



TECHNICAL DATA SHEET

Whitmore® TSFM Thread Stick Friction Modifier

Whitmore TSFM is a top-of-rail friction modifier (TOR FM) that is specifically designed to provide an optimum coefficient of friction at the wheel-rail interface. Whitmore TSFM substantially reduces wheel tread wear, TOR wear, and noise. Wear to the wheel tread and top-of-rail can lead to the onset of corrugations and result in increased rail grinding.

During normal rolling, Whitmore TSFM utilizes mild lubricating properties, however, when wheel creep occurs, the sliding friction immediately converts to “positive friction.” During this conversion, friction levels reach approximately 0.42 between the wheel tread and top-of-rail. This consequently controls the creep condition and returns the wheels to a healthy rolling motion. The result is a substantial reduction in creep forces, which reduces the onset of corrugations and high-frequency squealing.

Whitmore TSFM can be utilized alone or on a dual bracket with Whitmore FSL. The products are typically applied using spring-loaded applicators that prevent cross-contamination. Whitmore TSFM & Whitmore FSL perform very dissimilar functions, therefore, each has a unique size/shape with corresponding applicators to eliminate improper application.

BENEFITS:

- NOISE LEVELS – Stops or substantially reduces high pitch TOR squeal
- WEAR - Reduces or eliminates creep, hunting (also known as yaw), and corrugations.
- CORRUGATION – Delays the onset of corrugations, resulting in decreased rail grinding
- BRAKING – Does not affect braking or tractive effort
- QUIET - Smoother, quieter ride for transit customers.
- CLEAN - Provides clean and dry on-board friction modification.
- INTERLOCK - Whitmore® TSFM includes a round interlocking feature to prevent Nib fallout
- POSITIVE FRICTION - Increases friction on contaminated areas of track
- LOW CONSUMPTION – 1" / 2500 Miles, 25mm/4000km
- CONDUCTIVITY – Does not interfere with electrical conductivity at the wheel-rail interface

APPLICATIONS:

Whitmore TSFM optimizes friction at the wheel/rail interface. It is designed for rail transit vehicles and track machinery but is suitable for other industrial applications requiring control of friction.

NOMINAL CHARACTERISTICS	
Coefficient of Friction	0.18 to 0.42
Wear Rate	1" per 2500 Miles, 25mm per 4000km
Appearance	Opaque, Dark Grey Solid
Quality Standards	Determination of burning behavior: ISO 4589-2:2017 Smoke generation: ISO 5659-2:2017 Environmentally Safe: Non-GLP Fish Toxicity
Surface Hardness, ASTM D2240	84-85 Shore "D"

Limited Warranty: <http://www.whitmores.com/pdf/warranty.pdf>

930 Whitmore Drive • Rockwall, Texas 75087 • USA • (972) 771-1000 • 800-699-6318 whitmores.com