

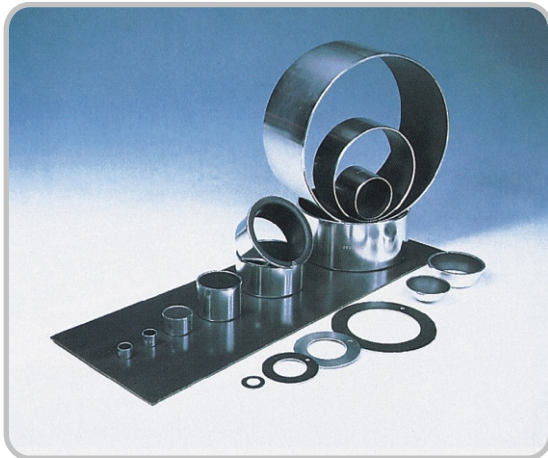


SLIDING BUSH SERIES

SF-1 SERIES	SF-1 SF-1T SF-1P SF-1W SF-1B SF-1D SF-1S SF-1SS
SF-2 SERIES	SF-2 SF-2Y SF-2S
JF SERIES	JF-800 JF-720 JF-700 JF-20
UF SERIES	UF-850
JDB SERIES	JDB-1 JDB-2 JDB-3 JDB-4 JDB-5
FB SERIES	FB090 FB092
FBG SERIES	FB08G FB09G
FR SERIES	FR
FD SERIES	FD-1 FD-2 FD-3
FU SERIES	FU
MC SERIES	OMC GMC



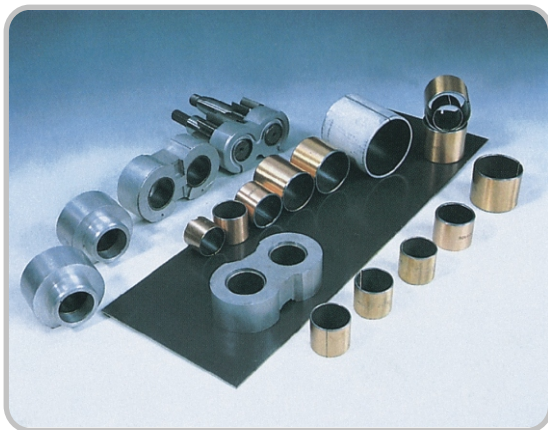
SF-1



LOAD CAPACITY	140N/mm ²
TEMPERATURE LIMIT	-195°C~+127°C
SPEED LIMIT	5m/s
FRICTION COEF	0.04~0.20
PV LIMIT(DRY)	3.6N/mm ² * m/s
PV LIMIT(OIL)	50 N/mm ² * m/s

SF-1 is wall wrapped bearings made of triple layer composites material which consists of a steel backing , a sintered porous bronze particles interlayer and calendared with PTFE and Pb mixture as surface layer. It is of low friction corrosion and can be used without oil, or only a trace of oil is needed. Moreover, it is of low cost, low vibration and low noise, compact and light. SF-1 is widely applied in various sliding articles of different kind of machines, tobacco machines ,hydraulic vehicles, automobiles, agriculture and forests machines and so on.

SF-1T



LOAD CAPACITY	140N/mm ²
TEMPERATURE LIMIT	-195°C~ +260°C
SPEED LIMIT	10m/s
FRICTION COEF	0.03~0.18
PV LIMIT(DRY)	4.3N/mm ² * m/s
PV LIMIT(OIL)	60N/mm ² * m/s

SF-1T is composed of a specially designed surface layer of PTFE formulations and is specifically applied for the high PV bushes of gear oil pumps.

It is to be used in hydrodynamic or boundary lubricating condition of medium or high pressure gear oil pumps such as P= 16-25 Mpa, V=3.5-5m/s. It shows the benefit of low friction coefficient, wear resistant and anti-impact properties. At hydrodynamic lubrication, the PV limit reaches to 120 N/mm². m/s. It is a best choice for the bushes of various kinds of gear pumps as well as plunger pumps, vane pumps and so on.

