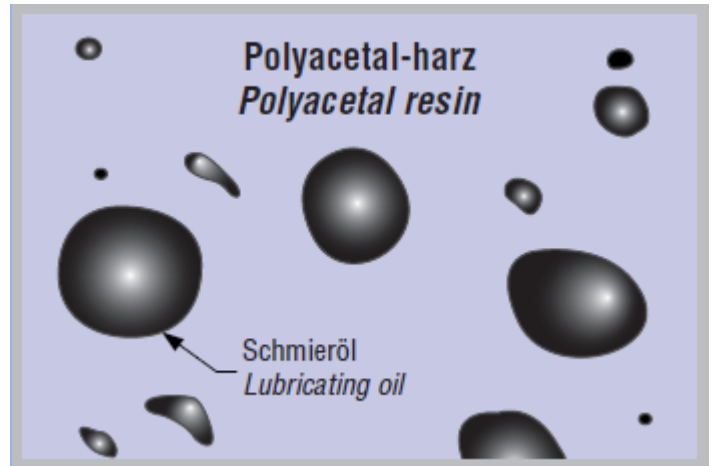
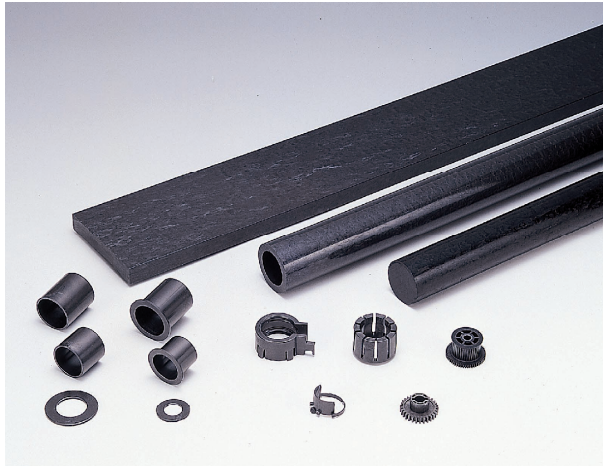


## OILES 80 Oil impregnated Polyacetal Bearing



### Features

- An oil impregnated Polyacetal resin bearing
- Good lubricant oil and special filler dispersed uniformly for broad range of applications
- Shows excellent load carrying capacity, wear resistance, low frictional coefficient and high velocity capability
- Prevents stick slips and squeaking noise
- Available in a large variety of shapes through injection molding

### Specifications

Lubrication condition	Dry
Service temperature range	-40 to 80°C
Allowable maximum contact pressure P	17.5 N/mm <sup>2</sup>
Allowable maximum sliding velocity V	0.85 m/sec
Allowable maximum PV value	2.45 N/mm <sup>2</sup> ·m/sec

### Mechanical properties

Specific gravity	ASTM D 792	----	1.39
Tensile strength	ASTM D 638	N/mm <sup>2</sup>	51.0
Tensile strength at break	ASTM D 638	%	60
Flexural strength	ASTM D 790	N/mm <sup>2</sup>	76.5
Flexural modulus	ASTM D 790	N/mm <sup>2</sup>	2.650
Hardness	ASTM D 785	----	HRM 72
Izod impact strength (with notch)	ASTM D 256	J/m	58.8
Co-efficient of thermal linear expansion	ASTM D 696	× 10 <sup>-5</sup> °C <sup>-1</sup>	>8 to 13
Melting point	DSC	°C	165
UL incombustibility	UL94	----	HB

Note: Values hear are nominal

## Test data

### Journal rotation test

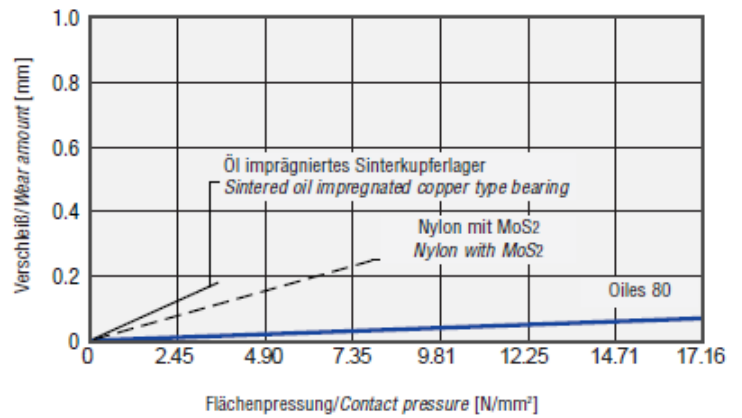
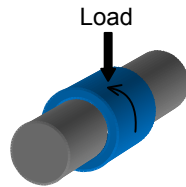
<Testing conditions>

Bearing dimensions:  $\phi 35 \times \phi 38 \times L20$  (mm)

Contact pressure:  $0.42 \text{ N/mm}^2$  is added every 5 min.

