



Advanced Composites for the Rail Industry

Composite Polymer Materials

Advanced Engineering to keep you on track

Why choose Tenmat Wear?

Tenmat Wear have been designing and manufacturing industry leading products, which are now considered to be the industry standard, for over 100 years. Tenmat Wear not only manufactures standard train bearings and wear parts, but also bespoke solutions to operate in specialised applications within the passenger, freight and locomotive industries.

Tenmat Wear is the only company worldwide that can produce genuine RAILKO and FEROFORM materials which have the major advantage of Tenmat Wear's reinforced composites.

RAILKO and FEROFORM are widely recognised as the industry standard for demanding applications within the railway industry and are the preferred choice for safety-critical wear parts on freight wagons. Tenmat Wear have been leading the development of materials and products used for railway bearings and wear parts in the rail industry for over 100 years and all materials are approved by all major railway authorities and OEMS.

Benefits

- Market-Leading Wear Performance Proving Long Service Life
- Easy Installation
- Lightweight
- High Temperature Resistant
- No Corrosion
- Full Protection for Diverse Train and Bogie Parts
- Fully Certified to EU Fire Safety Regulation EN 45545
- Increased Safety via Superior Load Bearing Capacity
- Approved by all Major Rail OEMs and Authorities
- Low, Controlled Friction Levels
- Lower Operational Train Noise
- Increased Safety via Superior Load Bearing Capacity
- High Dimensional Stability for Improved Efficiency
- Components Designed, Tailored to Your Exact Needs

The Rail Industries we supply

Freight

Tenmat Wear's RAILKO NF21 is the only material specified in all types of freight wagons including coal hopper wagons, oil tankers, salt/silt/ aggregate wagons, heavy-duty wagons and dangerous chemical tankers.

RAILKO NF21 and NF22 grades have a resin-bonded composite structure with added friction modifiers to give controlled friction. This grade has been developed as a high performing wearing and bearing material, with uses in many industrial applications as it offers low wear and friction rates.

Passenger

RAILKO and FEROFORM are considered to be the industry standard for railway bearings, wear parts and components worldwide and specified by all major passenger railway OEMs for use in high-speed trains, intercity commuter trains, metros, trams and light rail.

Typical Highly-Demanding Applications Include:

- Gangway tread plates
 - Anti-roll bar bushes
 - Tilting system bearings
 - Brake system bushes
 - Current collector bushes
 - Train coupler bearings
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Light Rail

Tenmat Wear high-performance train bearings are lightweight and widely used by all leading rail manufacturers in demanding applications such as suspension bushes, suspension washers, centre pivot plates, side sliding plates and engine coupling washers. RAILKO and FEROFORM materials excel in very difficult working environments, even in high salt and dust concentrations along coastal lines and in an arid desert.

Tenmat Wear components give full protection to vital parts in trains, helping to maintain high efficiency and performance levels across the lifetime of a train.

RAILKO Components



RAILKO NF21 Centre Pivot Liner (CPL)

Tenmat Wear's RAILKO CPL's are recognised as the best-performing, longer-lasting replacements for steel and thermoplastic wear parts. Specified by major wagon owners due to their excellent performance you can find RAILKO NF21 CPLs across all types of freight wagons including coal hopper wagons, oil tankers, salt / silt / aggregate wagons, heavy duty wagons and tankers for hazardous chemicals.



RAILKO NF21 Side Bearer Liner (SBL)

Tenmat Wear's RAILKO NF21 fully UIC approved Side Bearer Liners are installed onto the sides of the freight bogie to provide support to the car body. SBL's significantly improve train safety, as they are dimensionally stable and do not creep, being resistant to both water swell and thermal expansion.



RAILKO NF21 Hook Guide Plates

The reinforced matrix structure of RAILKO NF21 withstands even the most abrasive of environments. RAILKO NF21 Hook Guide Plates are corrosion-free and self-lubricating, meaning they provide complete protection to the expensive draw hook.



