

FLEXIBILITY, ACCESSIBILITY, VALUE

Kelsan® Solutions ARE RICH IN FEATURES AND TECHNOLOGY THAT DELIVER POWERFUL FRICTION CONTROL SOLUTIONS

WHY KELSAN® ?

- Kelsan®, with over 100 satisfied customers, has a proven track record of providing effective and reliable solutions.
- Our products are produced under tight quality control governed by our ISO 9001:2000 certification.
- We have in-house R&D and field technicians including several PhD's and certified engineers that are constantly improving existing products and creating innovative new products.
- Kelsan's dedicated design engineering and production team use FEA analysis software to produce locomotive and customer specific delivery systems.
- Kelsan has a combined experience of over 110 years in solid stick systems.

COMPLETE FRICTION CONTROL SOLUTIONS

Kelsan Technologies is not simply a product supplier. We are dedicated to providing our customers with comprehensive cost effective friction control solutions.....sustained solutions.

Our engineers partner with customers, freight locomotive and original equipment manufacturers to identify system challenges, measure baseline data, establish mutually acceptable performance criteria, and deliver pertinent solution. Kelsan's professional technical staff provides engineering services for product installation, systems maintenance, and long-term customer care. Following installation, Kelsan offers training seminars for vehicle and track personnel, and we conduct periodic after-sales system checks to ensure that system benefits are sustained.



EXCLUSIVE TECHNOLOGY PROVIDERS

Proprietary technology is the foundation of Kelsan's success. Our research and development team is constantly adding and improving its product line in order to continue bringing leading-edge friction control solutions to our freight customers.

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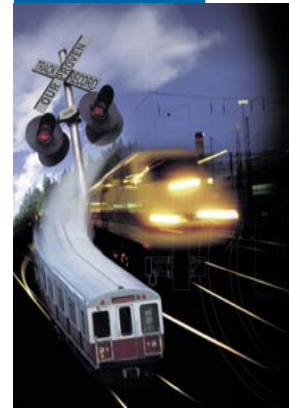
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For more information, please call:
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KELSAN TECHNOLOGIES CORP.

INNOVATIVE ThinFilm FRICTION CONTROL



Kelsan® Freight Locomotive Solution

OnBoard Freight Locomotive Gauge Face Lubrication System

Kelsan® LCF Solid Stick Gauge Face Lubricant

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Why Kelsan® LCF Freight?

Kelsan® LCF is a 100% dry, on-board, solid-stick lubricant that provides superior lubricity compared to traditional lubricants. Kelsan® LCF has achieved documented wheel flange wear rate reductions and energy savings. It will NOT migrate to the Top of Rail, or contaminate ballast, track structure, or vehicle equipment. Kelsan® LCF, has been specifically designed to maintain a clean environment while extending wheel/rail life and reducing energy consumption and operating costs. The effectiveness of this product is well-documented, supported by third-party references, and recognized globally.



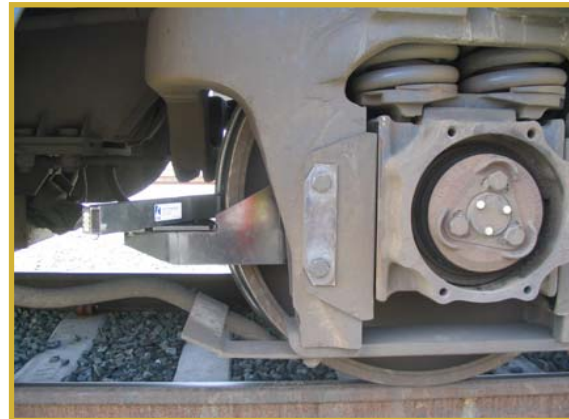
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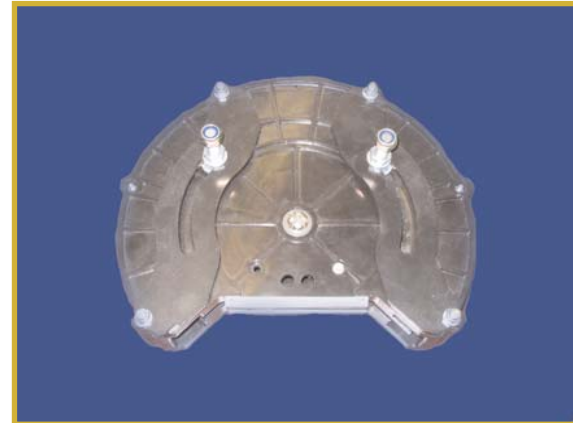
ENERGY SAVINGS

The unique properties of Kelsan® LCF, and the reliability advantages of Kelsan's on-board application system combine to deliver a highly effective energy savings solution. Independent tests at TTCI show an average of 10-12% in energy savings. Kelsan® LCF reliably provides these savings by using sticks that are consistent from beginning to end. Kelsan® LCF maintains a smooth lubricated wheel flange which reduces the drag resistant of locomotives.

- Excellent return on investment
- 10-12% energy savings at the TTCI
- Excellent product transfer rate supported by many studies



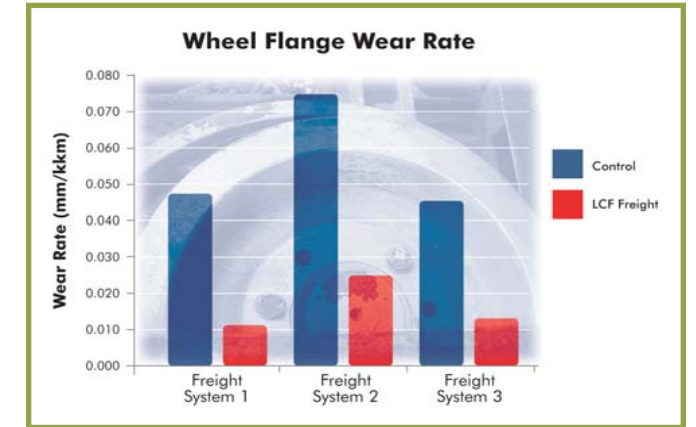
Application: Kelsan® LCF Sticks are applied directly to the Wheel Flange by vehicle mounted brackets & spring loaded applicators.



EXTEND WHEEL FLANGE LIFE

The unique properties of Kelsan® LCF, and the reliability advantages of Kelsan's on-board application system combine to deliver a highly effective wheel wear management solution. Although wheel wear rate reductions will vary from system to system, on average, freight customers can expect to dramatically extend flange life.

- Extend wheel life by reducing flange wear
- Extend wheel profiling intervals
- Decrease the risk of low-speed derailments
- Increase vehicle availability



ENVIRONMENTALLY SAFE

Independent testing confirms that Kelsan® LCF is safe for the environment and is much cleaner than grease and oil. The polymer characteristics are selected to ensure no migration from the flange to the top of the rail. The sticks are non-flammable and dry. They do not attract contaminants.

- Does not migrate to rail head
- Non-flammable
- No effect on traction or braking
- Cleaner depot
- Cleaner trains

ADDITIONAL PRODUCT FEATURES

- 5 times longer service intervals than closest competitor
- Extend Rail Gauge Life
- Low Capital Cost
- Ease of Maintenance
- High Reliability
- Does not melt under high operating temperatures
- Interlocking Sticks
- Unmatched expertise in wheel/rail friction control
- ISO 9001:2000 Certified

Ease of Maintenance: Kelsan® LCF

Interlocking sticks nest into each other for a seamless transition from stick to stick. In addition, Kelsan® LCF sticks are available in a variety of shapes and sizes.

