Oiles 500AB Aluminum bronze bearings with embedded solid lubricant

RoHS2 ELV Lead Free

Features

- Usable in seawater.
- Has superior heat resistance.
- Not brittle at low temperatures and may be used at very low temperatures.

Service range	500AB SL1	
Lubrication condition	Dry	periodic lubrication
Service temperature range ℃	−250～+400	−40～+150
Allowable max. pressure P N/mm² {kgf/cm²}	24 (100) {245 (1,020)}	
Allowable max. velocity V m/s {m/min}	0.25 {15}	0.50 {30}
Allowable max. PV value N/mm² · m/s {kgf/cm² · m/min}	1.25 {765}	2.45 {1,500}

The values in parentheses are static bearing pressures, which are the bearing pressures in applications with no motion or very small motion (≦0.0017m/s[0.1m/min]).

※Above values are applicable when solid lubricants SL1 are used.
When you use standard #500AB series in the temperature and over, contact us for more information.

Mechanical properties			
Density	——	g/cm³	7.6
Tensile strength	JIS Z 2241	N/mm² {kgf/mm²}	590 {60}
Tensile elongation at break	JIS Z 2241	%	15
Compressive strength	——	N/mm² {kgf/mm²}	240 {24} (Note)
Impact strength	JIS Z 2242	J/cm² {kgfm/cm²}	25 {2.5}
Hardness	JIS Z 2243	HBW	160
Modulus of longitudinal elasticity	——	N/mm² {kgf/mm²}	108,000 {11,000}
Co-efficient of linear expansion	——	×10⁻⁵ ℃⁻¹	1.6
Thermal conductivity	——	W/m℃ {cal/sec℃cm}	58.6 {0.14}

※The values shown above are typical values, not the standard values.
(Note) Compressive strength is 0.2%

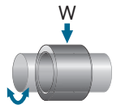
⚠Please indicate the type of motion (rotation, reciprocating, rotation & reciprocating) for custom-made products.

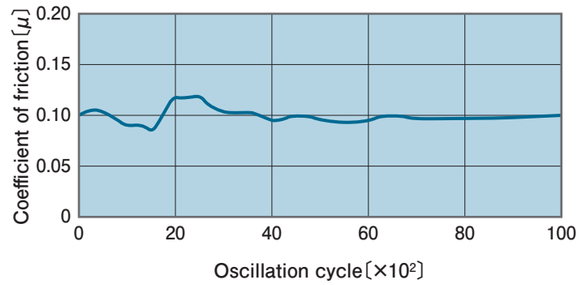
⚠Solid lubricant, SL401 and SL403 are not lead-free.

Test data

Journal oscillation test in sea water

<Testing conditions>
Mating material : SUS304
Pressure : 15.7N/mm² {160.0kgf/cm²}
Oscillating cycle : 60cpm
Oscillating angle : ±10°
Test cycle (time) : 100,000cycle (27.8hrs.)
Ambience : in artificial sea water
temperature 20±5°
*SL4 is used for this test data.





Journal oscillation test in water

<Testing conditions>
Bearing dimension : φ80×φ100×ℓ60
Mating material : S45C hard chrome plating
Pressure : 19.6N/mm² {200.0kgf/cm²}
29.4N/mm² {300.0kgf/cm²}
Velocity : 0.004m/s {0.25m/min}
Oscillating cycle : 6cpm
Oscillating angle : ±15°
Test cycle (time) : 100,000cycle (278hrs.)
Ambience : in the purified water
Lubrication : SL4L coating