

MATERIAL LIST

TYPE 鋼種	DAIDO 大同ブランド	EQUIVALENT 相当品		CHEMICAL COMPOSITION (%) 化学成分									Delivery Condition 納入時硬さ HB	HEAT TREATMENT					Raw material shape 素材在庫形状	TYPICAL APPLICATIONS 用途	
		JIS	AISI	C	Si	Mn	Ni	Cr	Mo	W	V	Others		Hardening Temperature (°C) 焼入温度	Quenching Medium 焼入方法	Tempering Temperature (°C) 焼戻し温度	Tempering Medium 焼戻し方法	Quench and Temper 焼入焼戻硬さ HRC			
Cold Work Tool Steel 冷間工具鋼	GOA	SKS3 (Modified)	O1 (Modified)	0.90	0.30	1.20	-	0.50	0.10	0.50	-	S.E.A. (Special Element Added)	Annealed 217 max.	800-850	OIL	150-200	AIR	61 Min.	Flat bar Round bar	Blanking dies, Punches, Gauges, Drawing dies, Taps, Piercing punches	
	DC11	SKD11	D2	1.50	0.30	0.50	-	12.00	1.00	-	0.30		Annealed 255 max.	1000-1050 1020-1040	AIR AIR	150-200 520-530	AIR	61 Min. 56-58	Flat bar Round bar	Blanking dies, Punches, Cold forming dies, Drawing dies, Forming Rolls, Piercing punches	
	DC53	SKD11 (Modified)	D2 (Modified)	8Cr-2Mo-V type									S.E.A.	Annealed 255 max.	1020-1040 1020-1040	AIR	180-200 520-530	AIR	61 Min. 62 Min.	Flat bar Round bar	Blanking dies, Punches, Cold forming dies, Drawing dies, Forming Rolls, Piercing punches
	GO5	N / A	N / A	Cr-Mo-V type										Annealed 217 max.	925-1000 Flame Hardening	AIR	N / A	N / A	60 Min.	Flat bar	Blanking dies
	GO40F	SCM440 (Modified)	4140 (Modified)	Cr-Mo-V type									[S] added	HRC40	Pre-Hardened Steel					Flat bar	Die plates, Backing plates
	GO4	N / A	N / A	0.85	0.30	2.00	-	1.00	1.40	-	-			Annealed 248 max.	830-870	AIR	150-200	AIR	61 Min.	Flat bar	Blanking dies, Precision Plastic Injection Mold, Rubber Mold, Gauges
Hot Work Tool Steel 熱間工具鋼	DHA1	SKD61	H13	0.38	1.00	0.40	-	5.00	1.25	-	1.00		Annealed 229 max.	1000-1050	AIR, (OIL)	550-650	AIR	53 Max.	Flat bar Round bar	Al Die-casting dies, Forging dies, Extrusion dies, Shear blades, Plungers sleeves	
	DHA-WORLD	SKD61 (Modified)	H13 (Modified)	Patent Pending 特許出願中 (5.5Cr-1.2Mo type)										Annealed 229 max.	1000-1050	AIR, (OIL)	550-650	AIR	53 Max.	Flat bar Round bar	Al Die-casting dies, Forging dies, Extrusion dies, Shear blades, Plungers sleeves
	DH31-EX	SKD61 (Modified)	H13 (Modified)	Patent Pending 特許出願中 (5.5Cr-2.5Mo-V type)									S.E.A. Re-melting	Annealed 235 max.	1000-1050	AIR, (OIL)	550-650	AIR	53 Max.	Flat bar	Al Die-casting dies, Forging dies, Extrusion dies
	DHA-Thermo	N / A	N / A	Patent Pending 特許出願中										Annealed 229 max.	1000-1030	Vacuum (>=4bar)	550-670	AIR	49 Max.	Round bar	Core pins, Spool bush, Spool core, Plunger chip, Insert
	DH2F	SKD61 (Modified)	H13 (Modified)	0.38	0.60	0.60	-	5.00	1.20	-	0.60	[S] added	HRC40	Pre-Hardened Steel					Flat bar Round bar	Die-casting dies, Plastic mold dies	
Plastic Mold Steel プラ型用鋼	S-STAR	SUS420 (Modified)	420 (Modified)	0.38	0.90	0.40	-	13.50	0.10	-	0.30	Re-melting	Annealed 248 max.	1020-1070	AIR	200-510	AIR	50-53	Flat bar	High precision uses, Long Life uses, Corrosion Resistant uses	
