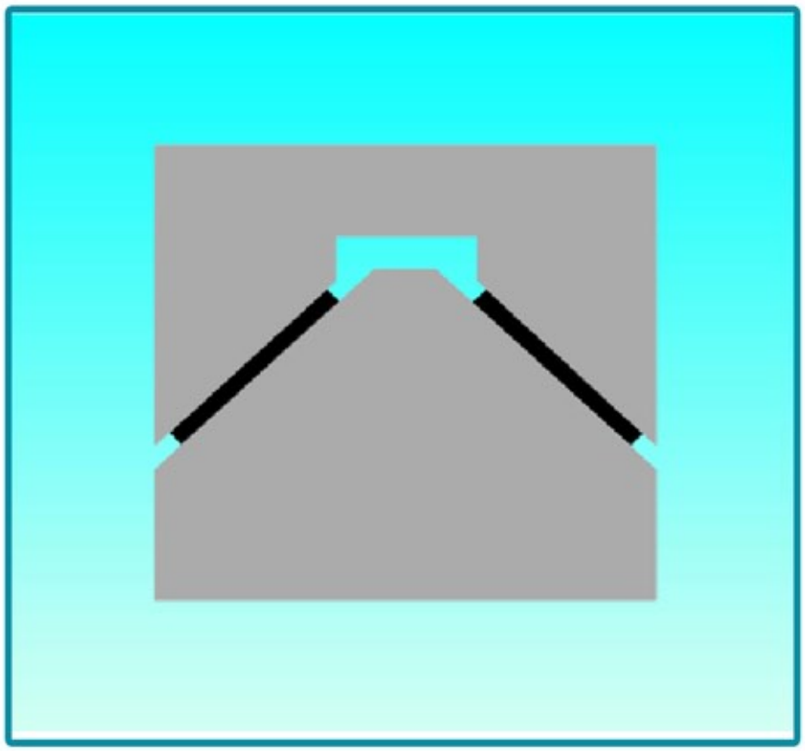
TREXONN

LINEAR BEARING SYSTEM



HINDUSTAN NYLONS

TREXONN

LINEAR BEARING SYSTEM

About Company :

HIndustan Nylons is company with difference. It is new, but the expertise it possesses is not. At the core of company are people, who have knowledge & experience of all aspects of fluorometals - be it engineering and design, manufacture, application or servicing.

We firmly believe on developing new systems to greatly upgrade the conventional systems imparting Total Quality and Maximum Productivity.

This is what, we have undertaken for Heavy Structural fabricators, Civil infrastructure construction contractors, Machine Tools Manufacturers and Re-builders by devotion of skills and efforts.

The result is TREXONN – Linear Slide Bearings, essential for Structures and Machines.

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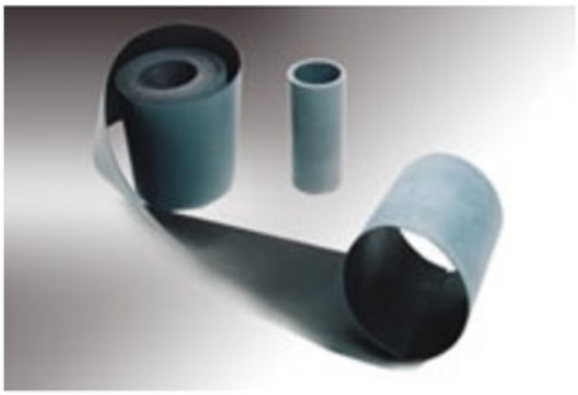
LINEAR BEARING SYSTEM

Concept :

The TREXONN linear slide bearing is employed on structures and Machines for slide bearing applications. The system basically consists of TREXONN Liner fixed on sliding part of structure / machine. This sliding part of machine - moves over stationery part of structure / machine. The system is used in Engineering structures and machines having sliding / reciprocating - Low speed / Low frequency movement.



