



Orkot® TXMIM and TLMIM

ADVANCED REINFORCED POLYMERS WITH SOLID LUBRICANTS- AVAILABLE ONLY FROM TRELLEBORG



Orkot® TLM Marine

Orkot® TLM Marine is an advanced, reinforced polymer material incorporating solid lubricants. The material has exceptional wear resistance and virtually no swell in water, providing dimensional stability. Orkot® TLM Marine tolerates edge loading and misalignment even with the heaviest loads.

Orkot® Marine Bearings are installed with an interference fit. Bearings are normally freeze fitted using liquid nitrogen but can be press fitted or resin chocked as required. Where there are extended periods without lubrication, such as upper pintle bearings under light ballast conditions.

Orkot® TXM Marine

Orkot® TXM Marine is an advanced reinforced medium weave polymer material (sometimes called synthetic polymer alloy) using a unique manufacturing process that provides a high concentration of PTFE in the sliding area while maintaining high compressive strength. The PTFE layer is several millimeters thick, making it tolerant to wear, while maintaining its low friction properties throughout the service life of the bearing. The PTFE layer is backed by our well known polymer, Orkot® TLM Marine giving a truly homogeneous bearing material without a metal backing layer. In areas where the running conditions are dry, Orkot® TXM Marine has proved particularly effective in eliminating stick-slip problems normally associated with these operating parameters.

Features

- Ideal replacement for bronze, steel or rubber-lined bushings
- Virtually no swell in water
- High impact strength
- Low coefficient of friction
- High load capacity
- Good chemical resistance
- Operates in fresh or salt water without lubrication
- Damping of vibration
- Accommodation of shaft misalignment
- Ease of machining
- Fitting by pressing, freezing, adhesives and mechanical methods
- Dimensional stability
- Reduced thermal softening and minimal creep
- Does not encourage galvanic corrosion
- Asbestos-free, no environmentally hazardous or toxic substances

Applications

- Marine Bearings
- Stern Tube Bearings
- Rudder Bearings
- Water-Lubricated Bearings
- Greaseless Bearings
- Dry-Running Bearings
- Commercial and Defense
- Deck Machinery
- Strut Bearings and Cutlass Bearings

ORKOT TXMM AND TLMM

Mechanical Properties	TLM Marine metric	TLM Marine inch	TXM Marine metric	TXM Marine inch
Compressive Strength				
Normal to Laminate	300 N/mm ²	43,500 lbs/in ²	280 N/mm ²	40600 lbs/in ²
Parallel to Laminate	90 N/mm ²	13,000 lbs/in ²	90 N/mm ²	13000 lbs/in ²
Tensile Strength	60 N/mm ²	8700 lbs/in ²	55 N/mm ²	8000 lbs/in ²
Flexural Strength	65 N/mm ²	9400 lbs/in ²	65 N/mm ²	9400 lbs/in ²
Shear Strength	80 N/mm ²	1600 lbs/in ²	80 N/mm ²	11600 lbs/in ²
Impact Strength				
Charpy Impact Unnotched Normal to Laminate	120 KJ/m ²	0.079 KJ/in ²	120 KJ/m ²	0.079 KJ/in ²

Mechanical Properties	TLM Marine metric	TLM Marine inch	TXM Marine metric	TXM Marine inch
Hardness - Rockwell M	90	90	90	90
Density	1.3 g/cm ³	0.047 lbs/in ³	1.3 g/cm ³	0.047 lbs/in ³
Swell in water, % of wall thickness	0.1%	0.1%	0.1%	0.1%
Thermal Expansion Coefficient				
20 – 100 °C (per °C x 10⁻⁵)				
68 – 212 °F (per °F x 10⁻⁵)				
Normal to Laminate	9 - 10	5.0 - 5.5	9 - 10	5.0 - 5.5
Parallel to Laminate	5 - 6	2.7 - 3.3	5 - 6	2.7 - 3.3
Sliding Properties				
Typical coefficient of friction running dry against a corrosion resistant surface such as stainless steel.	0.13	0.13	0.05	0.05
Bearing Pressure 15N/mm ² /2175 lbs/in ²				

Orkot® is only available from Trelleborg.

www.orkotmarine.com

For information on Trelleborg's entire portfolio of sealing & bearing solutions please look under



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