MATERIAL

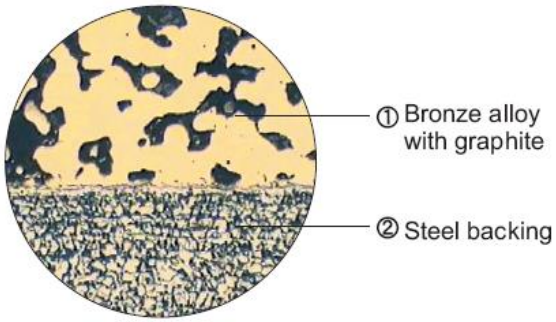
AST-850S Metal Backed Bronze Powder with Graphite

Structure

AST-850S is a composite multi-layer bearing composed of a special oil-impregnated sintered material which forms the sliding surface and steel material which forms the backing. Sintered layers are of a special copper-nickel alloy containing a uniformly-dispersed graphite-based solid lubricant. The solid lubricant is released at the bearing surface as wear occurs, ensuring a low coefficient of friction. Applications include automotive die wear plates, industrial robots, injection molding machine wear plates and tie-bar bearings, construction machines etc.

Features

These bearings can be used for motions in any direction, and in applications involving micro-motions, due to the uniformly-dispersed solid lubricant. In self-lubrication applications, and to provide low starting friction, we recommend pre-lubricating if possible. Subsequent re-lubrication maintenance would be drastically reduced. This material has very good load capacity, good wear resistance and low friction. This material can be machined after fitting for precise tolerance control, provided the sintered bronze layer is not removed.



Technical Data

Max. load	Static	100N/mm^2		Temp.	-40°C~+120°C
	Dynamic	50N/mm^2		Friction coefficient	0.03~0.20
Max. speed	Dry	0.5m/s		Alloy hardness	>45HB
	Lubrication	> 1m/s		Coefficient of thermal expansion	14*10^{-6}*K^{-1}
Max. PV	Dry	1.5N/mm^2*m/s			
	Lubrication	2.5N/mm^2*m/s		Oil volume	>10%

Typical Applications

This material has been widely used, with low friction and good wear resistance, in high load applications in which lubrication is impractical. Typical applications include automotive die wear plates, industrial robots, injection molding machine wear plates and tie-bar bushes, construction machinery, etc.

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