Typical Materials

Classification	Materials	Relative Density (%)	Mechanical Properties				Equivalent Materials
			Tensile Strength (MPa)	Elongation (%)	Hardness	Heat Treatment	
Structural Materials	Fe-1.5Ni-0.15C	96	410	34	50HRB	As sintered	
	Fe-1.5Ni-0.30C	96.5	400	23	60HRB	As sintered	
		96.5	935	—	79.5HRA (surface700Hv)	Carburized quenching	
	SNCM439	96	1700	10	50HRC	Quench & Temper	
Stainless steels	SUS316	96	530	38	52HRB		
	(SUS310S)	96	900	20	75HRB		*Equivalent to HK30
	SUS420J2	97	1200	—	50HRC	Quench & Temper	
	SUS440C	98	1200	—	55HRC	Quench & Temper	
	SUS630	96	1130	11	41HRC	Quench & Temper	
Die Steel & High Speed steels	Equivalent to SKD11	100 *	1600	—	60HRC	Quench & Temper	
	Equivalent to SKD61	100 *	1700	—	50HRC	Quench & Temper	
	YAP10	100	—	—	62HRC	Quench & Temper	
Nickel-based alloys	Equivalent to HRN-X	97.5	460	18	79.5HRB	As sintered	Hastelloy X
		100	705	40	92.5HRB	Hot Isostatic Pressing	
Specialty Materials	H34A	100	—	—	70HRC	Quench & Temper	
	Equivalent to T-400	98	—	—	55HRC		

Classification	Materials	Relative Density (%)	Average Thermal Expansion Coefficient		Equivalent Materials
			RT～200℃	RT～400℃	
Low-Expansion Materials & Sealed Materials	Equivalent to YEF42S	96	4.5	5.9	42Ni
	Equivalent to YEF29-17S	96	5.5	4.9	Kover
	Equivalent to YET36S	96	2.3	—	Inver
	Equivalent to YET315S	96	1.3	—	Super Inver