Sliding velocity: 1.133 m/sec

Lubrication: Initial greasing



### Journal oscillation test

<Testing conditions>

Bearing dimensions:  $\phi 40 \times \phi 50 \times L30$  (mm)

Mating material: 45C (Surface roughness  $Ry 1.5 \mu\text{m}$ )

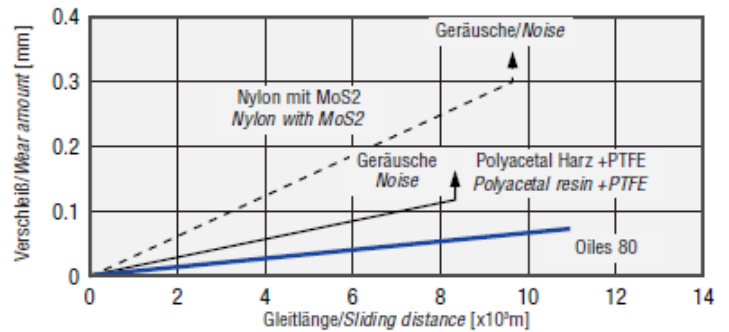
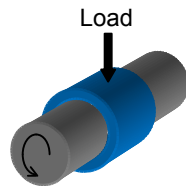
Contact pressure:  $4.4 \text{ N/mm}^2$  is added every 5 min.

Sliding velocity: 0.02 m/sec

Oscillating cycle: 72 cpm

Oscillating angle:  $24^\circ$

Lubrication: Initial greasing



### Thrust rotation test

<Testing conditions>

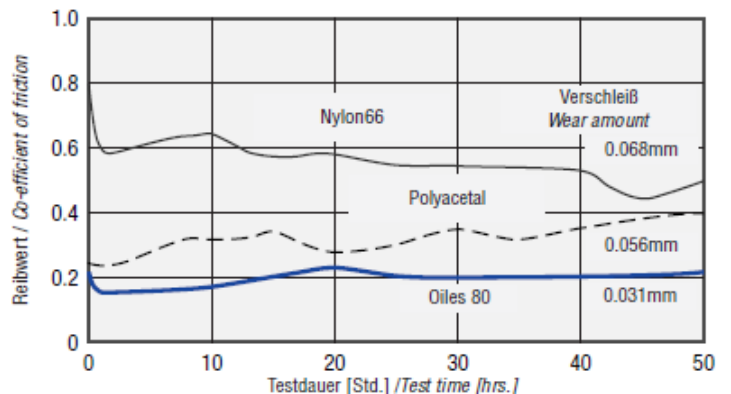
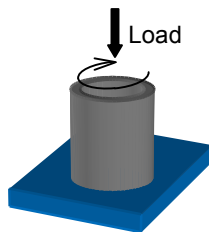
Mating material: 45C (Surface roughness  $Ry 3 \mu\text{m}$ )

Contact pressure:  $2.94 \text{ N/mm}^2$

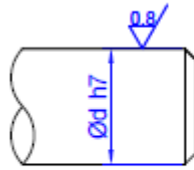
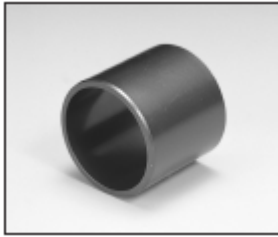
Sliding velocity: 0.167 m/sec

Test time: 50 hrs.

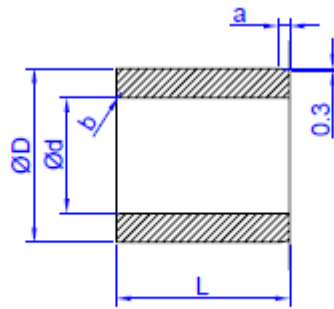
Lubrication: None (Dry)



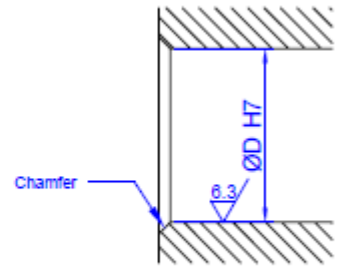
## OILES 80 Straight bushing (80B) Standard size