General properties :

TREXONN is Fluorometal, which is extensively used in Mechanical, Machine Tool Manufacturing industries, Hydraulics and Pneumatics Manufacturing Industries due to its unique characteristics

- ✔ Exceptionally low coefficient of friction.
- ✔ Excellent Wear resistance
- ✔ Outstanding Antistick Nature
- ✔ Pre-eminent Anti-slip Behavior
- ✔ Self Lubricating
- ✔ Remarkably good compressive strength
- ✔ Tough, Durable and Resilient
- ✔ Equal static & Dynamic frictional Behavior

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Working Benefits :

The system imparts unique working advantages, due to outstanding properties of TREXONN.

1. Minimum friction between moving & stationery surfaces, reducing run in time, saving power.
2. Accurate positioning of moving part of Machine with less power.
3. Minimum efforts to slide the moving part while start-up, run and stoppage.
4. No over travel of moving part of machine.
5. Requires no lubrication and eliminates elaborate lubrication system.
6. Shocks and Vibrations free operations to attain maximum accuracy.
7. No sticking up or galling of moving part when idle for time.
8. Machine works more accurately for longer durations.
9. Minimum service intervals.
10. Easy servicing and fast replacement.
11. Smooth and Chatter free travel.
12. Renews worn equipment.

Aggregate Effects :

1. Maximum and Repetitive Accuracy.
2. Improvement in productivity.
3. Ultimate Total Quality.
4. Reduced Operators fatigue.
5. Less production down time.
6. Enhanced useful life of machine.
7. Ease of servicing.
8. Fast replacement.

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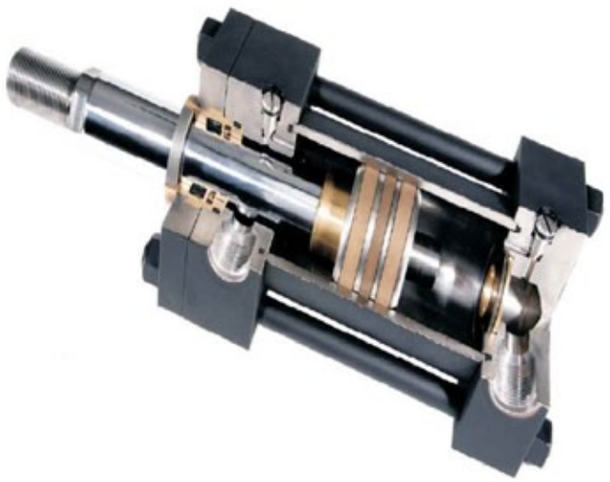
Applications :

- Slideway Liners of machine tools.
- Bridge bearing support, pads, pipe & cable expansion supports.
- Material handling skids.
- Roof Truss support Pads.
- Heavy structure – supports Pads for Heat Exchangers, Reaction Vessels, Boilers, and Storage Tanks.
- Lifts & Elevators, Escalators – Slide skids.
- Hydraulic & Pneumatic actuators Seals.



End User Industries :

- General Purpose, Conventional as well as CNC Machine Tools & Machining Centres – Manufacturers.
- Hydraulic Machinery, Equipments – Manufacturers.
- Pneumatic machinery, equipments, Actuators & Spares Manufacturers.
- SPM Manufacturers
- Injection Moulding Machines, Compression & Transfer Moulding Machines – Manufacturers.
- Manufacturers of Robotic equipments & Transfer Lines.
- Machine Tool Re-conditioners & Repairers.
- Machines having sliding / low speed / low frequency – reciprocating movement.

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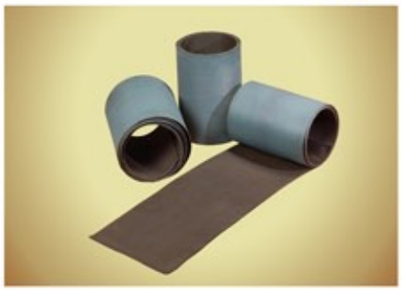
LINEAR BEARING SYSTEM

Product Range : Types and forms



1. Types :-
   - Standard (TBR–4) – For General purpose, low sliding frequency, low and medium Load applications
   - Heavy duty (TBR–6)– For high sliding frequency, Heavy Load applications.
   - Virgin PTFE For Bridge Bearing Applications.

