

DDR15X Metal Polymer Bearings



This material consists of a copper-tin-lead alloy sintered onto a steel backing, and the bearing surface is a mixture of PTFE (polytetrafluoroethylene), lead/tin and a special filler. The bearing exhibits excellent durability under boundary and fluid lubrication conditions and has good sliding characteristics due to the PTFE/lead/tin mixture, special filler, strength of the material and dimensional stability.

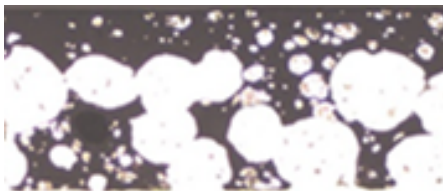
MAJOR APPLICATIONS

Gear pumps

FEATURES

- Provides performance under high loads that is comparable to metal bearings
- Offers a low coefficient of friction and excellent wear-resistance along boundary surfaces and under fluid lubrication
- Eliminates “stick and slip” thanks to a low coefficient of friction
- Offers superior resistance to chemical substances
- Performs well through an extended range of operating temperatures

MICROSTRUCTURE



- PTFE + lead/tin + special fillers
- Porous sintered lead bronze
- Steel backing

CHARACTERISTICS

		Metric		Imperial	
Max Load, P	Static	MPa (N/mm ²)	304	psi	44,100
	Dynamic	MPa (N/mm ²)	140	psi	20,000
Temperature Range		°C	-200 ~ +280	°F	-328 ~ +536
Coefficient of Thermal Exp.	Parallel to Surface	10 ⁻⁶ /°C	11	10 ⁻⁶ /°F	6
	Thickness Direction	10 ⁻⁶ /°C	30	10 ⁻⁶ /°F	17
Dry Condition	Max Sliding Speed, V	m/s	—	fpm	—
	Max PV	MPa x m/s	—	psi x fpm	—
Coefficient of Friction			—		—
Wet condition	Max Sliding Speed, V	m/s	10	fpm	2,000
	Max PV	MPa x m/s	10	psi x fpm	290,000
Coefficient of Friction			0.02-0.08*		0.02-0.08*

* Depending on the operating conditions

Note: This data is not guaranteed. Since conditions differ every application, it may be able to be used beyond the listed value.

