Metal Table EN - JIS 5

JIS Material No.	EN Material No.	EN Denomination	Material Description	Ø min.	Ø max.	Condition	Re-Rp0,2 in MPa	Rm in MPa	A in %	Hardness Unit	Hardness Value
(JIS)	untranslateable	SUH38	alloyed stainless steel / acid proof / heat resistant								
(JIS)	untranslateable	SUH600	alloyed construction steel / for quenching and tempering / for heat treatment / heat resistant			M					
(JIS)	untranslateable	SUJ1	unalloyed tool steel (~SUJ2 however 0.9-1.2%cr)								
(JIS)	untranslateable	SUJ3	unalloyed tool steel (~SUJ2 however 0.4-0.7%Si)								
(JIS)	untranslateable	SUJ4	unalloyed tool steel								
(JIS)	untranslateable	SUJ5	unalloyed tool steel								
(JIS)	untranslateable	SUM12	unalloyed steel / free cutting steel								
(JIS)	untranslateable	SUM41	unalloyed steel / free cutting steel								
(JIS)	untranslateable	SUM42	unalloyed steel / free cutting steel								
ISO	44SMn28	SUM43	unalloyed free cutting steel / for case hardening				420	630~850	16		
ISO	60CrMo33	SUP13	alloyed construction steel / for quenching and tempering / for heat treatment						35		
(JIS)	untranslateable	SUP6	alloyed steel for special purpose								
ISO	X3NiCr18-16	SUS384	alloyed stainless steel / acid proof								
(JIS)	X100CrMo17 (~)	SUS440	alloyed stainless steel / acid proof								
(JIS)	untranslateable	SWB	universal spring steel	Ø 0,8	Ø 1,4	(> 110°C)		2010~1620			
(JIS)	untranslateable	SWB	universal spring steel	Ø 1,6	Ø 2,6	(> 110°C)		1570~1420			
(JIS)	untranslateable	SWB	universal spring steel	Ø 2,9	Ø 4,5	(> 110°C)		1620~1320			
(JIS)	untranslateable	SWB	universal spring steel	Ø 5	Ø 7	(> 110°C)		1520~1180			
(JIS)	untranslateable	SWC	universal spring for high quality springs	Ø 5	Ø 7	(> 110°C)		1720~1370			
(JIS)	untranslateable	SWC	universal spring for high quality springs	Ø 0,8	Ø 1,4	(> 110°C)		2300~1860			
(JIS)	untranslateable	SWC	universal spring for high quality springs	Ø 1,6	Ø 2,6	(> 110°C)		2060~1520			
(JIS)	untranslateable	SWC	universal spring for high quality springs	Ø 2,9	Ø 4,5	(> 110°C)		1860~1520			
(JIS)	untranslateable	SWCH8[A]	cold formed steel / for steel wires					450			
(JIS)	untranslateable	SWO-A	heat treaded spring steel for general purpose springs			(>120°C)					
(JIS)	untranslateable	SWO-B	heat treaded spring steel for general purpose springs			(>120°C)					
(JIS)	untranslateable	SWOCV-V	heat treaded Q&T / Cr-V spring and valve steel for impact load			(>220°C)					
(JIS)	untranslateable	SWOSC-V	heat treaded Q&T / Cr-V spring and valve steel for impact load			(>245°C)					
(JIS)	untranslateable	SWO-V	heat treaded Q&T spring steel for general purpose springs			(>120°C)					
(JIS)	untranslateable	SWP-A	hight strength cold drawn spring steel			(> 110°C)					
(JIS)	untranslateable	SWP-B	hight strength cold drawn spring steel			(> 110°C)					
(JIS)	C43 (~~)	SWRH42A	carbon spring steel hardened								
(JIS)	C43 (~~)	SWRH57	carbon spring steel hardened								
(JIS)	C43 (~~)	SWRH6	carbon spring steel hardened								
(JIS)	C43 (~~)	SWRH62	carbon spring steel hardened								
(JIS)	untranslateable	SWRM	contstructional steel wire								

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Metal Table JIS - EN 1

JIS Material No.	EN Material No.	EN Denomination	Material Description	Ø min.	Ø max.	Condition	Re-Rp0,2 in MPa	Rm in MPa	A in %	Hardness Unit	Hardness Value
A1050	EN AW-1050A	**Al99,5**	pure aluminium / non heat-treatable			0	20~60	60~95	23		
A1050	EN AW-1050A	**Al99,5**	pure aluminium / non heat-treatable				55~130	65~170	~40	HB	20~45
