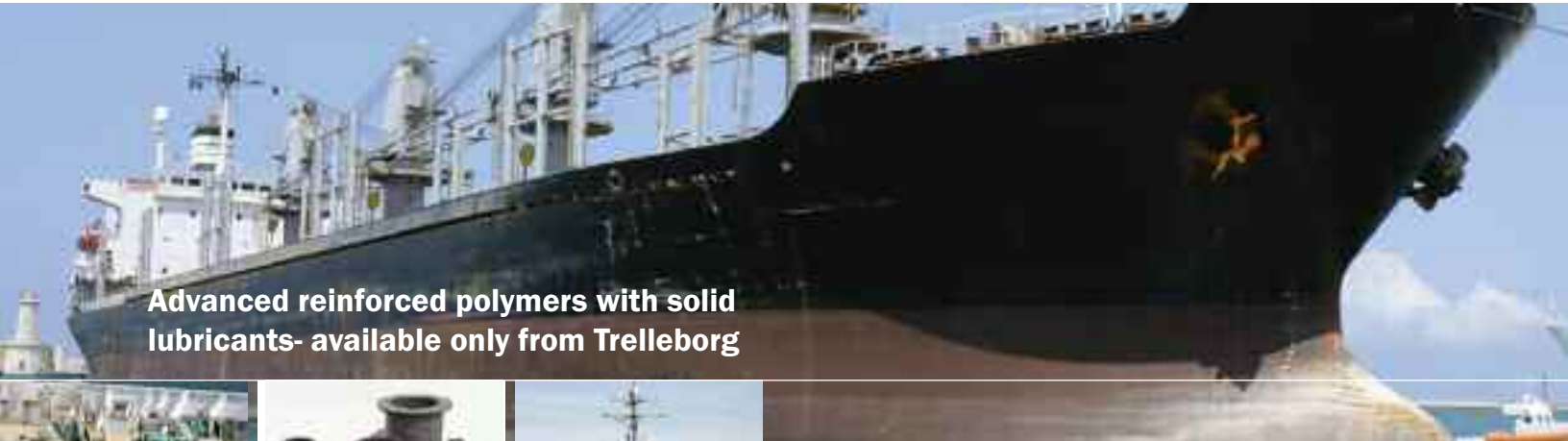


# Orkot® TXMM and TLMM



**Advanced reinforced polymers with solid lubricants- available only from Trelleborg**



## Your Partner for Sealing Technology

### 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

## Mechanical Properties

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

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

**Orkot® is only available from Trelleborg.**

### Trelleborg Sealing Solutions Rotherham

Bradmarsh Business Park  
Rotherham S60 1BX United Kingdom

24 Hour Emergency Line:

Email: [enquiries@orkotmarine.com](mailto:enquiries@orkotmarine.com)  
[www.orkotmarine.com](http://www.orkotmarine.com)

Tel: +44 (0)1709 789 828  
Fax: +44 (0)1709 789 802

+44 (0)1709 789 840

### Trelleborg Sealing Solutions Streamwood

901 Phoenix Lake Avenue  
Streamwood, IL 60107 USA

24 Hour Emergency Line:

Email: [tssusa@trelleborg.com](mailto:tssusa@trelleborg.com)  
[www.orkotmarine.com](http://www.orkotmarine.com)

Tel: +1 (630) 289 1500  
Fax: +1 (630) 289 5434

**+1 (800) 546 7568**

[www.orkotmarine.com](http://www.orkotmarine.com)

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

[www.tss.trelleborg.com](http://www.tss.trelleborg.com)