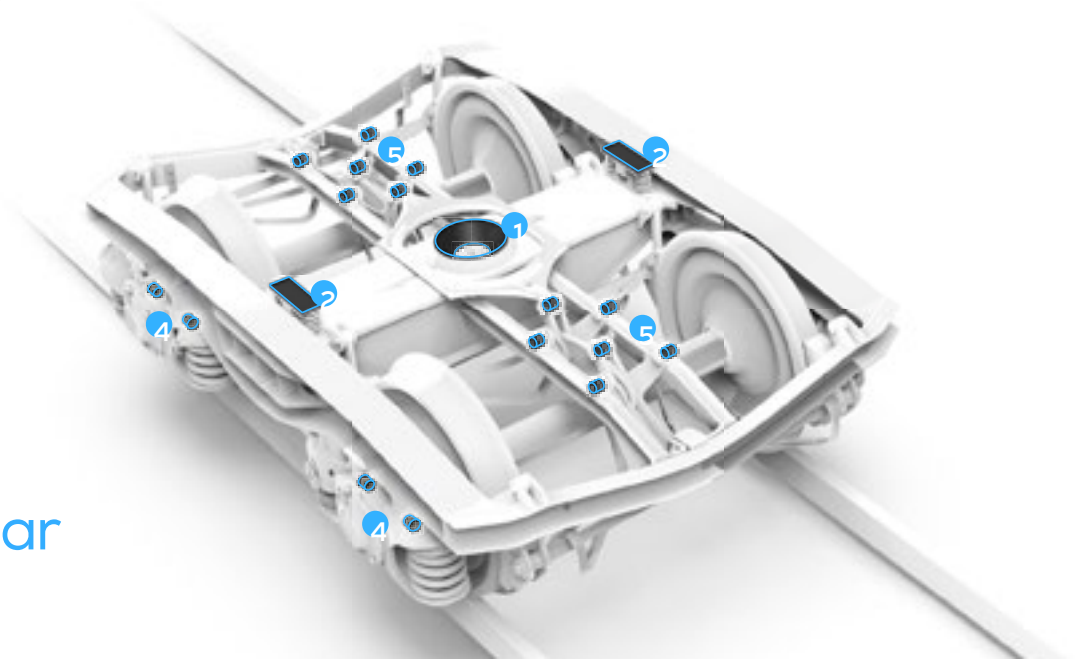
RAILKO RG15 Friction Damper Bushes

RAILKO RG15 has been specified as the guide bush for friction dampers used in Y type freight bogies. Easy to install, durable Railko RG15 Friction Damper Bushes absorb large impacts to provide complete protection to the bush housing against costly ovalisation. The use of RAILKO RG15 bushes avoids any risk of seizing and allows a tighter running clearance with the pin resulting in a longer service life.



RAILKO NF22 Brake Bushes

RAILKO NF22 reinforced composite bushes provide protection to pins, shafts and housings against costly wear. The RAILKO NF22 Brake Linkage Bushes have a very low water swell and thermal expansion, which enables tighter running clearances and longer bearing life.



RAILKO Freight Spare Parts List



Part Name		Drawing No.	Tenmat Wear Drawing No.	Dimensions	Quantity Per Bogie	
	RAILKO NF21 Centre Pivot Liner	2FWG000.04.077.041 287M125540012 UIC 3.00.04.108.8	70636 MOD19	8 x 180 x 332 mm	1	
	Centre Pivot Liner Fitting Tool		EMS 7031		1	
	RAILKO NF21 Upstand Centre Pivot Liner	SNCF REF 02_3002 072	EMS 6295	110 x 342 x 6mm	1	
	RAILKO NF21 Side Bearer Liner	UIC 3.00.04.84 3FWG106.0.09.082.019 387M1255 0017	56106 Mod 3 55560-1 53739-3	8 x 100 x 339 mm	2	
	(4a) Upper	7.504.4223 187M1255 025 FWG106.0.04.082.017	EMS 6698	89 x 100 x 380 mm	2	
	(4b) Lower	0.502.9080 FW8653.04.082.01.0 187M12550025	EMS 6699	96 x 77 x 100 mm	2	
	RAILKO NF21 Hook Guide Plates	4FWG000.05.003.012 4FWG000.05.003.011 3FWG489.0.05.003.003	N/A	12 x 70 x 210 mm 12 x 70 x 220 mm 12 x 60 x 210 mm	1	
	RAILKO RG15 Friction Damper Bush	10-4023 743	N/A	55 x 71.5 x 43.8mm	4	
	(8a) Y25 Bogie Kit	N/A	EMS 5621	25 x 33 x 12 mm	16	1 Set Per Bogie
				25 x 33 x 33 mm	16	
				25 x 33 x 16 mm	6	
				25 x 33 x 50 mm	3	
				25 x 33 x 20 mm	16	
				25 x 33 x 60 mm	3	
	(8b) Y33 Bogie Kit	N/A	EMS 5529	25 x 33 x 12 mm	8	1 Set Per Bogie
				25 x 33 x 33 mm	8	
				25 x 33 x 16 mm	2	
				25 x 33 x 50 mm	2	
				25 x 33 x 20 mm	8	
				25 x 33 x 60 mm	2	
				37 x 45 x 30 mm	2	
				31 x 40 x 16 mm	8	
				37 x 45 x 16 mm	4	
				61 x 72 x 40 mm	8	
				31 x 40 x 30 mm	4	

All parts are in stock and available for immediate dispatch.

Please enquire directly to rail@tenmatwear.com for all other requests for spare parts.

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Advanced materials.
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Tenmat Wear warrants the materials it produces will conform to Tenmat Wear specifications and approved drawings where applicable. It is entirely the customer's responsibility to make the final product choice and satisfy themselves of the suitability of the product for the intended application, carrying out testing where required. For construction projects, all products which the customer is intending to use on a particular project must be approved in writing by the customer's building designer, system designer or design control professional, to ensure compliance with the latest regulations.

The information contained in Tenmat Wear data sheets is presented in good faith. The values are "typical only" and are based on test results generally in accordance with BS2782, ASTM, a variety of other main test bodies along with Tenmat Wear internal test methods. These values should not be relied upon for specification purposes or the primary selection of materials. As the data sheet values are typical only, Tenmat Wear does not warrant the conformity of its materials to these properties or the suitability of its materials for any particular purpose. It is the responsibility of the customer to do the necessary testing and satisfy themselves the product is suitable for the intended application.