Mating shaft



Bushing



Housing

### (Ordering method) Parts No: 80B-1510

Inner diameter $\phi d$	Outer diameter $\phi D$	a	b	Length L $\begin{matrix} 0 \\ \pm 0.3 \end{matrix}$															
				2	3	4	5	6	8	10	12	15	20	25	30	40	50		
2 $\begin{matrix} +0.065 \\ +0.015 \end{matrix}$	4 $\begin{matrix} +0.107 \\ +0.032 \end{matrix}$	0.3	R0.3	0202	0203	0204													
3 $\begin{matrix} +0.080 \\ +0.030 \end{matrix}$	5 $\uparrow$	$\uparrow$	$\uparrow$		0303	0304	0305	0306											
4 $\begin{matrix} +0.095 \\ +0.045 \end{matrix}$	6 $\uparrow$	0.5	R0.4		0403	0404	0405	0406											
5 $\uparrow$	7 $\begin{matrix} +0.157 \\ +0.045 \end{matrix}$	$\uparrow$	$\uparrow$		0503	0504	0505	0506	0508										
6 $\uparrow$	8 $\uparrow$	$\uparrow$	$\uparrow$			0604	0605	0606	0608	0610									
7 $\uparrow$	9 $\uparrow$	$\uparrow$	$\uparrow$				0705	0706	0708	0710									
8 $\begin{matrix} +0.120 \\ +0.060 \end{matrix}$	10 $\uparrow$	$\uparrow$	$\uparrow$				0805	0806	0808	0810	0812	0815							
9 $\uparrow$	11 $\begin{matrix} +0.193 \\ +0.058 \end{matrix}$	$\uparrow$	$\uparrow$				0905	0906		0910	0912	0915							
10 $\uparrow$	12 $\uparrow$	$\uparrow$	$\uparrow$				1005	1006	1008	1010	1012	1015	1020						
12 $\uparrow$	14 $\uparrow$	$\uparrow$	R0.6					1206	1208	1210	1212	1215	1220						
14 $\uparrow$	16 $\uparrow$	$\uparrow$	$\uparrow$							1410	1412	1415	1420						
15 $\uparrow$	17 $\uparrow$	$\uparrow$	$\uparrow$							1510	1512	1515	1520	1525	1530				
16 $\uparrow$	18 $\uparrow$	$\uparrow$	$\uparrow$							1610	1612	1615	1620	1625	1630				
18 $\uparrow$	20 $\begin{matrix} +0.221 \\ +0.071 \end{matrix}$	$\uparrow$	$\uparrow$							1810	1812	1815	1820	1825	1830				
20 $\begin{matrix} +0.145 \\ +0.075 \end{matrix}$	23 $\uparrow$	$\uparrow$	$\uparrow$								2015	2020	2025	2030					
22 $\uparrow$	25 $\begin{matrix} +0.231 \\ +0.081 \end{matrix}$	$\uparrow$	$\uparrow$									2220		2230					
24 $\uparrow$	27 $\uparrow$	$\uparrow$	$\uparrow$									2415	2420	2425					
25 $\begin{matrix} +0.170 \\ +0.090 \end{matrix}$	28 $\uparrow$	$\uparrow$	$\uparrow$								2515	2520	2525	2530					
28 $\uparrow$	32 $\begin{matrix} +0.290 \\ +0.095 \end{matrix}$	$\uparrow$	$\uparrow$									2820	2825	2830					
30 $\uparrow$	34 $\uparrow$	$\uparrow$	$\uparrow$									3020	3025	3030	3040				
32 $\begin{matrix} +0.215 \\ +0.115 \end{matrix}$	36 $\uparrow$	$\uparrow$	$\uparrow$									3230		3230	3240				
35 $\uparrow$	39 $\uparrow$	$\uparrow$	$\uparrow$									3520	3525	3530	3540				
38 $\uparrow$	42 $\begin{matrix} +0.340 \\ +0.115 \end{matrix}$	2	R0.8									3820		3830	3840				
40 $\uparrow$	44 $\uparrow$	$\uparrow$	$\uparrow$									4020	4025	4030	4040	4050			
45 $\begin{matrix} +0.235 \\ +0.135 \end{matrix}$	50 $\uparrow$	$\uparrow$	$\uparrow$									4520		4530	4540	4550			
50 $\uparrow$	55 $\begin{matrix} +0.430 \\ +0.130 \end{matrix}$	$\uparrow$	$\uparrow$									5020		5030	5040	5050			

