



Proven technologies for water-lubricated Propeller shaft & Rudder bearings.

TENMAT is a leading manufacturer of specialized, high performance, engineering materials and components with over 100 years' of experience.

FEROFORM bearings offer ship owners, shipyards, designers and OEM's considerable benefits in terms of performance, reliability, ease of use, availability and design. They can be supplied in various forms including bushes, fully machined bearings, staves etc.

FEROFORM bearings provide high compressive strength, durability, dimensional stability, and low friction. Their excellent wear characteristics promote long life, especially in arduous abrasive and sand laden waters. Thus reducing maintenance costs for the end users.

FEROFORM T12 Specialist grade for naval applications

FEROFORM T12 is Cured Phenolic Resin Matrix Reinforced with Woven Synthetic fibre Cloth + Molybdenum disulphide.

FEROFORM T12 has strength, durability, dimensional stability, low friction, and excellent wear characteristics. It has the ability to run both dry and wet with water lubrication making it extremely useful in Marine applications for **Stern Tube, A-Bracket and Rudder bearings**.

Performance Properties

- Low bearing and shaftwear (compatible)
- No stick slip at low speeds (2-3 rpm)
- Smooth running of vessels
- Higher vessel speeds
- Low break out torque
- Noise free (stealth operation)
- Less fuel consumption



PROPERTIES	UNITS	T12	T14
Density	g/cm ³	1.32	1.32
Ultimate Compressive Strength	MPa	285	310
Normal Working Pressure	MPa	75	75
Compressive Yield @68.9MPa	%	2.5	2.5
Impact Strength	kJ/m ²	75	55
Shear Strength	MPa	75	85
Brinell Hardness		23	25
% Swell in Water	@ 20 °C	0.3	0.2
	@ 80 °C	1	1
Coefficient of Friction	Dry	0.08-0.16	0.13-0.18
	Wet	0.11-0.18	0.16-0.22
Bond Strength	KN@ 6.4 thick	2.4	2.7
Coefficient of	10 ⁻⁶ /°C normal	70	70
Thermal Expansion	parallel	30	30
Max. Continuous Operating Temp.	°C	100	100
Max. Intermittent Operating Temp.	°C	120	120

FEROFORM T12 is approved by major classification societies and many Navies for ships bearing applications including stern tube, rudder and deck equipment.

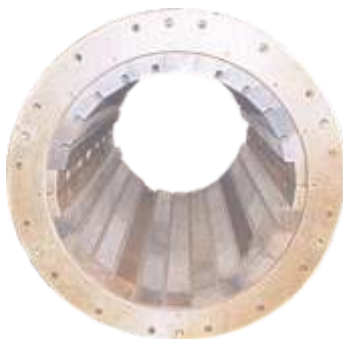
FEROFORM T14 for Commercial Ship applications

FEROFORM T14 is Cured Phenolic Resin Matrix Reinforced with Woven Synthetic fibre Cloth.

FEROFORM T14 has strength, durability, dimensional stability, and excellent wear characteristics and is used in Marine applications for **Stern Tube, A-Bracket and Rudder bearings**.

TENMAT FEROFORM T14 has been developed as a superior water lubricated general purpose wearing and bearing material for many marine and industrial applications. FEROFORM T14 is approved by major classification societies and many Navies for ships bearing applications including stern tube, rudder and deck equipment.

FEROFORM bearings can be supplied as a Full Cylindrical , Split or Stave design Bearings.



Stave Bearing



Full Cylindrical Bearing



**Split Bearing
(Two Halves Bearing)**



FEROFORM T14 BEARINGS

Classification Society Approvals

FEROFORM T Grades marine Bearings are approved by all of the major Classification Societies, including:-

Rudder Bearing

Feroform materials give excellent life when subjected to the small fretting movements associated with rudders and steering gear.

