



Advanced Composites for the Marine Industry

Composite Polymer Materials

Proven Products for plain sailing

High Performance Marine Bearings

FEROFORM and RAILKO technical composite materials, exclusively manufactured by Tenmat, are widely recognised as the industry standard for demanding bearing applications in critical positions such as the stern tube, rudder, propeller, deck equipment, steering gear, and many other applications. Tenmat bearings offer considerable benefits in terms of performance, price, reliability, design, ease of use and installation.

The innovative Tenmat FEROFORM and RAILKO material grades combine high strength with excellent wear resistance and durability, yielding high performance bearings for all types of service conditions, from the arctic to the tropics, from coastal waters to deep sea conditions.

Tenmat marine bearings are proven to not support biofouling which helps avoid shaft damage – as this limits additional sediment being present between the shaft and bearing. Biofouling can be a huge issue with some other bearing materials especially in tropical waters, or when a vessel is docked for a period of time.

Material Benefits

- Market-Leading Wear Performance
- Does Not Require Clean Water Systems
- Excellent Stability
- Low Noise
- Shaft Friendly
- Accepts Misalignment
- Approved by All Major Classification Societies
- Significant Worldwide Stocks
- Works with All Lubrication Systems
- Easy to Machine, Fit, and Install

Marine Industries

Commercial

Tenmat easy-to-install marine bearings are hard wearing, outliving rubber and thermoplastics. This gives longer operational life and lower operational costs which are ideal characteristics for all commercial ships; Bulkers, Tankers, Panamax, Aframax, Cruise Ships etc.

Applications

- Stern Tube Bearings
- Stave Bearings
- Propeller Bearings
- Rudder Bearings
- Hatch Cover Pads
- Deck Equipment
- Sheave Bearings
- Stinger Rollers and Stern Rollers
- Cargo Pump Bearings

Naval

Over 35 Navies around the world continue to specify FEROFORM and RAILKO bearings for safety critical applications. Our marine bearings have been fitted on a wide range of Naval vessels, including patrol boats, corvettes, frigates, destroyers, submarines and aircraft carriers.

Applications

- Stern Tube Bearings
- Stave Bearings
- Propeller Bearings
- A-Bracket Bearings
- Rudder Bearings
- Steering Gear
- Rudder Stock Bushes
- Pintle Bushes
- Winches and Deck Equipment

Submarines

FEROFORM and RAILKO composite materials successfully absorbs shocks and vibrations. This yields significant reductions in noise and enhances bearing life, even in estuarine waters.

Applications

- Stern Tube, Propeller, Impulsors
- Rudder, Dive Plane, Tiller Bearings
- Aerial, Antenna Hinge Point
- Snort Mast and Periscope Bearings
- Steering Gear Bearings
- Retractable Bollard, Capstan, Winches
- Torpedo Tube Door Bearings
- Main Hatch Bearings

Deck Equipment

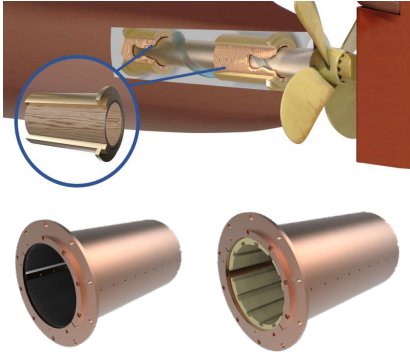
FEROFORM F3637, PR18, and T814 are the ideal choices when replacing metallic bearings with a lubricant free solution. FEROFORM material grades will not seize or pressure weld and avoid the frequent greasing and maintenance inherent to metallic bushes. This makes FEROFORM bushes excellent for safety critical applications like lifeboat davits.

