

Feroform T – group of maintenance free bearing materials

1. Structure

- T11** – hardened phenolic resin with natural fibres mixed with graphite,
- T12** – hardened phenolic resin with synthetic fibres mixed with MoS₂,
- T14** – hardened phenolic resin with synthetic fibres mixed without any performance changing additives,
- T814** – hardened phenolic resin with aramid fibres mixed with PTFE.

2. Characteristics

- maintenance free bearing material with high load resistance and dark-olive colour,
- asbestos free,
- specially designed for work in high temperatures (up to 200°C),
- low wear and good bearing properties even in high temperatures,
- lubrication grooves improve bearing performance in lubricated applications,
- resistant to abrasion and chemical corrosion,
- has minimum thermal expansion, absorbs vibrations and is resistant to impact loads,
- manufactured in casting and press moulding technology optimum for many different shapes,
- also available in wide range of semi-products,
- available additives:
 - 1 – oil impregnation, improves run-off, reduces coefficient of friction,
 - 7 – thermal stabilisation, for better performance in high temperatures,
 - 8 – additional MoS₂ in order to provide better run-off in high erosion environment for example. T11.71 – T11 material thermally stabilized and impregnated with oil,

3. Applications

- water turbines, conveyors and worm gears, breweries, chemical, food and beverage industry, paper and textile industry, earthmoving machines, shipyards, pumps, water turbines seals, filtration systems, water desalination and conditioning systems, etc.

4. Availability

- standard range of semi-products:
 sheets – dimensions: 1220 x 1220 mm thickness: 1,6-101 mm
 rods – dimensions: Ø19-111 x 1220 mm
 tubes – dimensions: Ø20-200 x Ø 40-250 x 1150 mm
 tubes – dimensions: Ø200-600 x Ø 260-700 x 1050 mm
 to order: tubes with big dimensions (inner diameter up to 1800 mm),
 to order: assembly ready elements even with complex shape.

5. Technical data

Parameter	Unit	Value				
		T11	T12	T14	T814	
Maximum load	MPa	62	62	65	62	
Maximum sliding speed	m/s	2	2	2	2,5	
Maximum p x v factor	dry	MPa x m/s	0,2	0,23	0,166	0,25
	oil impregnated		0,4	0,43	0,33	0,40
	grease lubricated		0,6	0,63	0,5	0,40
Working temperature	maximum	constant	+100			
		temporary	+120			
Coefficient of friction	dry	-	0,09 – 0,12	0,08 – 0,16	0,13 – 0,18	0,04 – 0,08
	lubricated		0,11 – 0,15	0,11 – 0,18	0,16 – 0,22	0,06 – 0,09
Surface Ra finish	shaft	µm	0,2 – 0,8			
	housing		1,8 – 3,2			
Fitting	shaft	-	h7			
	housing		H7			
Shaft hardness	HB	200				

6. Working conditions

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

7. Assembly tips

- The housing should have a fit-in phase machined.
- The bushes should be assembled with constant pressure without bush torsion.