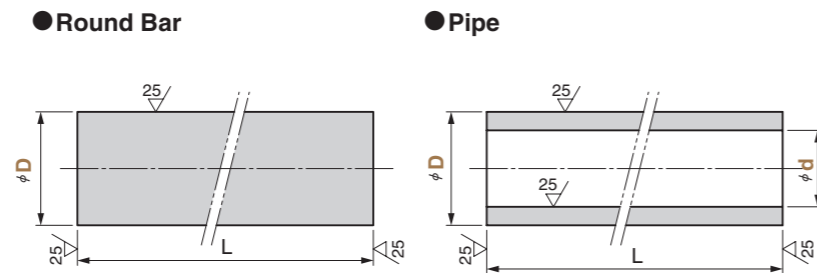


# Blank Material for Oilless Bushing Growing Cast Iron/Copper Alloy Casting

**S30** (SO#30:Growing Cast Iron)  
**S60** (SO#60:Copper Alloy Casting)



### S30 (SO#30 : Growing Cast Iron Type) **RoHS**

It has excellent wear resistance and seizure resistance of casting, and it is the oil impregnated bearing that has internal porosity by repeated composition adjustment and heat treatment in the porosity.

#### Features

- Less noise owing to porous structure.
- High dimensional stability due to uniform material quality.

#### Application

- Where reduction in oil lubrication is desired.
- Where reduction in vibration and sliding noise is desired.

### S60 (SO#60 : Copper Alloy Casting Type)

The major composition is copper alloy. With addition of special elements such as tin, zinc, etc., generation of crystal in solidification of molten metal is controlled. This easily generates minute shrink holes or discharge holes of melting gas. The base metal of the bearing has minute porosity and it is impregnated with high grade lubrication oil.

#### Features

- Less lubrication frequencies than before.

#### Application

- Piston ring, piston guide of hydraulic unit
- Cylinder sleeve.
- Bush for blower.

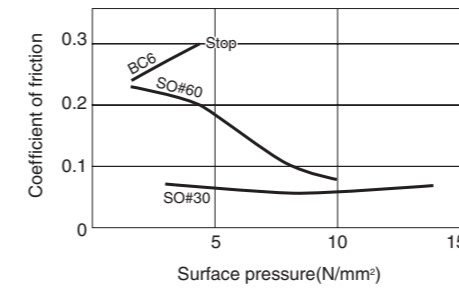
#### Operation Range

Type	Lubricating Condition	Environment Condition	Max. Allowable Load P N/mm <sup>2</sup>	Max. Allowable Sliding Speed V m/min	Max. Allowable PV value N/mm <sup>2</sup> ·m/min	Operation Range Temperature °C
SO#30	Regular lubrication	Atmosphere	10	60	75	-40~+100
SO#60	Regular lubrication	Atmosphere	15	100	100	-40~+200

#### Physical Properties

Type	Specific Gravity g/cm <sup>3</sup>	Hardness HB	Tensile Strength N/mm <sup>2</sup>	Linear Expansion Coefficient ×10 <sup>-5</sup> /°C	Impregnation %	Thermal conductivity W/(m·K)	Modules of longitudinal elasticity kN/mm <sup>2</sup>
SO#30	6.3~7.0	150~220	100	1.0~1.2	—	35~58	50~70
SO#60	8.5	60~80	145 or more	1.7	—	—	—

#### Friction characteristics



Drive Condition

- No lubrication, Intermittent rotation
- Speed V=5m/min

### S30 (SO#30 : Growing Cast Iron Type) **RoHS**

L	Catalog No.	D
		16
		21
		26
		31
		36
200	Round Bar Type S30	41
		46
		51
		56
		61
		66
		71

Order **Catalog No.** - **D**  
**S30** - **21**

L	Catalog No.	d	D
		29	43
		53	56
		61	66
		71	76
200	Pipe Type S30	59	86
		91	96
		101	121
		111	121
		126	141

Order **Catalog No.** - **d** - **D**  
**S30** - **29** - **43**

### S60 (SO#60 : Copper Alloy Casting Type)

L	Catalog No.	D
		16
		21
		26
		31
200	Round Bar Type S60	36
		41
		46
		51
		56
		61

Order **Catalog No.** - **D**  
**S60** - **16**

L	Catalog No.	d	D
		19	31
		36	36
		41	41
200	Pipe Type S60	29	46
		34	51
		44	56
		49	61

Order **Catalog No.** - **d** - **D**  
**S60** - **19** - **31**