2. Forms :-
   - For Machine Tools Applications – Linear slide bearings is available in forms of liners of different thicknesses – 1.0, 1.5, 2.0, 2.5 & 3.0 mm and standard width of 305 mm. (Non Standard forms available on request.)
   - For Structural applications – Slide Pads in different thicknesses – 3 / 4.5mm onwards, in different sizes, with or without Dimples.

3. Colour :-
   - One side Olive Green, Other side Bondable Dark brown / Black.
   - For Non adhesive applications such as Hydraulic and Pneumatic Seals, Colour: Both side Olive Green/ Brown.
   - For Structural applications- one side white, other side bondable- brown.

Performance Guarantee :

- ✔ TREXONN – Linear Slide Bearings are manufactured strictly in accordance with Quality Management System, right from input upto output.
- ✔ The physical properties of Raw Material as well as finished product are tested at Inhouse Laboratory and put to use for performance testing on Inhouse machines.
- ✔ Trexonn – Linear Slide Bearings are manufactured in Technical Association from Isocomp Technologies, Australia and samples / specimens are regularly sent for testing to Principle.
- ✔ The company is certified ISO 9001:2008 and performance of Trexonn – Linear Slide Bearings is fool proof and absoulutly fail safe.

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Fittment Method :

1. The TREXONN – Liners have been chemically treated on one side & is ready for adhering to the correctly prepared metallic surface.

2. Preparation of Metallic Surface-
   A. The metal surface can be prepared with normal machining methods like Grinding, Milling, Shaping, planning, Scraping, Polishing and having ultimate surface roughness between Ra= 1.6 to 6 µ.
   B. Any depressions, dents, pores on metal surface should be covered, filled with epoxy based adhesives & polished.
   C. The metallic surface as well as liner surface should be cleaned by only following cleaning agents.
      1. Trichloroethylene 2. Per Chloroethylene 3. Acetone
      Caution: Petrol, Diesel, Kerosene should not be used as cleaning agent.

3. Gluing
   A. Adhesive – ARALDITE
   B. The Araldite should be applied to both metallic surface and pretreated – black side of TREXONN liner uniformly. The due care should be taken while spreading the Araldite on metallic surface in longitudinal direction (Perpendicular to sliding direction) While on TREXONN liner in Transverse direction (Parallel to sliding direction)
   C. Adhesive Quantity: 0.200 kg per sq. M.

4. Fitment: The metallic surface and TREXONN liner may be exposed to air for two minutes for accelerating the curing & subsequently the TREXONN liner may be kept on metallic surface from one end & then slowly up to other end.

5. Curing: During curing, the constant clamping pressure of 200 gm /cm² may be applied for 24/48 hours.

6. Finishing – After curing TREXONN liner can be finished by conventional finishing mediums like Grindstone & Polish papers.

Grindstone:.....	Grinding Medium:	SIC	Polish Papers:.....	Medium:	Electro-coated SIC
	Grain size:	46		Grain size:	240
	Roughness:	G		Roughness:	P
	Structure:	16			
	Binder:	Ke			

Caution: The Best performance of TREXONN system is dependent on bonding strength between metallic surface & liner. Hence any deviation w.r.t. under noted matters shall result in poor bonding & leading to premature failure of total system

a. Surface roughness of metallic surface.
b. Cleaning Agents
c. Method of Application of glue.
d. Exposure of treated surface of liner to light should be strictly avoided.
e. Cleaning Agents - not to be applied to treated surface of Liner.