	NAK-PRM	N / A	P21 (Modified)	Patent Pending 特許出願中									Re-melting	HRC40	Pre-Hardened Steel					Flat bar	High precision uses, Ultra Mirror Polishing uses
	NAK80	N / A	P21	0.15	0.30	1.50	3.00	-	0.30	-	-	[Cu]1.0 [Al]1.0 Re-melting	HRC40	Pre-Hardened Steel					Flat bar Round bar	High precision uses, Mirror Polishing uses	
	PAC5000	N / A	N / A	Patent Pending 特許出願中										HRC36-39	Pre-Hardened Steel					Flat bar	High precision uses, Mirror Polishing uses
	PX4	N / A	P20 (Improved)	Patent Pending 特許出願中 (Cr-Mo-V type)										HRC30-33	Pre-Hardened Steel					Flat bar	General uses, Mirror polishing uses
	G-STAR	SUS420F (Modified)	420 (Modified)	0.35	0.30	-	-	16.00	1.00	-	-	[S] 0.1	HRC33-37	Pre-Hardened Steel					Flat bar	Corrosion Resistant uses	
	440C-ES	SUS440C	440C	1.00	0.80	0.80	0.50	17.00	0.60	-	-		Annealed 248 max.	1010-1070	OIL	100-180	AIR	58 Min.	Flat bar	Rust resistant uses, Jig and Fixture	
	PD613	N / A	N / A	Patent Pending 特許出願中 (8Cr-1Mo-V type)									Re-melting	Annealed 248 max.	1020-1030	AIR	200-500	AIR	56-61	Flat bar	High Precision uses, Wear Resistant uses
		K-2	N / A	DIN 1.2311 (Improved)	0.30	-	0.60	0.10	0.90	0.15	-	-		HRC 29-32	Pre-Hardened Steel					Flat bar	General uses
	K-3	N / A	DIN1.2738 (Improved)	0.30	-	0.80	0.20	1.50	0.25	-	-		HRC 32-34	Pre-Hardened Steel					Flat bar	General uses	
High Speed Tool Steel 高速度鋼	SKH9	SKH51	M2	0.88	-	-	-	4.00	5.00	6.00	2.00	Re-melting	Annealed 255 max.	1150-1230	OIL, SALT	540-580	AIR	63 Min.	Flat bar Round bar	Drills, Reamers, Taps, Punches	
	DRM1	N / A	N / A	Patent Pending 特許出願中									Re-melting	Annealed 235 max.	1100-1140	OIL, SALT	550-620	AIR	56-58	Flat bar Round bar	Hot forging dies, Warm forging dies
	DRM2	N / A	N / A	Patent Pending 特許出願中									Re-melting	Annealed 235 max.	1050-1100	OIL, SALT	550-620	AIR	58-62	Flat bar Round bar	Warm forging dies, Cold forging dies
	DRM3	N / A	N / A	Patent Pending 特許出願中									Re-melting	Annealed 235 max.	1100-1140	OIL, SALT	550-620	AIR	62-66	Flat bar Round bar	Cold forging dies
Powder High Speed Tool Steel 粉末高速度鋼	DEX20	N / A	M3-2	1.30	-	-	-	4.00	5.00	6.50	3.00		Annealed 285 max.	1100-1150 1150-1180	OIL, SALT OIL, SALT	560-580 560-580	AIR	60 Min. 63 Min.	Flat bar Round bar	Cold forming dies, Drills, Taps, etc...	
	DEX40	N / A	N / A	1.30	-	-	-	4.00	5.00	6.50	3.00	[Co]8.00	Annealed 285 max.	1100-1180 1180-1220	OIL, SALT OIL, SALT	540-590 560-600	AIR	62 Min. 64 Min.	Flat bar Round bar	Broaches, End mills, Cold forming dies, Cold working rolls, etc...	
Others その他	Mild Steel	SS400		-	-	-	-	-	-	-	-								Flat bar Round bar	Die holder, etc...	
	Carbon Steel	S50C, S55C(K-1)	1050, 1055	-	-	-	-	-	-	-	-								Flat bar Round bar	Support plates, etc...	