

## deva.tex – self lubricating bearing material

### 1. Structure

Fibres embedded in epoxy resin carrying PTFE as lubricant.

### 2. Characteristics

- maintenance free bearing material suitable for heavy working conditions,
- available as precision bearings made in IT8 (for diameters  $\geq 40\text{mm}$  IT9), and standard IT11,
- custom dimensions available due to the machinable inner and outer layer,
- does not require additional lubrication,
- suitable for high loads,
- very low coefficient of friction and minimal wear in dry working conditions,
- low water absorption,
- suitable for rotating, oscillating and linear motions as well as for micro-motions,
- insensitive to edge loads, impact pressures, vibrations, vacuum and water or aggressive environment.

### 3. Applications

- water turbines, sewage-treatment plants, hydromechanical engineering, agricultural machines, earth moving equipment, railroad vehicles, shut-off valves, chemical industry, apparatus engineering, wind turbines, etc.

### 4. Availability

- cylindrical bushes, plates.

### 5. Technical data

Parameter		Unit	Value
Maximum load	static	MPa	220
	dynamic		120
Maximum sliding speed	dry	m/s	0,3
Maximum p x v factor	dry	MPa x m/s	1,8
Working temperature	maximum	°C	+160
	minimum		-100
Coefficient of friction	dry	-	0,03 – 0,12
	in water		0,03 – 0,12
Surface Ra finish	shaft	$\mu\text{m}$	0,2 – 0,8
	housing		3,2
Fitting	shaft	-	h8, (h7,d7,e7)*
	housing		H7
Shaft hardness		HB	180

\* - for precision applications.

### 6. Working conditions

dry	good
oil lubricated	good
grease lubricated	fair
water lubricated	fair
process fluid lubricated	good

### 7. Assembly tips

Press-fit installation. Supercooling in liquid nitrogen possible for inner diameters above 150 mm. Additional fixture or gluing of bushes is not necessary. Fixture of plates with countersunk screws or shape limits. Additional machining permitted.