SF-1P



LOAD CAPACITY	140N/mm ²
TEMPERATURE LIMIT	-195°C~ +270°C
SPEED LIMIT	2.5m/s
FRICTION COEF	0.04~0.20
PV LIMIT(DRY)	3.6N/mm ² * m/s
PV LIMIT(OIL)	50 N/mm ² * m/s

SF-1P is particularly suitable for bushes in reciprocating motion, and the properties are similar to that of the foreign product designated as DD2. It is efficient even under sudden break off of the lubricating oil. It is wear resistant, and so can keep the lubricating oil clear after long period of working. Meanwhile It can protect the mating surface from wearing. It is used widely as oil damping vibrating absorber of automobiles, motorcycles and various hydraulic cylinders, hydraulic motors and pneumatic elements.

SF-1W



LOAD CAPACITY	140N/mm ²
TEMPERATURE LIMIT	-195°C~+270°C
SPEED LIMIT	5m/s
FRICTION COEF	0.04~0.20
PV LIMIT(DRY)	3.6N/mm ² * m/s
PV LIMIT(OIL)	50 N/mm ² * m/s

SF-1W is a new type bushing without lead composition which is developed aiming at increasing demands on environmental protection. Besides its wide application on general machines, SF-1 is particularly suitable for food machine, pharmaceutical machine, tobacco machine etc.

SF-1B

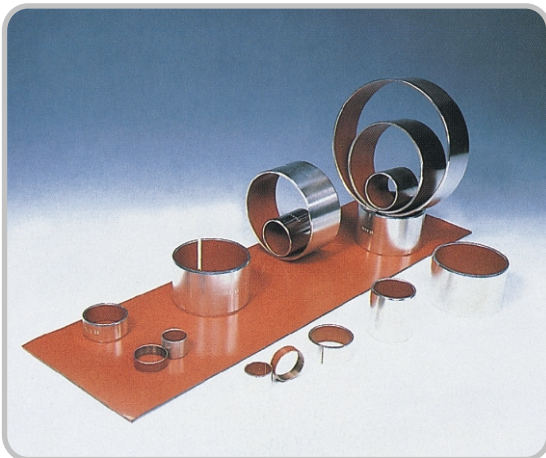


LOAD CAPACITY	140N/mm ²
TEMPERATURE LIMIT	-195°C~+300°C
SPEED LIMIT	5m/s
FRICTION COEF	0.04~0.18
PV LIMIT(DRY)	4.3N/mm ² * m/s
PV LIMIT(OIL)	50 N/mm ² * m/s

SF-1B is of high safety factor and is particularly appropriate for high temperature environment where no oil is efficient and where the machine must be under successive long period working condition.

This is widely used in steel metallurgy industry such as bushes for roller grooves of successive casting machines, cement grouting pumps and screw conveyers for cement. It can also be composed in steel housing or fabricated into flanged bushes which can move both in radial and in axial directions.

SF-1D

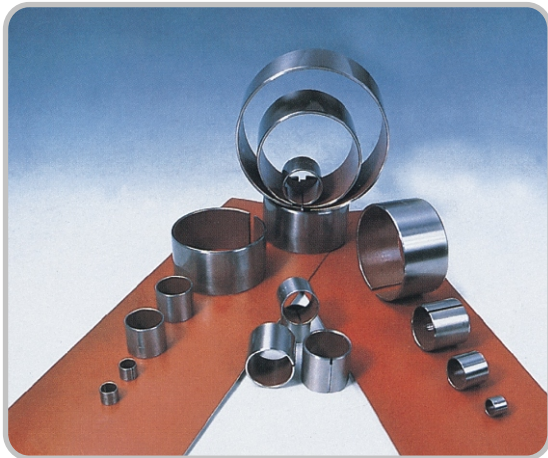


LOAD CAPACITY	140N/mm ²
TEMPERATURE LIMIT	-195°C~+270°C
SPEED LIMIT	3mm/s
FRICTION COEF	0.04~0.20
PV LIMIT(DRY)	3.8N/mm ² * m/s
PV LIMIT(OIL)	50 N/mm ² * m/s

SF-1D hydraulic bushing is developed on the basis of SF-1P and meanwhile considering the motion way of oil pump and damper, It is the substitute of and parallels in performance with abroad DR. In addition to covering the same usage of SF-1P, SF-1D in particular fits frequently reciprocating motion with a high side force. It is a tendency to gradually replace SF-1P with SF-1D, the latter will cover a wide application in automobile, motor damper and oil pumps etc.



