



KELSAN® Solid Stick
Friction Management

SECTOR

Rail

KELSAN® Solid Stick Friction Management by **LB**Foster®

KELSAN® Solid Stick friction management solution by L.B. Foster is the world's leading system for reducing wear at the wheel/rail interface.

The KELSAN® system is a 100% dry, on-board, self-regulating solution for passenger and freight rail environments.

Consisting of hardware applicators and friction management consumables all from the same original equipment manufacturer, L.B. Foster, the KELSAN® Solid Stick friction management solution is available for:

- > Wheel flange lubrication
- > Top of rail/wheel tread treatment.

For more detail on the solution benefits, please contact us to discuss your specific requirements.



Reputation

Proven history from the original and industry leading designer, developer, manufacturer and supplier of patented Solid Stick friction management solutions.

15m+

Sticks sold
worldwide

40+

Countries

500+

Rail Companies

50,000+

Rail vehicles

Hardware

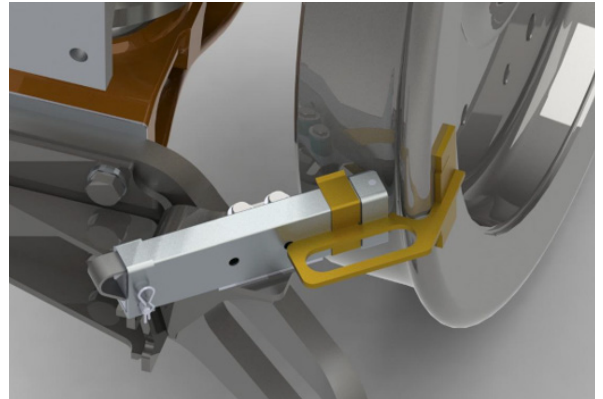
KELSAN® Solid Stick friction management solutions are individually designed for each vehicle application.

Technical specialists trained and familiar with multiple vehicle types design and test each system to meet the exacting needs of the on-board rail environment. All designs are supported with 3D modelling and robust Finite Element Analysis (FEA) replicating real-world forces, vibration and other physical effects before systems are fitted to vehicles.

Solid Stick friction management solutions are applied via a vehicle mounted, spring loaded applicator and bracket assembly, which intelligently applies friction modifier to the wheel when it is needed, providing a constant thin-film that delivers excellent network protection.

Applicators can be designed to suit system or vehicle maintenance intervals.

All hardware in Europe is manufactured and accredited to EN15085.



Consumables

KELSAN® Solid Sticks have several distinctive characteristics that make them the preferred choice of rail system operators.



Each stick includes a patented interlocking feature to ensure continuous product application and minimal waste.



KELSAN® Solid Sticks are non-toxic, non-flammable and flame-resistant to meet strict environmental standards and are safe for use on subterranean railways.



Wheel Flange Lubrication

KELSAN® LCF (Low Coefficient of Friction) Solid Stick Lubrication System

KELSAN® LCF Solid Sticks are specifically designed to reduce wheel flange wear.

The system provides consistent lubrication to the wheel/rail interface throughout the entire railway system and is safer, cleaner and more reliable than alternative oil-based systems.

Product application is optimised through by self-regulation. Excessive stick wear is avoided as consumption only occurs when the lubricant is consumed in the curve.

The product's intrinsic thermosetting properties ensure no migration to the railhead and prevent the stick from melting under high temperatures.

Top of Rail / Wheel Tread Treatment

KELSAN® HPF (High Positive Friction) Solid Stick On-Board Friction Modifier

The HPF Solid Stick system is an on-board friction modifier designed to reduce corrugation, noise and tread wear.

The HPF material creates a micron-thin film layer between the wheel tread and the top of rail, providing a controlled friction level of 0.35 at the wheel/rail interface.

Application of HPF helps to control wheel squeal noise and reduce the onset of short pitch corrugations after grinding.

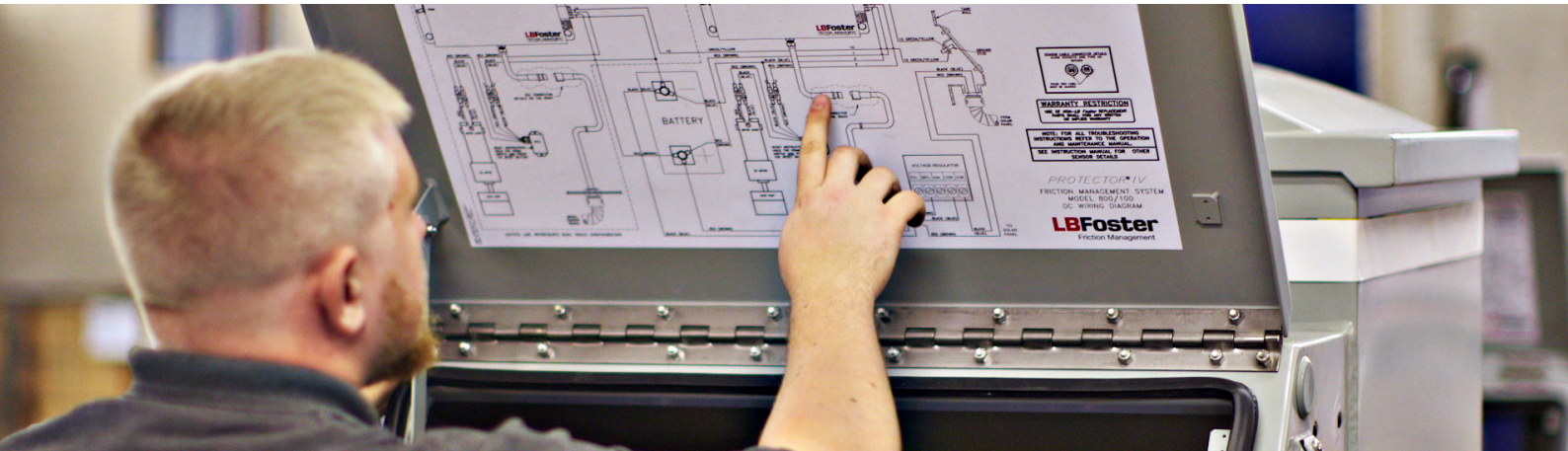
Unlike traditional lubricants, such as oil and grease, HPF has no detrimental impact on braking or traction.

BENEFITS

- > Extends wheel flange and rail life
- > Reduces energy consumption
- > Reduces risk of low-speed derailments
- > No effect on traction or braking
- > Environmentally clean and safe
- > No reduction in performance at high speed.

BENEFITS

- > Reduces short pitch corrugations
- > Reduces rail replacement costs
- > Reduces lateral forces by 30-50%
- > Reduces energy consumption
- > Environmentally clean and safe
- > No reduction in performance at high speed.



The L.B. Foster Europe business is a UK headquartered €45m division of L.B. Foster Company, Pittsburgh PA, USA.

The European business employs in excess of 280 people, across seven locations.

Other solutions from L.B. Foster Europe include:

- > **Control & Display Systems** for rail, power and transport applications
- > **Automation & Materials Handling** for automotive, food & beverage and manufacturing applications
- > **Telecoms Services and Solutions** for rail and non-rail
- > **Asset Management Software Solutions** for all market sectors.

L.B. Foster

2000+

Employees

\$500m

Sales

30

Production sites

50

Countries

L.B. Foster Europe

280

Employees

€40m

Sales

7

Office locations

2

Countries

Your contacts



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