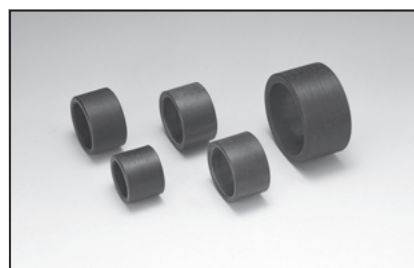


# Oiles Fiberflon TR Multi-layer polytetrafluoroethylene plastic bearings



## Feature

- Serviceable without the need for lubrication. Has superior wear resistance.
- Demonstrates the low coefficient of friction of the PTFE plastic as is.
- Offers superior performance under high-load, low-speed conditions.
- The sliding surface is made of cross-woven fabric hardened firmly with plastic to improve cold flow, disadvantage of PTFE, remarkably.
- Has superior heat, cold and chemical resistance.
- Backing materials are selectable according to applications.
- May be used in water and seawater.

## Service range

Lubrication condition	Dry
Service temperature range °C	-40~+120
Allowable max. pressure P N/mm <sup>2</sup> {kgf/cm <sup>2</sup> }	100 {1,020}
Allowable max. velocity V m/s {m/min}	0.15 {9}
Allowable max. PV value N/mm <sup>2</sup> · m/s {kgf/cm <sup>2</sup> · m/min}	1.20 {734}

Condition: in atmosphere, bushing, shaft rotation.

## Mechanical properties

Specific gravity	JIS K 6911	—	1.4	Radial crushing strength	JIS Z 2507	N/mm <sup>2</sup> {kgf/mm <sup>2</sup> }	145 {14.8} (roll formed)
Tensile strength	JIS K 6911	N/mm <sup>2</sup> {kgf/mm <sup>2</sup> }	95 {9.7}	Hardness	JIS K 6911	HRM	80
Flexural property	JIS K 6911	N/mm <sup>2</sup> {kgf/mm <sup>2</sup> }	110 {11.2}	Izod impact strength (with notch)	JIS K 6911	J/m {kgf·cm/cm}	177 {18}
Compressive strength	JIS K 6911	N/mm <sup>2</sup> {kgf/mm <sup>2</sup> }	195 {19.9}	Co-efficient of linear expansion	ASTM D 696	×10 <sup>-5</sup> °C <sup>-1</sup>	2~3

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

## Test data

### Journal oscillation test

<Testing conditions>

Bearing dimension : φ40×φ50×ℓ30

Mating material : S45C (surface roughness Rz2μm)

Pressure : 49.0N/mm<sup>2</sup> {500.0kgf/cm<sup>2</sup>}  
34.3N/mm<sup>2</sup> {350.0kgf/cm<sup>2</sup>}

Velocity : 0.005m/s {0.31m/min}

Oscillating cycle : 5cpm

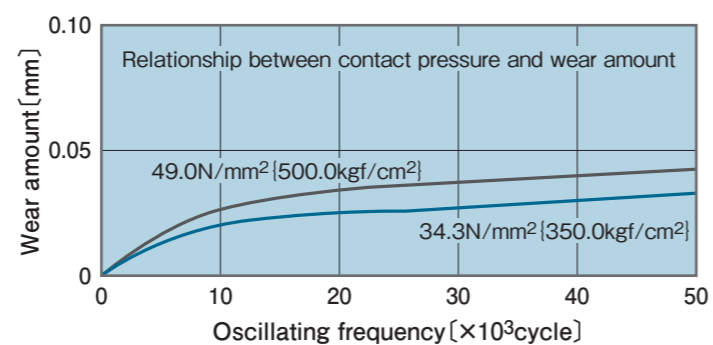
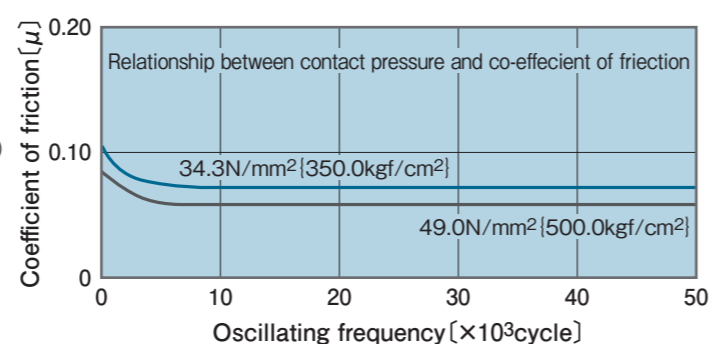
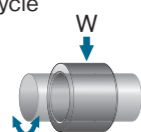
Oscillating angle : ±45°