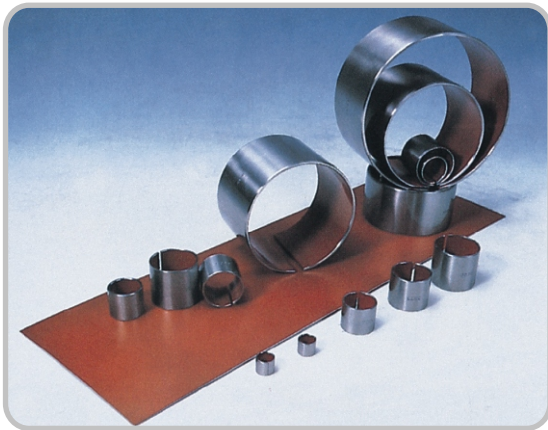
SF-1S



LOAD CAPACITY	140N/mm ²
TEMPERATURE LIMIT	-195°C~ +270°C
SPEED LIMIT	4.5m/s
FRICTION COEF	0.04~0.20
PV LIMIT(DRY)	3.6N/mm ² * m/s
PV LIMIT(OIL)	50 N/mm ² * m/s

SF-1S is of oil resistant, acid resistant alkali-resistant and seawater resistant. Moreover, there is no lead in the PTFE surface layer, and so is particularly fit for bushings in foodstuff machines, alkali flow meters, pumps motion elements in pharmaceutical machines, printing machines chemical engineering machines and other ocean industry. This is a triple layers composite bush, the base material being a bronze plate and a film of heat resistant powder filled PTFE being calendered onto the sintered spherical bronze interlayer.

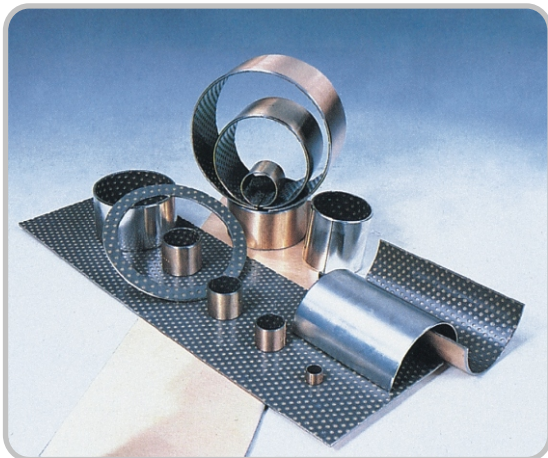
SF-1SS



LOAD CAPACITY	120N/mm ²
TEMPERATURE LIMIT	-195°C~ +270°C
SPEED LIMIT	2.5m/s
FRICTION COEF	0.05~0.25
PV LIMIT(DRY)	3.0N/mm ² * m/s
PV LIMIT(OIL)	40N/mm ² * m/s

SF-1SS stainless bushing with plastic coated is based on stainless steel spray-painted PTFE on the surface. It is of anti-acid, anti-alkali, anti-salty liquid and can be widely used in chemical industry such as acid/alkali flow indicator, pumps, valves etc. and also in the sliding position where anti-corrosion is a necessity mostly in sea industry.

SF-2



LOAD CAPACITY	140N/mm ²
TEMPERATURE LIMIT	-40°C~ +130°C
SPEED LIMIT	2.5m/s
FRICTION COEF	0.05~0.25
PV LIMIT(DRY)	2.8N/mm ² * m/s
PV LIMIT(OIL)	22 N/mm ² * m/s

SF-2 boundary lubrication bushing is based on a composite material with 3 firmly bonded layers: steel as backing, sintered bronze spherical powder as interlayer and modified POM as lining layer. It fits well for low speed, heavy duty and normal temperature and saves cost and prolongs working life when replacing normal all copper sleeves. It is widely applied in auto chassis, forging machine, metallurgical and mining machine, civil engineering, powerstation, strip rolling industries etc.