A2011	EN AW-2011	**AlCu6BiPb**	duraluminium / treatable			T3	296	379	15	HB	ca.105
A2011	EN AW-2011	**AlCu6BiPb**	duraluminium / treatable			T4	145	310	20	HB	ca.95
A2017	EN AW-2017	**AlCu4MgSi**	duraluminium / treatable			T3	250	400	10		
A2017	EN AW-2017	**AlCu4MgSi**	duraluminium / treatable			T4	240	390	12		
A4032	EN AW-4032	**AlSi12,5MgCuNi**	aluminium wrought alloy / non heat-treatable								
A5052	EN AW-5052	**AlMg2,5**	aluminium wrought alloy / non heat-treatable			H112	125	220	20	HB	65
A5052	EN AW-5052	**AlMg2,5**	aluminium wrought alloy / non heat-treatable			0	90	193	25		
A5056A	EN AW-5056A	**AlMg5**	aluminium wrought alloy / non heat-treatable			0	152	290	35		
A5056A	EN AW-5056A	**AlMg5**	aluminium wrought alloy / non heat-treatable			H38	345	414	15		
A5056A	EN AW-5056A	**AlMg5**	aluminium wrought alloy / non heat-treatable			0	110	240	15	HB	55
A5083	EN AW-5083	**AlMg4,5Mn0,7**	aluminium wrought alloy / non heat-treatable			H111	200	317	18		
A5083	EN AW-5083	**AlMg4,5Mn0,7**	aluminium wrought alloy / non heat-treatable			H112	125~140	275~300	12~15		
A5083	EN AW-5083	**AlMg4,5Mn0,7**	aluminium wrought alloy / non heat-treatable			0	110	270	12	HB	60
A6063	EN AW-6063	**AlMg0,7Si**	aluminium wrought alloy / treatable			0	50	100	27	HB	25
A6063	EN AW-6063	**AlMg0,7Si**	aluminium wrought alloy / treatable			T5	145	193	12		
A6063	EN AW-6063	**AlMg0,7Si**	aluminium wrought alloy / treatable			T6	214	241	12		
A6N01	EN AC-51400	**AlMgSi0,7**	special alloy for extrusion moulding (~AlSi0,5Mg)			T5	214.2	255	8		
A6N01	EN AC-51400	**AlMgSi0,7**	special alloy for extrusion moulding (~AlSi0,5Mg)			T6	261	277	8~12		
A6N01	EN AC-51400	**AlMgSi0,7**	special alloy for extrusion moulding (~AlSi0,5Mg)			0	ca.48	ca.120			
A6N01	EN AW 6060	**AlMgSi**	special alloy for extrusion moulding (~AlSi0,5Mg)								
A7020	EN AW-7020	**AlZn4,5Mg1**	aluminium wrought alloy / treatable				140~270	320~350	9~15	HB	45~105
A7075	EN AW-7075	**AlZn5,5MgCu**	aluminium wrought alloy / treatable			0	103	228	17		
A7075	EN AW-7075	**AlZn5,5MgCu**	aluminium wrought alloy / treatable			T6	500	570	10		
A7075	EN AW-7075	**AlZn5,5MgCu**	aluminium wrought alloy / treatable			T651	490	550	12	HB	160
AC4A	EN AC-42100	**G-AlSi10Mg**	aluminium cast alloy			T6	190~210	230~290	2~4		
AC4A	EN AC-42100	**G-AlSi10Mg**	aluminium cast alloy			T64	180	250	8	HB	75~90
AC4C	EN-AC 42200	**G-AlSi7Mg**	aluminium cast alloy			T5	170~230	210~270	4~7	HB	75~90
AC7A	EN AC-51300	**G-AlMg5**	aluminium cast alloy			F	105	245	5.3	HB	80
AC7A	EN AC-51300	**G-AlMg5**	aluminium cast alloy				90~100	140~150	2	HB	55~70
ADC12	EN AC-46100	**G-AlSi12Cu**	aluminium cast alloy (~ALSi11Cu2,5Fe)				186	296	2		
ADC12	EN AC-46100	**G-AlSi12Cu**	aluminium cast alloy (~ALSi11Cu2,5Fe)				80~150	150~220	1~4	HB	60~90
ANP79	EN AW-7075	**AlZn5,5MgCu (~)**	AlZnMgCu aluminium alloy (Daido)								
C1020	CW008A	**Cu-OF**	pure copper / oxygen free				50~150	245~300	45		
C1100	CW004A	**Cu-ETP**	pure copper				50~150	245~300	45		
C1220	CW024A	**Cu-DHP (SF-Cu)**	pure phosphorous desoxidated copper								
C1730	CW101C	**CuBe2**	copper beryllium alloy for springs				1200	1300			
C2600	CW505L	**CuZn30**	brass				160~470	270~520		HB	55~150
C2600	CW505L	**CuZn30**	brass				130~810	300~830		HB	65~200
C2700	CW508L	**CuZn37**	brass				150~580	300~610		HB	55~190
C2801	CW509L	**CuZn40**	brass				240~390	340~500		HB	75~130
C2801	CW509L	**CuZn40**	brass				270~500	350~550	10		
C3602[BD]	CW614N	**CuZn39Pb3**	brass			F		315			
C3604	CW614N	**CuZn39Pb3**	brass			F 37; 44, 51	250~390	360~500	90~145		