Applications

- Stern Rollers and Stinger Rollers
- Hatch Cover Pads
- Anchor Chain Guides
- Lifeboat Releases
- Cylinder Rod End Bushes
- Cable Layers
- Cutter Head Bearings
- Bow Door Bushes
- High Temperature Load Pads
- Davit, Sheave & Winch

Marine Components

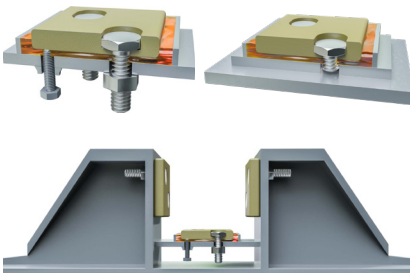
Propeller Shaft Bearings



FEROFORM T12/T14 RAILKO NF21/22

Tenmat Propeller Shaft Bearings provide superior wear resistance and therefore extended operational life and reduced operational costs for the marine market. Tenmat marine bearings offer market leading durability and low noise, even in the harshest conditions without contaminating the aquatic environment.

Tanker Pads

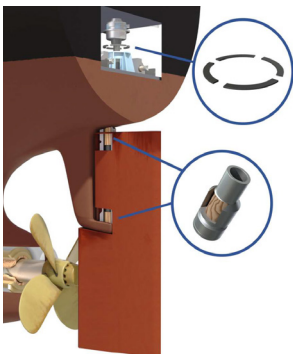


FEROFORM F3637 (High Temperature) FEROFORM F365 (Low Temperature)

FEROFORM F3637 High Temperature Tanker Pads provide superior load bearing and temperature bearing capacity and therefore extended operational life with no maintenance required.

FEROFORM F365 is a tank insulation and support pad designed specifically for LNG and LPG vessels. FEROFORM F365 is a compact support pad that offers advantages during installation and vessel/tank design. Unlike traditional LNG/LPG tank pads, FEROFORM F365 has excellent shear strength qualities that drastically reduces the risk of delamination of the material during temperature changes.

Rudder Bearings & Steering Gear



FEROFORM PR18 RAILKO NF21

Tenmat FEROFORM and RAILKO Bearing Materials are used extensively as rudder bearings and steering gear wear parts. Both FEROFORM and RAILKO composite materials have been used with water, grease, and oil lubricants with excellent results.

Tests confirm that Ferroform and Railko marine bearings have better wear resistance than elastomeric and polyester / polyester bearing materials, thus providing ship owners with up to 4 times longer service life and lower operating costs.

Marine Components

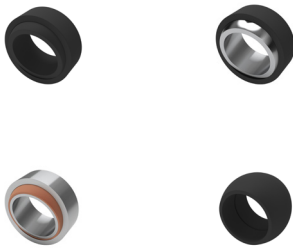
Deck Equipment



FEROFORM PR18 FEROFORM T814

Tenmat FEROFORM composite marine bearings are self-lubricating and can be used for replacing metallic bearings. FEROFORM PR18, and T814 are the ideal choices when replacing metallic bearings with a lubricant free solution. FEROFORM material grades will not seize or pressure weld and avoid the frequent greasing and maintenance inherent to metallic bushes. This makes FEROFORM bushes excellent for safety critical applications like lifeboat davit hooks.

Feroball®



FEROFORM T814

Feroball® is a special designed self-lubricating spherical plain bearing for slow moving/oscillating applications. Feroball® bearings are designed for wet or humid situations, Feroball® bearings are also known for their specific low stick-slip limits. Feroball® spherical bearing are available in full composite (FBA series) and Steel or Stainless Steel (FBT and FBX series).

Feroball® FBT-series (FBT Normal Duty Series and FBT Heavy Duty Series). The Feroball® FBT series is a product made of Feroform T814 and Stainless Steel (1.4404). This combination means that the Feroball® has a superior corrosion resistance against other Cr-Ni steel materials.

The wider Diamorph Group

We also offer the following products within the Diamorph Group:

PERMALI Naval Defence Composites -

- Composite Flight deck nets & Guardrails
- Ballistic protection
- Lift off gates, Ladders & Hatches

Tufnol Resin Materials -

- Stern bearings
- Prop shafts
- Stern tubes bearings
- Bow thruster bearings
- Stave bearings

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Advanced Composites for the Marine Industry



Part of the
Diamorph Group



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