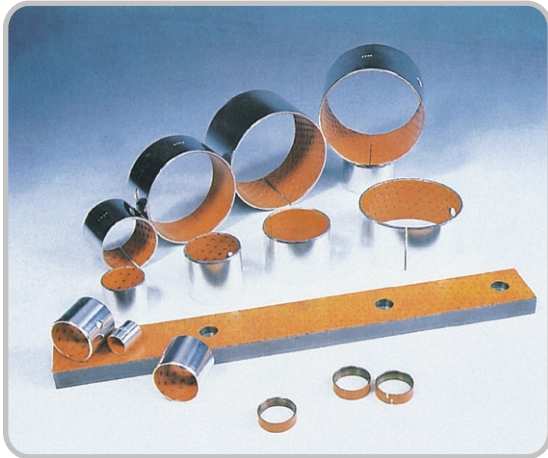
SF-2Y



LOAD CAPACITY	140N/mm ²
TEMPERATURE LIMIT	-40 °C~ +130 °C
SPEED LIMIT	2.5m/s
FRICTION COEF	0.05~0.25
PV LIMIT(DRY)	2.8N/mm ² * m/s
PV LIMIT(OIL)	22 N/mm ² * m/s

SF-2Y non-lead boundary lubrication bushing is improved on the basis of SF-2. Therefore, it almost has the same properties with SF-2, but its application can be extended to where non-lead is required.

SF-2S



LOAD CAPACITY	110N/mm ²
TEMPERATURE LIMIT	-60 °C~+130 °C
SPEED LIMIT	5m/s
FRICTION COEF	0.03~0.20
PV LIMIT(DRY)	3.2N/mm ² * m/s
PV LIMIT(OIL)	25 N/mm ² * m/s

SF-2S is similar to foreign made DS bush, and may be operated without lubricant or under a trace of oil. It is of low friction, anti-corrosion and is of long life. This is now applied in machines under oscillating motion and in open field or in corrosive environment such as hoisters, bulldogger, tower cranes, and printing or dyeing machines for textiles.

JF-800



LEAD BRONZE ALLOY	CuPb10Sn10
LOAD CAPACITY	65N/mm ²
TEMPERATURE MAX.	260 °C
HARDNESS ALLOY	(7~12) HB

JF-800 bimetal bushing is based on steel and sintered with CuPb10Sn10 as a lining layer. This type has the best performance within the range of Cu-Pb alloy constructed bushing. Therefore it has a wide application and is mostly suitable for where is middle speed and high impact etc.

JF-720



LEAD BRONZE ALLOY	CuPb24Sn4
LOAD CAPACITY	38N/mm ²
TEMPERATURE MAX.	300°C
HARDERNESS ALLOY	(45~70) HB

JF-720 is a bimetal bushing with steel as backing and sintered CuPb24Sn4 as lining layer. This type has fairly good performance in anti-fatigue and load capacity. It is suitable for middle speed and middle load. When overplated certain soft alloy, it can be applied in high-speed internal combustion engine and as connect-rod bushing.

JF-700



LEAD BRONZE ALLOY	CuPb30
LOAD CAPACITY	25N/mm ²
TEMPERATURE MAX.	170°C
HARDERNESS ALLOY	(30~45) HB

JF-700 is a bimetal bushing with steel as backing and sintered CuPb30 as lining layer. It has good performance in anti-seizing alien substance contamination. It is necessary to be over-plated certain soft alloy and mostly applied in internal combustion engine under high speed and middle to low load, e.g. main bushing and connect-rod bushing.