C3771	CW617N	**CuZn40Pb2**	brass				200	315~390	15		
C3771	CW617N	**CuZn40Pb2**	brass					510		HB	145
C3771	CW617N	**CuZn40Pb2**	brass				300~570	380~610		HB	90~165
C5191[B]	CW452K	**CuSn6P**	phosphorus bronce (PBC2)				300~600	350~650		HB	75~190
C6782	CC766S	**CuZn37Al1**	brass				170	450	25		
CAC304	CC762S	**CuZn25Al5**	bronce cast				450~480	750	10		
CAC406C	CC491K	**CuSn5Zn5(RG5)**	bronce cast (BC6)			H12		50	35		
CAC406C	CC491K	**CuSn5Zn5(RG5)**	bronce cast (BC6)			0		40	60		
CAC406C	CC491K	**CuSn5Zn5(RG5)**	bronce cast (BC6)	2	60	R340	230	340	45	HB	100
CAC406C	CC491K	**CuSn5Zn5(RG5)**	bronce cast (BC6)	2	40	R400	250	400	26	HB	125
CAC406C	CC491K	**CuSn5Zn5(RG5)**	bronce cast (BC6)	2	12	R470	350	470	15	HB	170
CAC406C	CC491K	**CuSn5Zn5(RG5)**	bronce cast (BC6)	2	6	R550	500	550		HB	200
DC53	(JIS)	**untranslateable**	general purpose cold work tool/mold steel (Daido)								
FC200	EN-JL1030	**EN-GJL-200 (GG-20)**	grey cast iron; flake-graphite cast iron				210	200			
FC200	EN-JL1030	**EN-GJL-200 (GG-20)**	grey cast iron; flake-graphite cast iron				Rp0.1/>165	200~300			
FC250	EN-JL1040	**EN-GJL-250 (GG-25)**	grey cast iron; flake-graphite cast iron				240	250			
FC250	EN-JL1040	**EN-GJL-250 (GG-25)**	grey cast iron; flake-graphite cast iron				Rp0.1/>230	250~350			
FC300	EN-JL1050	**EN-GJL-300**	grey cast iron; flake-graphite cast iron								
FCD450	EN-JS1040	**EN-GJS400 (GGG-40)**	nodular cast iron; ductile cast Iron				310	<450			
FCD600	EN-JS1060	**EN-GJS600 (GGG-60)**	nodular cast iron; ductile cast Iron				370	<600	3		
FCMB270	EN-JM1130 (~~)	**EN-GJMB 350-10 (~~)**	black-heart malleable cast iron								
G-Star	1.2085 (~~)	**X3CrMo16-1 (~~)**	(AISI: mod.420);easy machinable special mould steel (Daido)							HRc	ca. 37
KCF	1.4605 (~~)	**X2CrAlTi18-2 (~~)**	alloyed stainless steel / acid proof / with special elements								
NAK55	(JIS)	**untranslateable**	pre-hardened mold steel (Daido)								
PX5	1.2083 (~~)	**X42Cr12+S (~~)**	mould steel, (Daido), (AISI: modificated P20)								
PX5	1.2316 (~~)	**X36CrMo17+S (~~)**	mould steel, (Daido), (AISI: modificated P20)								
S09CK	1.1121	**2C10 (C10E; Ck10)**	unalloyed construction steel / for case hardening				295~390	490~640	16		
S10C	1.0301	**C10**	unalloyed construction steel / for case hardening				290~380	400~650			
S10C	1.1207	**C10R**	unalloyed construction steel / for case hardening					400			
S12C	(JIS)	**untranslateable**	unalloyed construction steel / for case hardening								
S15C	1.0401	**C15R**	unalloyed construction steel / for case hardening				430	600~750			
S15C	1.1141	**C15E (Ck15)**	unalloyed construction steel / for case hardening			case hardened	355	590~780	14	HRc	49~55
S20C	1.0402	**C22**	unalloyed construction steel / for quenching and tempering / for heat treatment		16		340	470~620	22		
S20C	1.0406	**C25**	unalloyed construction steel / for quenching and tempering / for heat treatment			annealed	370	500~650	23		
S20C	1.1151	**C22E (Ck22)**	unalloyed construction steel / for quenching and tempering / for heat treatment		16	QT	290~340	470~620	22		
S20C	1.1151	**C22E (Ck22)**	unalloyed construction steel / for quenching and tempering / for heat treatment				210~340	410~500			
S22C	1.1149	**3C22 (Cm22/C22R)**	unalloyed construction steel / for quenching and tempering / for heat treatment				340	470~620			
S25C	1.1158	**C25E (Ck25)**	unalloyed construction steel / for quenching and tempering / for heat treatment		16	QT	370	550~700	21		

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