetal.ie

Italy
ISCAR ITALIA srl
Tel +39 02 93 528 1
Fax +39 02 93 528 213
marketing@iscaritalia.it
www.iscaritalia.it

Japan
ISCAR JAPAN LTD.
Tel +81 6 6835 5471
Fax +81 6 6835 5472
iscar@iscar.co.jp
www.iscar.co.jp

Latvia
SIA EKL/LS
Tel +371 6 733 11 54
Fax +371 6 780 56 48
ekllpstools@isr.lv

Lithuania
MECHA, UB
Tel +370 37 407 230
Fax +370 37 407 231
sigitas@mecha.lt

Macedonia
(Representative Office)
Tel +389 2 309 02 52
Fax +389 2 309 02 54
info@iscar.com.mk

Mexico
ISCAR DE MÉXICO
Tel +52 (442) 214 5505
Fax+52 (442) 214 5510
iscarmex@iscar.com.mx
www.iscar.com.mx

The Netherlands
ISCAR NEDERLAND B.V.
Tel +31 (0) 182 535523
Fax+31 (0) 182 572777
info@iscar.nl
www.iscar.nl

New Zealand
ISCAR PACIFIC LTD.
Tel +64 (0) 9 573 1280
Fax+64 (0) 9 573 0781
iscar@iscarpac.co.nz

Norway
SVEA MASKINER AS
Tel +47 32277750
Fax +47 32277751
per.martin.bakken@svea.no

Peru
HARTMETALL SAC
Tel: (511) 6612699
otorres@hartmetallgroup.com

Philippines
MESCO
Tel +63 2631 1775
Fax +63 2635 0276
mesco@mesco.com.ph

Poland
ISCAR POLAND Sp. z o.o.
Tel +48 32 735 7700
Fax+48 32 735 7701
iscar@iscar.pl
www.iscar.pl

Portugal
ISCAR PORTUGAL, SA
Tel +351 256 579950
Fax+351 256 586764
info@iscarportugal.pt
www.iscarportugal.pt

Romania
ISCAR TOOLS SRL
Tel +40 (0)312 286 614
Fax+40 (0)312 286 615
iscar-romania@iscar.com

Russia
Moscow
ISCAR RUSSIA LLC
Tel/fax +7 495 660 91 25/31
iscar@iscar.ru
www.iscar.ru

Chelyabinsk
ISCAR RUSSIA EAST LLC
Tel/fax +7 351 277 74 32
info@iscar-east.com
www.iscar-east.ru

Serbia
ISCAR TOOLS d.o.o.
Tel +381 11 314 90 38
Fax +381 11 314 91 47
info@iscartools.rs

Singapore
SINO TOOLING SYSTEM
Tel +65 6566 7668
Fax +65 6567 7336
sinotool@singnet.com.sg

Slovakia
ISCAR SR, s.r.o.
Tel +421 (0) 41 5074301
Fax +421 (0) 41 5074311
info@iscar.sk
www.iscar.sk

Slovenia
ISCAR SLOVENIJA d.o.o.
Tel +386 1 580 92 30
Fax+386 1 562 21 84
info@iscar.si
www.iscar.si

South Africa
ISCAR SOUTH AFRICA (PTY) LTD.
ShareCall 08600-47227
Tel +27 11 997 2700
Fax +27 11 388 9750
iscar@iscarsa.co.za
www.iscar.co.za

South Korea
ISCAR KOREA
Tel +82 53 760 7594
Fax+82 53 760 7500
leeyj@taegutec.co.kr
www.iscarkorea.co.kr

Spain
ISCAR IBERICA SA
Tel +34 93 594 6484
Fax +34 93 582 4458
iscar@iscarib.es
www.iscarib.es

Sweden
ISCAR SVERIGE AB
Tel +46 (0) 18 66 90 60
Fax +46 (0) 18 122 920
info@iscar.se
www.iscar.se

Switzerland
ISCAR HARTMETALL AG
Tel +41 (0) 52 728 0850
Fax +41 (0) 52 728 0855
office@iscar.ch
www.iscar.ch

Taiwan
ISCAR TAIWAN LTD.
Tel +886 (0)4-24731573
Fax +886 (0)4-24731530
iscar.taiwan@msa.hinet.net
www.iscar.org.tw

Thailand
ISCAR THAILAND LTD.
Tel +66 (2) 7136633-8
Fax+66 (2) 7136632
iscar@iscarthailand.com
www.iscarthailand.com

Turkey
ISCAR KESICI TAKIM
TIC. VE. IML. LTD
Tel +90 (262) 751 04 84 (Pbx)
Fax+90 (262) 751 04 85
iscar@iscar.com.tr
www.iscar.com.tr

Ukraine
ISCAR UKRAINE LLC
Tel/fax +38 (044) 503-07-08
iscar_ua@iscar.com
www.iscar.com.ua

United Kingdom
ISCAR TOOLS LTD.
Tel +44 (0) 121 422 8585
Fax+44 (0) 121 423 2789
sales@iscar.co.uk
www.iscar.co.uk

United States
ISCAR METALS INC.
Tel +1 817 258 3200
Tech Tel 1-877-BY-ISCAR
Fax+1 817 258 3221
info@iscarmetals.com
www.iscarmetals.com

Venezuela
FERREINDUSTRIAL ISO-DIN C.A.
Tel +58 2 632 8211/633 4657
Fax +58 2 632 5277
iso-din@cantv.net

Vietnam
ISCAR VIETNAM
(Representative Office)
Tel +84 8 38 123 519/20
Fax +84 8 38 123 521
iscarvn@hcm.fpt.vn
www.iscarvn.com

Please check ISCAR's online catalog www.iscar.com for the most current technical information regarding our products.

04/2019
3374300 G

Complete Machining Solutions

Rotating Tool Lines

Milling • Hole Making • Tooling Systems

Metric Version Catalog 2019

GET IT ON Google Play

Download on the App Store

E-CAT ELECTRONIC CATALOG

Member IMC Group

ISCAR

www.iscar.com