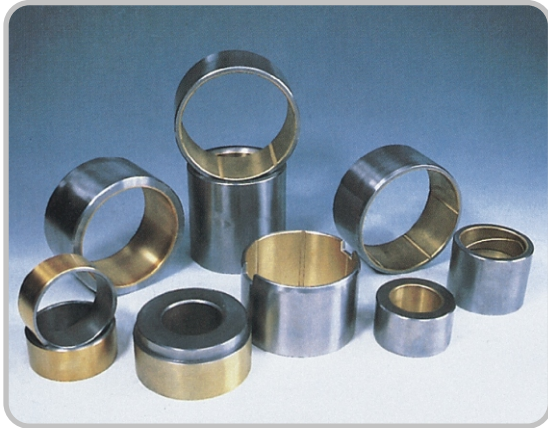
JF-20



LEAD BRONZE ALLOY	CuPb20Cu
LOAD CAPACITY	30N/mm ²
TEMPERATURE MAX.	150°C
HARDERNESS ALLOY	(30~40) HB

JF-20 is a high tin and aluminum based bushing, which adopts steel as backing and is coated a lining of AlSn20Cu through rolling treatment. It is of fairly good fatigue resistance, load capacity and good anti-corrosion and also performs well in bearing's sliding properties. It is widely applied under high speed and low load such as in internal combustion engine, air compressor and cooling machine, civil engineering, power station, strip rolling industries etc.

UF-850



LEAD BRONZE ALLOY	CuPb6Sn6Zn3
LOAD CAPACITY	65N/mm ²
TEMPERATURE MAX.	260°C
HARDNESS ALLOY	(70~100) HB

UF850 is a steel-bronze bushing, which uses 20# steel as backing and is sintered with 6-6-3 bronze in its inside as a lining. The performance of this structure parallels that of all 6-6-3 bronze bushing but saving cost. Therefore it can be used to replace conventional thick-wall bronze bushing and improve product competitiveness.

JDB-1



BASE MATERIAL	CuZn24Al6
BASE HARDNESS	HB230 (HB270)
FRICITION COEF (μ)	<0.16
TEMP LIMIT	300°C
DYNAMIC LOAD LIMIT	100N/mm ²
LOAD LIMIT UNDER 1m/min	25N/mm ²
SLIDING VELOCITY LIMIT	dry 0.4m/s oil 5m/s
PV LIMIT	3.8N/mm ² * m/s

JDB-1 solid lubricant embedded bushing is a new type made from strong brass and homogeneously embedded with solid lubricant in its body. It breaks through the limit of general bearing whose lubrication depends on oil film. So it is suitable for high temperature, heavy duty, anti-corrosion, or where oil is hard to be introduced. Its performance doubles both on hardness and wear-friction. It is now widely applied in successive casting machines, steel rollers in metallography, mineral machine, ships, turbo generators, hydraulic turbines and injection molding machines for plastics.

JDB-2

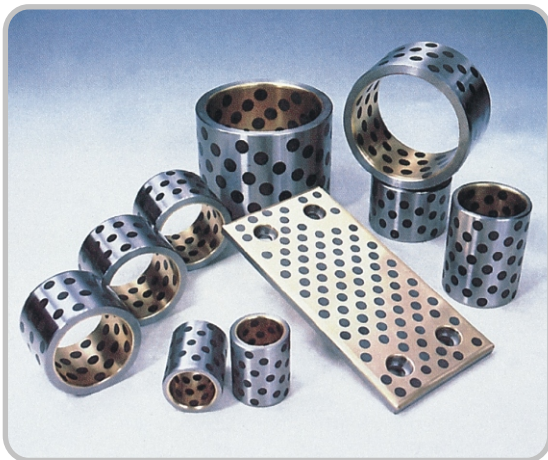


BASE MATERIAL	CuSn6Zn6Pb3
BASE HARDNESS	HB90
FRICITION COEF (μ)	<0.15
TEMP LIMIT	350°C
DYNAMIC LOAD LIMIT	60N/mm ²
LOAD LIMIT UNDER 1m/min	15N/mm ²
SLIDING VELOCITY LIMIT	2m/s
PV LIMIT	0.8N/mm ² * m/s

JDB-2 is also one type of JDB series. It is based on bronze CuSn6Zn6Pb3 and evenly embedded with a solid lubricant. It is mostly applied under low load, high temperature and middle speed, e.g. gemel in furnace gate, convey way of the baking furnace, light industry and tooling machine industry etc.