Oscillating frequency : 50,000cycle

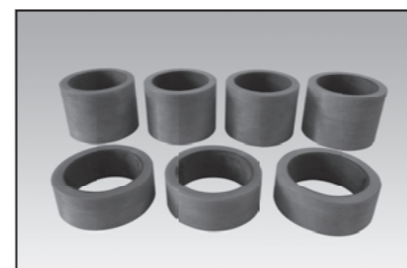
Test time : 167hrs.

Clearance : 0.170mm

Lubrication : dry



# Oiles Fiberflon OH Multi-layer polytetrafluoroethylene plastic bearings



This product is registered in the New Technology Information System (NETIS) managed by MLIT.  
Technology name : Solid-lubricant dispersed bearing FIBERFLON OH/Registration No. : KT-130060-VE (for water gates/underwater pumps)

## Feature

- This product can be used in air, water or seawater.
- Demonstrates superior wear resistance under micro-motion.
- Thanks to the dual structure of the sliding layer and backing material (FRP:glass fiber), this product offers load bearing characteristics equivalent to those of metal bearings.
- Easy dimensional setting due to a low swelling rate.
- Machining on the inner surface is possible.

## Service range

Lubrication condition	Dry
Service temperature range °C	-40~+120
Allowable max. pressure P N/mm <sup>2</sup> {kgf/cm <sup>2</sup> }	49 (100) {500 (1,020)}
Allowable max. velocity V m/s {m/min}	0.15 {9}
Allowable max. PV value N/mm <sup>2</sup> · m/s {kgf/cm <sup>2</sup> · m/min}	1.2 {734}

Condition: in atmosphere, bushing, shaft rotation.  
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

Specific gravity	JIS K 6911	—	1.7	Hardness	JIS K 6911	HRM	60
Tensile strength	JIS K 6911	N/mm <sup>2</sup> {kgf/mm <sup>2</sup> }	165 {16.8}	Izod impact strength (with notch)	JIS K 6911	J/m {kgf·cm/cm}	1,010 {103}
Compressive strength	JIS K 6911	N/mm <sup>2</sup> {kgf/mm <sup>2</sup> }	238 {24.3}	Co-efficient of linear expansion	ASTM D 696	×10 <sup>-5</sup> °C <sup>-1</sup>	5 ~ 8
Flexural property	JIS K 6911	N/mm <sup>2</sup> {kgf/mm <sup>2</sup> }	127 {13.0}	Swelling rate	—	%	0.35

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

## Test data

### Journal oscillation test

<Testing conditions>

Environment : In atmospheric air, In water

Bearing dimension : φ60×φ75×ℓ50

Mating material : SUS403

Pressure : 24.5N/mm<sup>2</sup>

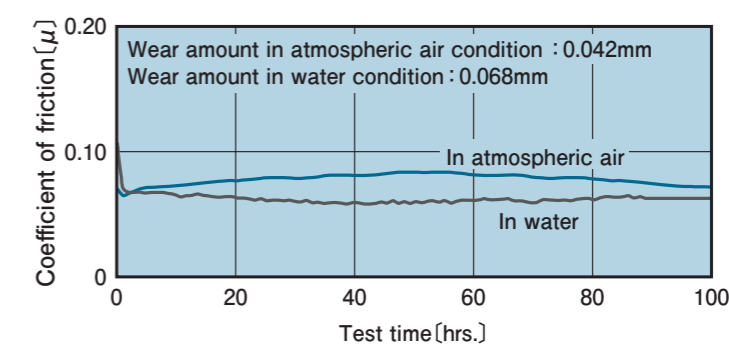
Velocity : 0.019m/s

Oscillating angle : ±45°

Oscillating cycle : 12cpm

Test time : 100hr

Lubrication : dry



### Journal oscillation test

<Testing conditions>

Environment : In atmospheric air, In water

Bearing dimension : φ60×φ75×ℓ50

Mating material : SUS403

Pressure : 24.5N/mm<sup>2</sup>

Velocity : 0.0084m/s

Oscillating angle : ±2°

Oscillating cycle : 120cpm

Test time : 100hr

Lubrication : dry

