



## Features

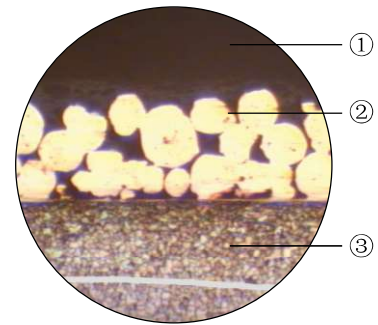
CSB-50HP is a newly developed material designed to accommodate higher speeds and loads utilizing lubrication. The proprietary mesh design and special resins support higher PV values and reduced friction. Excellent wear resistance is an added feature. Rotational surface speeds up to 5m/s , PV ratings of 60N/mm<sup>2</sup>\*m/s.. This material is designed to operate with lubrication.

## Structure

**1. PTFE/Fibre mixture 0.01~0.03mm.** The PTFE layer is the contact surface for the rotating shaft . Minute particles of the PTFE layer and the sintered bronze material combine to create a solid lubricant film, which coats the shaft.

**2. Sintered bronze layer 0.20-0.35mm.** A special composition of powdered copper is thermally fused to the steel backing. This contact layer acts as an anchor for the PTFE layer and conducts the thermal build up away from the bearing surfaces.

**3. Low-carbon steel,** Setting the foundation of the bushings, the steel back provides exceptional stability, load carrying and heat dissipation characteristics.



## Tech. Data

Max. Load	Static	250N/mm <sup>2</sup>	Temp. limit	-195 °C~+280 °C	
	Very low speed	140N/mm <sup>2</sup>		Friction coefficient	0.03~0.20
	Rotating oscillating	60N/mm <sup>2</sup>		Max. speed	Dry running: 2m/s Hydrodynamic operation: >5m/s
Max. PV dry running	Short-term operation	3.6N/mm <sup>2</sup> *m/s	Thermal conductivity	42 W(m*K) <sup>-1</sup>	
	Continuous operation	1.8N/mm <sup>2</sup> *m/s	Coefficient of thermal expansion	11*10 <sup>-6</sup> *K <sup>-1</sup>	
PV hydrodynamic		60 N/mm <sup>2</sup> *m/s			

## Typical Application

This new material is suitable for high PV value application with oil lubrication. The typical applications are: gear pump, vane pump, shock absorber, gear motor, axial and radial piston pumps and so on. Oil grooves or oil holes design are available (for details, please refer to CSB notice).

