



Materials for Oil-Impregnated Sintered Bearing / Sintered Bearing

	DIAMET BEARING Materials	Material Designation Code		Alloys	Physical and Mechanical Properties ¹⁾				Maximum Operating Condition ²⁾	Application Environment						Application			Features and Example of use		
		International Standard	JIS B 1581 -1974		Oil content	Radial Crushing Strength	Reference Value			Maximum PV value	Low Noise	Dry Environment	Liquid Environment	High Temperature Environment	Corrosive Environment	Resin Insert	Home Electric Appliances	Multimedia		Vehicle	Industrial machine
							Density (Oil-impregnated Density)	Hardness													
Symbols	ISO5755	Former JIS	Alloy Systems	vol.%	MPa	g/cm ³	HV	MPa·m/min.													
Bronze Based	B110	C-T10	SBK1218	Cu-Sn	>18	>147	6.4~7.2	25~60	150	○					◎	◎	◎	◎	◎	For general purpose / Blowers, Washer	
	B111	C-T10G	SBK1218	Cu-Sn-C	>18	>147	6.4~7.2	25~60	200	◎					◎	◎	◎	◎	◎	For general purpose, For high speed / Wiper, Industrial machine	
	☆B113	—	SBK1112	Cu-Sn	>15	>147	6.8~7.5	25~60	30	◎					◎		◎			For audio devices (Low noise)	
	B118	—	—	Cu-Sn-C	>18	>147	6.4~7.2	25~60	150	○					◎	◎	◎	◎	◎	For general purpose, For middle speed / Starter	
	★B031	—	—	Cu-Sn-C	—	>118	6.4~7.2※	20~60	—	◎	○	○			○	◎		◎	◎	Seizure resistance and noise in intermittent operation / Fuel pump	
	B032	—	—	Cu-Sn-C	>14	>118	6.4~7.0	20~60	150	○					◎	◎			◎	Seizure resistance and low noise in intermittent operation / Dryer	
	★B035	—	—	Cu-Sn-C	—	>118	6.3~7.1	20~70	—		◎	○	◎	◎	○	○		◎	◎	Suitable for dry condition, heat resistance / EGR, Office automation	
★B045	—	—	Cu-Sn-C	—	>147	6.3~7.1※	20~70	—		◎	○	◎	◎	○		◎	◎	◎	Suitable for dry condition, heat resistance / EGR, Office automation		
Phosphor-Bronze Based	B061	—	—	Cu-Sn-C-Mo-P	>18	>147	6.2~7.0	30~70	300	○	○					◎	○		○	For high speed (Good lubrication with MoS ₂) / Starter, Power window, Sliding door	
	B062	—	—	Cu-Sn-P	>18	>196	6.6~7.2	30~70	250	○					◎	○			◎	High strength Cu-Sn-P based bearing as same as iron alloys (seizure resistance)	
	B063	—	—	Cu-Sn-C-P	>12	>294	6.6~7.6	40~70	350	○					◎				◎	High strength Cu-Sn-P based bearing as same as iron alloys (seizure resistance)	
	B065	—	—	Cu-Sn-C-P	>12	>196	6.4~7.3	30~70	300	○	○				◎				◎	High strength Cu-Sn-P based bearing as same as iron alloys (seizure resistance) / AT sliding parts, Juicer mixer	
Copper-Nickel Based	★B095	—	—	Cu-Ni-C-P	—	>118	6.7~7.5※	30~90	—	○	○	◎	◎	◎	◎				◎	Corrosion Resistance (Sulfidization resistance) / Fuel pumps	
	★B097	—	—	Cu-Ni-Sn-C	—	>118	6.3~7.1※	30~90	—		◎	◎	◎	◎					◎	Wear resistance and corrosion resistance in intermittent operation with high temperature	
	B820	—	—	Ni-Cu-C-P	—	>147	6.4~7.2※	40~110	—		○	○	◎	◎					◎	Durability under Exhaust or chloride attack condition / EGR	
	B830	—	—	Cu-Ni-Sn-P-C	—	>147	6.3~6.9	40~100	1,000						○	○			◎	High performance oil-impregnated sintered bearing (Ball Bearing substitute)	
Iron Based	F112	—	SBF2118	Fe-Cu-C	>18	>196	5.6~6.4	30~70	120						○	○			◎	Economical, good for calking / Wiper, Industrial machine	
	F314	—	—	Fe-Cu-C	>18	>274	5.6~6.4	50~130	120										◎	High Strength / Geared motor	
Iron - Copper Based	F330	F-03C22G	SBF2218	Fe-Cu-C	>18	>274	5.8~6.5	60~130	200										◎	Resistance to load and impact, Good for hard shaft / Wiper, Power seat, Blower	
	F331	—	—	Fe-Cu-C	>18	>196	5.8~6.5	50~100	200						○	○			◎	Resistance to load and impact, Good for soft shaft / Starter	
	☆F332	F-03C22	—	Fe-Cu	>18	>147	6.0~6.8	30~60	50	◎					○	◎	◎			Economical, Low noise (Equivalent to copper base) / Ventilation fan, Electric fan	
	F336	—	—	Fe-Cu-Sn	>18	>196	6.2~7.0	30~70	170	○					◎	◎	◎	◎	○	Wear resistance and durability / Power window, Electric fan, Blower, Starter	
	F360	—	—	Fe-Cu-Sn	>18	>196	5.9~6.8	30~70	150						◎	◎			◎	Low friction and durability / AT sliding parts	
	◎F339	—	—	Fe-Cu-Sn-Zn-C	>16	>147	6.2~7.0	30~70	230	◎					◎	◎	◎	◎	○	Low friction, Durability, Low noise (Equivalent to copper base) / Throttle, Power seat	
	◎F361	—	—	Fe-Cu-Sn	>18	>196	5.9~6.7	30~70	180	○					◎	◎	◎	◎	○	Low friction and durability / Starter	
◎F350	—	—	Fe-Cu-Sn-C	>16	>147	5.7~6.6	30~70	200	○					○	◎	◎	◎	○	High lubrication, Durability, Low noise (Equivalent to copper base)		

- ★ Copper material with carbon additive to improve solid lubricant property ※ indicates dry density
- ☆ Low noise material
- ◎ Good cost performance material with special copper powder on its surface
- ※ Density in dry condition

1) Physical and mechanical properties is value just for reference measured based on ISO, JIS and JPMA standards. Actual product specifications are to be discussed.

2) Allowable maximum operation condition is value just for reference.

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