JDB-3



BASE MATERIAL	CuSn6Zn6Pb3
BASE HARDNESS	HB80
FRICTION COEF (μ)	<0.14
TEMP LIMIT	300°C
DYNANIC LOAD LIMIT	70N/mm ²
LOAD LIMIT UNDER IM/MIN	20N/mm ²
SLIDING VELOCITY LIMIT	2m/s
PV LIMIT	0.6N/mm ² * m/s

JDB-3 has almost the same constructure of JDB series. It is based on a bimetal material, which is sintered CuSn6Zn6Pb3 as a lining on its steel backing, likewise embedded with solid lubricant. Besides having the functions of JDB-2, it saves cost, improves compress strength and is also weldable between bush's end and machine part. It is suitable for metallurgy machine, construction machine and where oil is hard to be employed such as oil convey equipment.

JDB-4



BASE MATERIAL	HT250
BASE HARDNESS	HB210
FRICTION COEF (μ)	<0.17
TEMP LIMIT	400°C
DYNANIC LOAD LIMIT	60N/mm ²
LOAD LIMIT UNDER IM/MIN	15N/mm ²
SLIDING VELOCITY LIMIT	0.5m/s
PV LIMIT	0.8N/mm ² * m/s

JDB-4 is based on cast iron HT250 and embedded with solid lubricant. It is a typical cost saving product. It can be applied as a substitute of JDB-2 in where mechanical demands are not very high, for instance, guide post of mould, mold-frame of plastic injection machine etc.

JDB-5



BASE MATERIAL	CuCr15
BASE HARDNESS	HRC60
FRICTION COEF (μ)	<0.17
TEMP LIMIT	350°C
DYNANIC LOAD LIMIT	250N/mm ²
LOAD LIMIT UNDER IM/MIN	70N/mm ²
SLIDING VELOCITY LIMIT	0.1m/s
PV LIMIT	2.5N/mm ² * m/s

JDB-5 is reinforced product of JDB series. It is based steel GCr15 and embedded with solid lubricant. It is of high compress strength and particularly suitable for supporting position in hoisting machine, e.g. the support or stand of windlass and of crane. But it should not be applied in water or in acid/alkali circumstance.

FB090



BASE MATERIAL	CUSN8P0.3
HARDNESS	HB90~120
LOAD CAPACITY	150N/MM ²
TEMPERATURE LIMIT	-100°C~200°C
SPEED LIMIT	2.5M/S
PV LIMIT (OIL)	16 N/MM ² * M/S

FB090 is a kind of bushes wrapped by bronze strip. The bronze is of particular formulation with high specific gravity and on its surface maybe incorporated with spherical or diamond shaped indentations or oil grooves as required by customers. It is of high load capacity and long life. In place of traditional bronze bush, it is more cheap and more compact. It is widely applied in hoisting machines and other construction machines, automobiles, tractors, trucks, machine tools and some mineral engines.

FB092



BASE MATERIAL	CUSN8P0.3
HARDNESS	HB90~120
LOAD CAPACITY	150N/MM ²
TEMPERATURE LIMIT	-100°C~200°C
SPEED LIMIT	2.5M/S
PV LIMIT (OIL)	16 N/MM ² * M/S

FB092 bronze bushing is based on bronze CuSn8.3P0.3 and evenly distributed drilling oil hole on its body. When in assembly, oil or grease should be stored in the holes before bushing is sealed from both ends. FB092 has the advantages of abundant oil storage, easy-to-assembly, machine compactness etc. It can replace the conventional whole copper sleeves thus to save much cost. It is mostly applied under middle load, low speed such as in convey machine, hoisting machine, windlass, aligning machine etc.

FB08G



LOAD CAPACITY	150N/MM ²
TEMPERATURE LIMIT	-100°C~250°C
SPEED LIMIT	1.5M/S
FRICTION COEF (μ)	0.06~0.25
PV LIMIT(DRY)	2.6N/MM ² * M/S
PV LIMIT(OIL)	15 N/MM ² * M/S

FB08G is a kind of steel-lead bronze alloys based bearing which is embedded with particular formulation of solid lubricants. Owing to the high strength, high load capacity and the spirally distributed diamond type of the embedded solid lubricant, the high temperature lubricating action and wear resistant action as extraordinary exploited. The lubrication area of the bearing surface is being about 25%. This type of bearing is particularly applied in starting motor for automobiles, generators, hoisting machines, various cranes and those machines in metallurgical industry.