FEROFORM PR18 - Cost Effective Solution for RUDDER BEARING

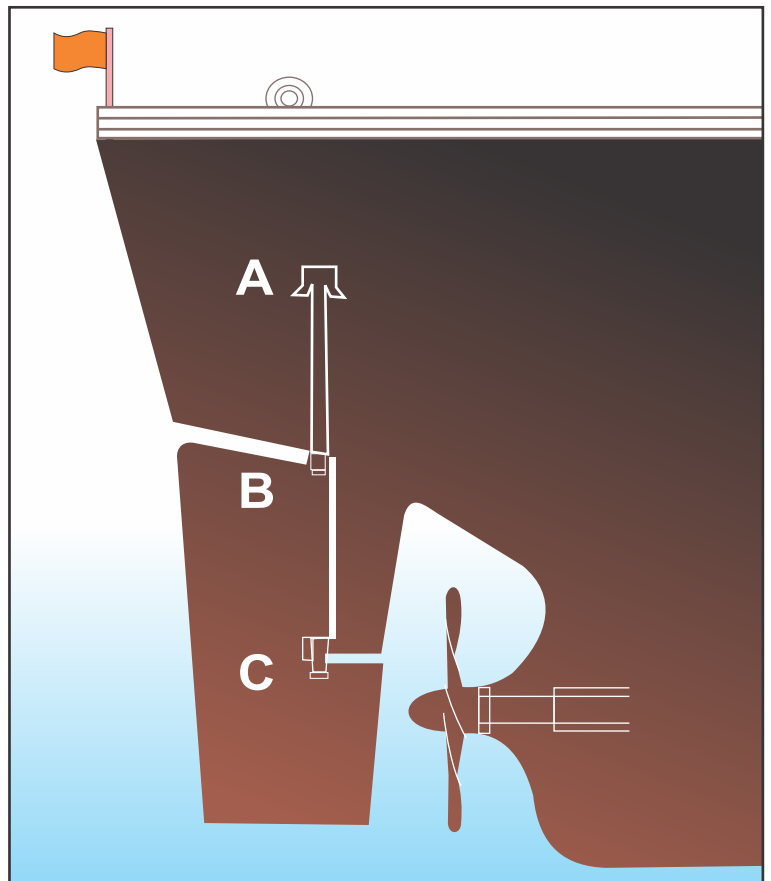
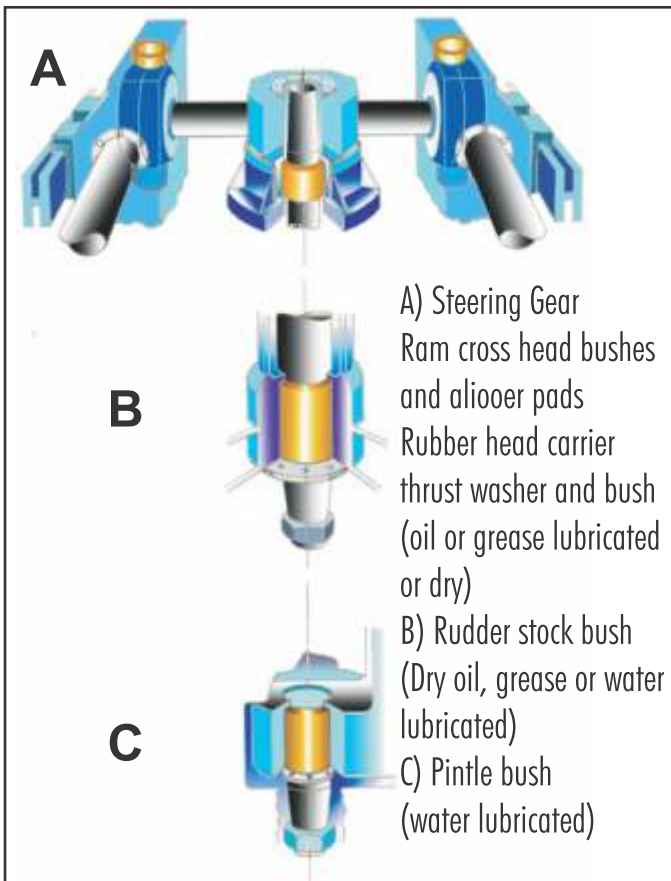
FEROFORM PR18 is a composite material made from Cured Polyester resin Matrix reinforced with Woven Synthetic Fibre cloth + Friction Modifier.

FEROFORM PR18 contains high performance resins and specially selected friction modifiers making it a thermally stable and high wear resistant material.

- Dry running but can also be used with all common lubricants
- Approved by all major classification societies for up to 10 Mpa
- Thermally stable
- Lower operating costs for ship operator
- Reduced bearing length



PROPERTIES	UNITS	PR18
Density	g/cm ³	1.3
Ultimate Compressive Strength	MPa	300
Normal Working Pressure	MPa	75
Compressive Yield @68.9MPa	%	2.5
Brinell Hardness		23
% Swell in Water	@ 20 °C	0.15
Average Coefficient of Friction	Dry Wet	0.08 0.12
Coefficient of	10 ⁻⁶ /°C normal	110
Thermal Expansion	parallel	40
Maximum Continuous	°C	100
Operating Temperature		
Maximum Intermittent	°C	110
Operating Temperature		



Feroform F3637 Tanker Pads

The Feroform Tank Support Pad is a versatile and simple support system for hot tanks carrying bitumen, asphalt, coal tar and sulphur. F3637 has been fitted in 21 tankers over 17 years. F3637 is now the material of choice, replacing traditional materials in both new build and for retrofit purposes.

A reliable and proven system, F3637 can be designed to suit exact customer requirements. To date no F3637 pads fitted over 17 years ago have required in service replacement.

Properties and Benefits

High Temperature Insulation material to 300°C

- Can be in direct contact with tank
- Works with all hot products - sulphur 150°C, asphalt 250°C & coal tar 280°C

Low Thermal conductivity

- Low heat loss from cargo
- Normal steel for hull

High Load Capacity

- Fewer pads required and thus lower costs

Controlled Friction

- Allows tank to expand but controls unwanted movement.

Non metallic

- Pressure welding or corrosion welding is impossible. Tank can always slide.
- No metal path for heat loss

Custom Design—Pads designed to fit your requirements

- Fits to the tank
- Quick fitting method reduces installation costs

Approved by Lloyds, DNV, ABS, NKK, BV, GL class ships



DECK EQUIPMENT

FEROFORM PR14, PR11, PR12, PR814 APPLICATIONS Cranes, Stern Rollers, Hydraulic Cylinders, Davits, Hatch Covers, Anchor Chain Guide Pins, Winches, Bow Doors, Hose Reels, Fairleads, Vehicle Ramps, Steering Gear.

TECHNICAL SUPPORT AND AFTER SALES & SERVICES

AMT Marine have full fledged technical team, who can provide technical support like selection of right grade of bearing, helping bearing design & calculation, providing guidance in installation of bearing and also do fitment of bearing.



MACHINING

AMT Marine have up-to-date machining facility, where we can provide fully machined bearing as per customer requirement and design at short possible time.



OFF THE SHELF DELIVERY

AMT Marine hold a large stock of different grades & sizes of tubes in Mumbai to meet any urgent requirement.



As Used By Over 40 Navies Worldwide.



Agents & Distributors in India

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