

MATERIALS

Sintered Bearing, Oil-impregnated, Self-lubricating, Maintenance-free
DIN 1850 / ISO 2795

Sino Bronze Co., Ltd.

Material #	Materials	Composition %	Density g/cm ³	Porosity % (min)	Strength Constant "K" PSI	Tensile Strength PSI	Elongation %, in 1"	Compressive Yield Strength(0.1%) PSI	Equivalent Specifications	Recommendations
1	Diluted Bronze	Fe: 55 - 62 Cu: 34 - 38 Sn: 3 - 4 Other: 2.0 max	6.0 - 6.4	17	30,000				MPiF: FCTG - 3604 - K22	Low cost bearing material used at light to medium loads and medium to high speed.
2	Bronze	Cu: 87.2 - 90.5 Sn: 9.5 - 10.5 Graphite: 0 - 0.3 Other: 2.0 max	6.0 - 6.4	22	19000	10000		7500	MPiF: CT - 1000 - K19 ASTM: B 438 - 83a Class A, Type 1	General purpose bearing material
3	Bronze	Cu: 87.2 - 90.5 Sn: 9.5 - 10.5 Graphite: 0 - 0.3 Other: 2.0 max	6.4-6.8	19	26000	15000	2	11000	MPiF: CT - 1000 - K26 ASTM: B 438 - 83a Class A, Type II DIN: SINT - A50	Ensure some ductility and also resist shock loading.
4	Bronze	Cu: 87.2 - 90.5 Sn: 9.5 - 10.5 Graphite: 0 - 0.3 Other: 2.0 max	6.8 - 7.2	12	37000	20000	3	19500	MPiF: CT - 1000 - K37 ASTM: B 438 - 83a Class A, Type III DIN: SINT - B50	More ductility and will support higher loads. Used in lower speed applications and are often used as a combination of structural parts and bearings.
5	High Strength Bronze	Cu: 87 - 89 Pb: 0.5 - 1.0 Sn: 8 Other: 1.0 max	6.8 - 7.2	12	40000	24000	3	21000	MPiF: CT - 1000 - K37 ASTM: B 438 - 83a Class A, Type III DIN: SINT - B50	Used for lower speed applications but has excellent strength for combination of structural parts and bearings.
6	Bronze (Medium Graphite)	Cu: 85.7 - 90.0 Sn: 9.5 - 10.5 Graph.: 0.5 - 1.8 Other: 2.0 max	6.4 - 6.8	17	23000	12000	2	10000	MPiF: CT - 1001 - K23 ASTM: B 438 - 83a Class B, Type II DIN: SINT - B51	These bearings will operate under heavy loads and high speeds and under moderately abrasive conditions.

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7	Bronze (Medium Graphite)	Cu: 85.7 - 90.0 Sn: 9.5 - 10.5 Graph.: 0.5 - 1.8 Other: 2.0 max	6.8-7.2	9	33000	15000	2	12000	MPiF: CT - 1001 - K33 ASTM: B 438 - 83a Class B, Type III DIN: SINT - C51	These bearings will operate under heavy loads and high speeds and under moderately abrasive conditions.
8	Bronze (High Graphite)	Cu: 82.5 - 87.5 Sn: 9.5 - 10.5 Graph.: 3.0 - 5.0 Other: 2.0 max	5.8 - 6.2	11	10000				MPiF: CTG - 1004 - K10	These bearings run very quietly. They tend to require less field lubrication and operate at somewhat higher temperatures.
9	Bronze (High Graphite)	Cu: 82.5 - 87.5 Sn: 9.5 - 10.5 Graph.: 3.0 - 5.0 Other: 2.0 max	6.2 - 6.6	4	15000				MPiF: CTG - 1004 - K15	These bearings run very quietly. They tend to require less field lubrication and operate at somewhat higher temperatures.
10	Iron	Fe: 97.7 - 100.0 Carbon: 0-0.3 Other: 2.0 max	6.0 - 6.4	20	23000	18000	1.5	16000	MPiF: F - 0000 - K23 ASTM: B 439 - 83 Grade 1 DIN: SINT - B00	Used as a bearing material for medium loads. Typically harder and stronger than 90-10 bronze at same density.
11	Iron, Carbon	Fe: 97.1 - 99.4 Carbon: 0.6-0.9 Other: 2.0 max	6.0 - 6.4	18	32000	35000	0.5	41000	MPiF: F - 0008 - K32 ASTM: B 439 - 83 Grade 2 DIN: SINT - B11	These bearings result in a stronger than pure iron with higher crushing strength, greater wear resistance and higher compressive strength.
12	Iron-Graphite	Fe: 93.9 - 97.2 Graph.: 2.5-3.5 Other: 2.0 max	6.0 - 6.4	12	16000	15000	1		MPiF: FG - 0303 - K16	This material has excellent damping characteristics and results in quiet running. May be impregnated with oil.