FB09G



LOAD CAPACITY	150N/mm ²
TEMPERATURE LIMIT	-100°C~+250°C
SPEED LIMIT	1.5m/s
FRICTION COEF	0.06~0.25
PV LIMIT(DRY)	2.6N/mm ² * m/s
PV LIMIT(OIL)	15 N/mm ² * m/s

FB09G is based bronze material and embedded with solid lubricants in its diamond or round shape pockets which are evenly distributed on its inside layers. It has almost the same performance and application condition with FB08G.

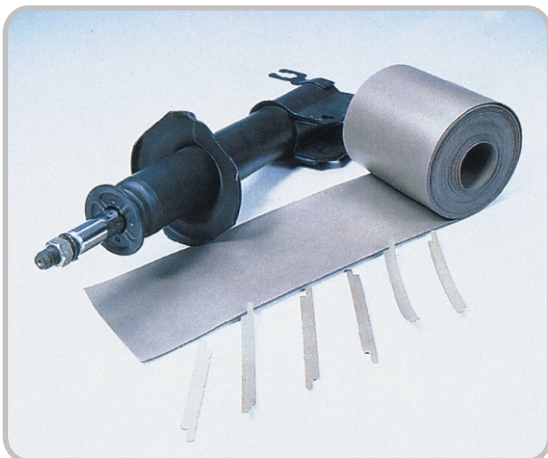
FR



LOAD CAPACITY	30N/mm ²
TEMPERATURE LIMIT	-40°C~+260°C
SPEED LIMIT	2.5m/s
FRICTION COEF	0.05~0.20
PV LIMIT(DRY)	1.65N/mm ² * m/s

FR is a composite material with bronze wire mesh as frame and calendered with a film of filled poly tetrafluoroethylene. This is of low friction and low wear, and is rather soft and is to be applied readily by inserting between the two rubbing metal surfaces, and can fulfill the ideal aim of no noise, no lubricating, no maintenance and no pollution. At present, this is applied in those mechanical elements under relatively low load and low speed, such as in textile machines, spherical bearings. Automobile door hinge and the operating rod for cars.

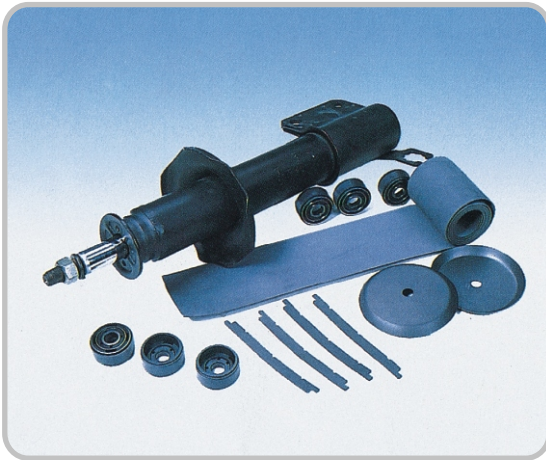
FD-1



TENSILE STRENGTH	22N/mm ²
FRICTION COEF	0.09
SPEED LIMIT	1.5m/s
TEMPERATURE LIMIT	-100°C~+250°C

FD-1 soft strip is based on PTFE and mold pressed and sintered into lubricants mainly copper etc. It is of low friction, low wear. Its tensile strength can meet the motion of mono piston ring. Due to its low friction, FD-1 can be applied under oil or without oil and so it's the best choice of auto damper, piston ring. At present, it is adopted in a lot of China autos such as Audi, Volkswagen, Cetiron etc and it maintains low friction long-termly.

