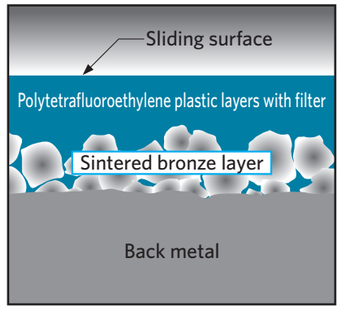
Oiles Techmet E

Polytetrafluoroethylene plastic multi-layer bearings with back metals

RoHS2 ELV Lead Free

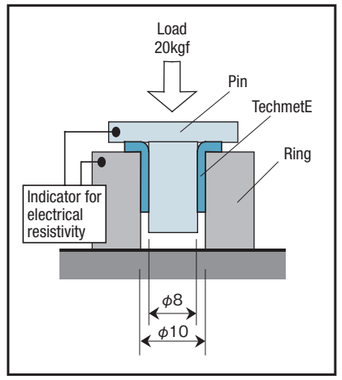


image

Feature

- Serviceable without the need for lubrication. Features superior dimensional stability, mechanical strength, and thermal conductivity with a thin, lightweight, and compact design.
  (Available from Thickness 0.5 mm)
- Features low coefficient of friction and superior wear resistance.
- Electrically conductive

Electrical resistivity
1000Ω or less with below measurement method



Service range

Lubrication condition	Dry
Service temperature range ℃	−50～+250
Allowable max. pressure P N/mm² {kgf/cm²}	49 (137) {500 (1,400)}
Allowable max. velocity V m/s {m/min}	0.5 {30}
Allowable max. PV value N/mm² · m/s {kgf/cm² · m/min}	3.27 {2,000}

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]).

Mechanical properties

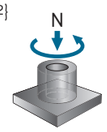
Tensile strength	JIS Z 2241	N/mm² {kgf/cm²}	380 {3,875}
Elongation	JIS Z 2241	%	27
Hardness	JIS Z 2244	HV	107

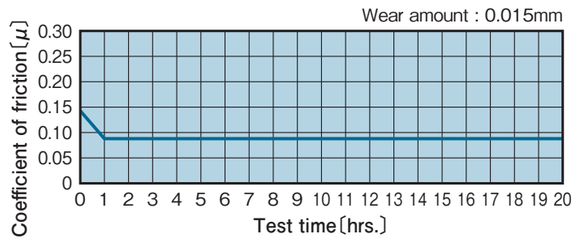
※The values shown above are typical values, not the standard values.
※The values shown above are values of back metal.

Test data

Thrust rotation test

<Testing conditions>
Mating material : S45C-N
(surface roughness Rz1.6μm)
Pressure : 9.8N/mm²{100kgf/cm²}
Velocity : 0.167m/s{10.0m/min}
Test time : 20hrs
Lubrication : dry





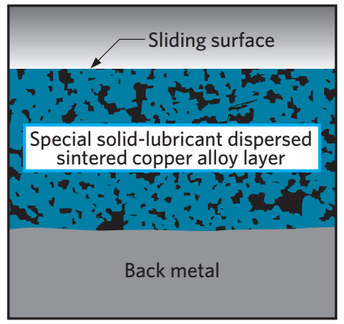
◉Please refer to the fitting method of Drymet LF. (P.153, 154)

Oiles Toughmet

Solid-lubricant dispersed sintered bearings with back metals

Standard product/Custom-made product

RoHS2 ELV Lead Free



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Feature

- Has superior load resistance and heat resistance. Also conductive.
- Demonstrates superior performance even in reciprocating, oscillating, and intermittent operations.
- Demonstrates much superior performances by the action of oil retaining power of the sintered copper alloy layer and solid lubricant if lubricating oil is used together.
- Thin bearing allows compact design.
- Electrically conductive.
- The standard products are available in various sizes.

Service range

Lubrication condition	Dry
Service temperature range ℃	−40～+350
Allowable max. pressure P N/mm² {kgf/cm²}	24.5 (49) {250 (500)}
Allowable max. velocity V m/s {m/min}	0.40 {24}
Allowable max. PV value N/mm² · m/s {kgf/cm² · m/min}	1.65 {1,010}

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]).

Mechanical properties

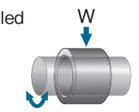
Tensile strength	JIS Z 2241	N/mm² {kgf/cm²}	380 {3,875}
Elongation	JIS Z 2241	%	27
Hardness	JIS Z 2244	HV	107

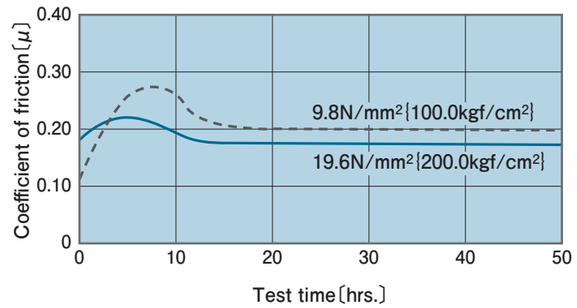
※The values shown above are typical values, not the standard values.
※The values shown above are values of back metal.

Test data

Journal oscillation test

<Testing conditions>
Bearing dimension : ϕ 40×ϕ44× ℓ 30
Pressure : 9.8N/mm²{100.0kgf/cm²}
19.6N/mm²{200.0kgf/cm²}
Velocity : 0.014m/s{0.84m/min}
Oscillating angle : ±20°
Oscillating cycle : 30cpm
Test time : 50hrs.
Lubrication : grease is applied at assembly.





◉Please refer to the fitting method of Drymet LF. (P.153, 154)