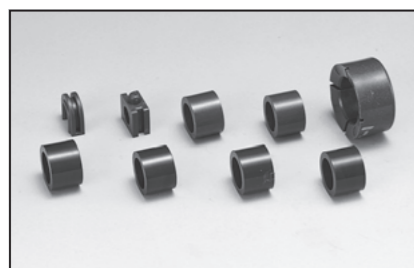


# Oiles 88 Oil-impregnated polyester bearings



## Feature

- Serviceable without the need for lubrication.
- Features low coefficient of friction and superior impact resistance.
- Features superior vibration-proof and soundproof characteristics.
- Injection-molded and can be made in complicated shapes. Has good mass productivity.

| Service range   | 88-02        | 88-71        |
|---|--------------|--------------|
| Lubrication condition   | Dry          |              |
| Service temperature range °C  | -40~+140     | -40~+140     |
| Allowable max. pressure P N/mm <sup>2</sup> {kgf/cm <sup>2</sup> }            | 14.5 {148}   | 17.5 {179}   |
| Allowable max. velocity V m/s {m/min}   | 0.85 {51}    | 0.85 {51}    |
| Allowable max. PV value N/mm <sup>2</sup> · m/s {kgf/cm <sup>2</sup> · m/min} | 2.45 {1,500} | 2.45 {1,500} |

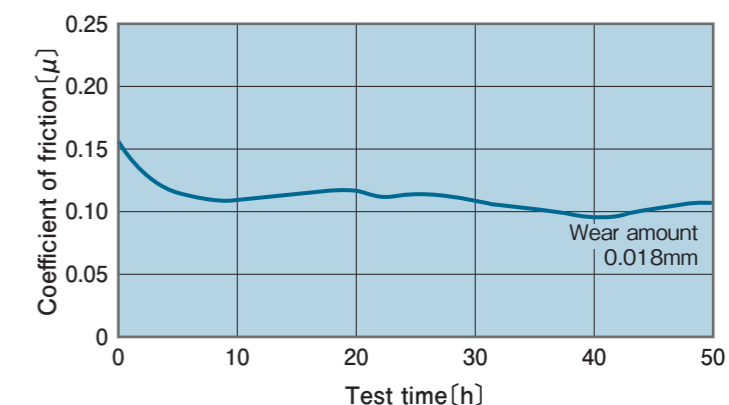
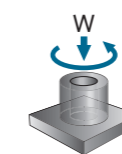
| Mechanical properties                      |            |  | 88-02           | 88-71          |            |
|--|------------|--|-----------------|----------------|------------|
| Specific gravity                           | ASTM D 792 | —  | 1.35            | 1.20           |            |
| Tensile strength                           | ASTM D 638 | N/mm <sup>2</sup> {kgf/cm <sup>2</sup> } | 37.3 {380}      | 55.4 {565}     |            |
| Tensile elongation at break                | ASTM D 638 | %  | 30              | 30             |            |
| Flexural property                          | ASTM D 790 | N/mm <sup>2</sup> {kgf/cm <sup>2</sup> } | 57.8 {590}      | 79.9 {815}     |            |
| Flexural modulus                           | ASTM D 790 | N/mm <sup>2</sup> {kgf/cm <sup>2</sup> } | 1,760 {18,000}  | 2,160 {22,000} |            |
| Compressive stress                         | ASTM D 695 | N/mm <sup>2</sup> {kgf/cm <sup>2</sup> } | 5% deformation  | 13.7 {140}     | 22.1 {225} |
|  |            |  | 10% deformation | 49.0 {500}     | 86.8 {885} |
| Hardness                                   | ASTM D 785 | HRM                                      | 52              | 80             |            |
| Izod impact strength (with notch)          | ASTM D 256 | J/m {kgfcm/cm}                           | 49.0 {5.0}      | 118 {12.0}     |            |
| Co-efficient of linear expansion           | ASTM D 696 | ×10 <sup>-5</sup> °C <sup>-1</sup>       | 6~12            | 6              |            |
| Deflection temperature under load 1.82 MPa | ASTM D 648 | °C                                       | 56              | —              |            |
| Melting point                              | DSC        | °C                                       | 224             | 220            |            |
| UL incombustibility                        | UL94       | File No.E78113                           | HB              | —              |            |

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

## 88-02 Test data

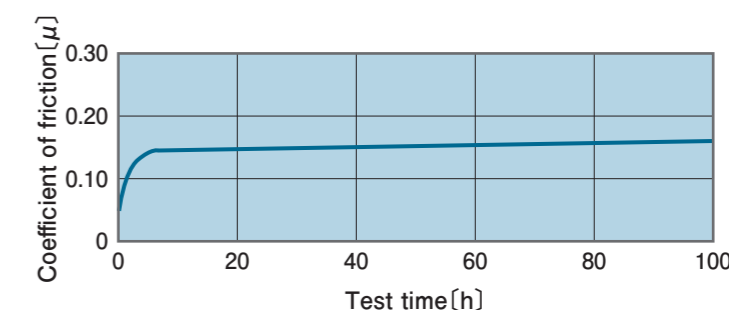
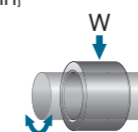
### Thrust test

<Testing conditions>  
 Mating material : S45C (surface roughness Rz3μm)  
 Pressure : 5.88N/mm<sup>2</sup> {60.0kgf/cm<sup>2</sup>}  
 Velocity : 0.083m/s {5.0m/min}  
 Test time : 50h  
 Lubrication : dry

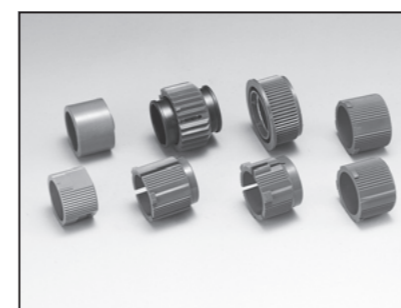


### Journal oscillation test

<Testing conditions>  
 Mating material : FCD500 (surface roughness Rz1.5μm)  
 Pressure : 14.7N/mm<sup>2</sup> {150.0kgf/cm<sup>2</sup>}  
 Velocity : 0.028m/s {1.67m/min}  
 Oscillating cycle : 60cpm  
 Oscillating angle : ±20°  
 Test time : 100h  
 Lubrication : grease is applied at assembly



# Oiles 88 Elastomer Polyester elastomer



## Feature

- Among thermo-plastic elastomer, the Oiles 88 elastomer features superior high temperature characteristics and is applicable to wide temperature range from low to high temperatures.
- Has superior wear resistance. Demonstrates outstanding resistance against abrasive wear caused by dust and coarse mating surface, in particular.
- Has rubber elasticity and flexibility, superior impact resistance, and large noise suppressing and vibration-proof effects.
- Features superior oil resistance, chemical resistance and aging resistance among elastomer type flexible plastic.

## Mechanical properties 88-91

|                             |             |  |            |
|-----------------------------|-------------|--|------------|
| Specific gravity            | ASTM D 792  | —  | 1.22       |
| Tensile strength            | ASTM D 638  | N/mm <sup>2</sup> {kgf/cm <sup>2</sup> } | 33.3 {340} |
| Tensile elongation at break | ASTM D 638  | %  | 400        |
| Hardness                    | ASTM D 2240 | Shore D                                  | 57         |
| VICAT softening point       | ASTM D 1525 | °C                                       | 190        |
| Melting point               | DSC         | °C                                       | 212        |