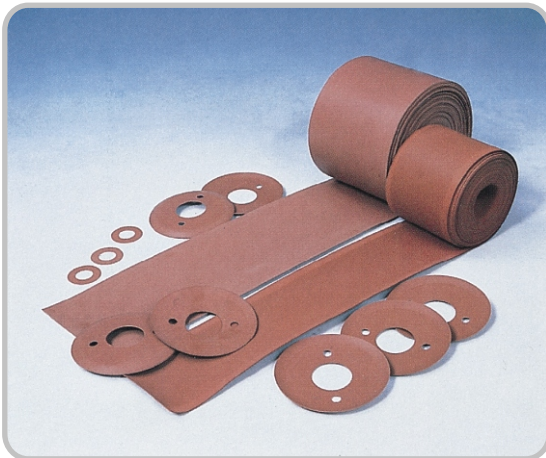
FD-2



TENSILE STRENGTH	23N/mm ²
FRICTION COEF	0.04
SPEED LIMIT	1.5m/s
TEMPERATURE LIMIT	-100°C~+250°C

FD-2 soft strip is based on PTFE and filled with graphite and other lubricants which are milled, pressed and finally sintered into PTFE basis. This material is of good elasticity, low friction coefficient, high wear resistance. It fits to be used together with metal backing. It proves excellent friction-wear performance on the damper piston, such as in Volkswagen, Buick auto etc, through the process of FD-2 covering onto metallurgical powder part.

FD-3



TENSILE STRENGTH	23N/mm ²
FRICTION COEF	0.04
SPEED LIMIT	1.5m/s
TEMPERATURE LIMIT	-100°C~+250°C

FD-3 modified soft strip is based on PTFE and filled into specific lubricant through a combination of mold pressing and sintering. It is of high wear resistance, good anti impactness and good performance in airproof. At present it is widely applied in flow pump of the greasing machine and ring seal etc.

FU



LOAD CAPACITY	120N/mm ²
SHRINK FIT	-100°C~+200°C
SPEED LIMIT	2.5m/s
COMPOSITIONS	CuSn6-6-3
PV LIMIT	2.45N/mm ² * m/s

FU the bronze powder is mold pressed under high pressure and then sintered under high temperature, and oil is soaked into the homogeneously spreaded tiny pores of the metal under vacuum. Fu bearing can withstand dry condition in medium speed and low load for sometime. Moreover it is cheap and stable in dimension. This is widely used in domestic electric and electronic machines, electric tools, textile machines, chemical engineering machines, automobiles and official business machines.

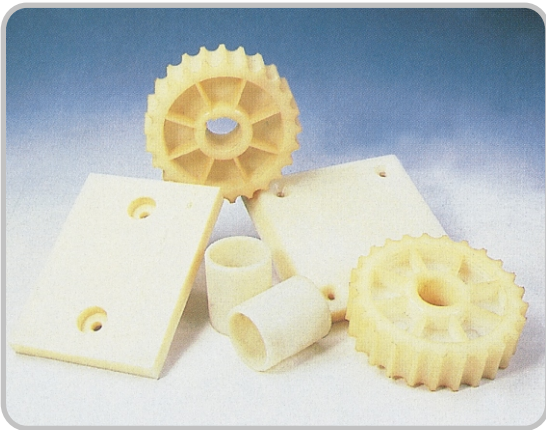
OMC



TENSILE STRENGTH	14-20MPA
HARDNESS HRC	R118
TEMPERATURE LIMIT	80°C
LINEAR EXPENSION	10 1/°C
FRICITION COEF	0.45-0.5

OMC is an oil impregnated nylon material bushing. It is a high strength, self-lubricating plastic material made from nylon monomer after a catalyzed polymerization reaction which is meanwhile added lubricants in the process. OMC is widely used in hydro-electricity engineering, metallurgy machine, rubber-making machine etc.

GMC



TENSILE STRENGTH	14-20MPA
HARDNESS HRC	R118
TEMPERATURE LIMIT	80°C
LINEAR EXPENSION	10 1/°C
FRICITION COEF	0.45-0.5

CMC is a reinforced nylon material. Due to the filling of glass fiber, it is of high strength, good rigidity, low stick slip. So it is widely applied in mining machine, ship-making industry and paper-making industry etc.