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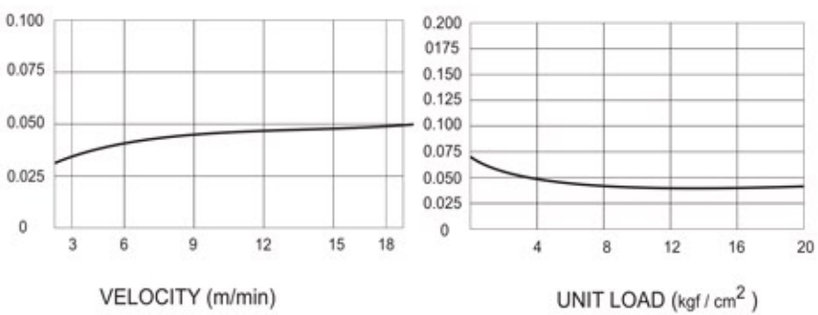
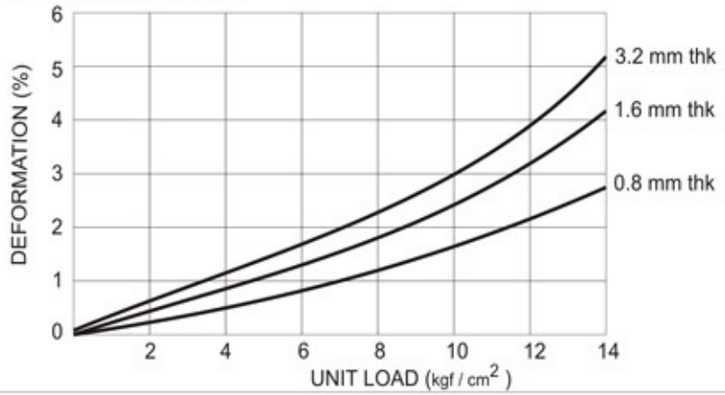
Physical Properties of MoC - Trexonn

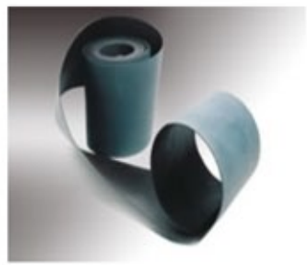
PROPERTY	UNIT	TEST METHOD	VALUES	
			Standard (TBR - 4)	Heavy Duty (TBR - 6)
01. Density	gm/cc	A S T M - D - 792	3.1	3.9
02. Tensile Strength	kgf / cm^2	A S T M - D - 638	140	125
03. Elongation	%	A S T M - D - 638	150	125
04. Compressive Strength	kgf / cm^2	A S T M - D - 695	90	120
05. Deformation Under Load (Permanent)	%	A S T M - D - 621	6	4
06. Hardness	Shore - D	A S T M - D - 2240	64	70
07. Heat Resistance	^{o}C	A S T M - D - 648	-250 to + 250	
08. Limiting PV Value	kgf / cm^2 x mm/s	T y p e	400	600
09. Abrasion Resistance / Wear Rate	gm/s	A S T M - D - 137	0.1	0.1
10. Dynamic Coefficient of Friction	—	A S T M - D - 1894	0.1 to 0.14	0.1 to 0.14
11. Chemical resistance : Excellent resistance to known Petroleum based oils, Greases, Coolants, Cleaning agents up to 250^{o} c.				

12. a. Coefficient of friction (u)



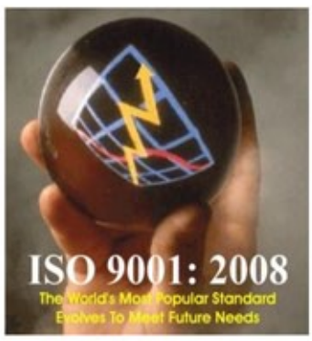
12. b. Deformation Under Load





QA Quality Assurance

Notes: Data quoted are average value & should not be used for design purpose.
Physical Properties of white Virgin PTFE may be referred at www.hindustan-nylons.com



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ISO 9001 - 2008

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