General	
Manufacture	The product is manufactured under an ISO 9001:2015 quality control regime.
Composition	The product is a water-based friction modifier consisting of an engineered composite of inorganic solids, polymers, and other additives.
Classification	This product does not meet the classification criteria for an OSHA hazardous substance (29 CFR 1910, Subpart Z) in the USA.
Packaging	Available in: • 10 L pail (Only available in Europe and UK) • 19 L (5 US gallon) pail • 1000 L Returnable Tote  
Storage	Store within warehouse at a temperature between 5°C (41°F) and 35°C (95°F). Avoid exposure to heat sources such as direct sunlight. Keep containers sealed to prevent water loss.
Shelf Life	This product has a limited shelf life. When stored in accordance with the above recommended conditions, this product has a shelf life of 24 months from the date of manufacture.
Safety & Environment	
Environment	The product has low mobility and is not expected to bioaccumulate.
Ecotoxicity	Currently not available.
Air Quality	The product is stable and non-volatile.
Fire Safety	The liquid product is non-flammable.
Thermal Regulation	Not Applicable
Physical Properties	
Appearance	Thixotropic gel with dark grey color
Odour	None
Miscibility	Miscible with water, not miscible with oil or grease
Density, g/cm^3 at 25°C	1.07 – 1.09
pH	9 - 10
Freezing Point	- 6°C (21°F)
Viscosity, cP at 25°C *Brookfield Viscometer with RV6 Spindle at 70 rpm*	4,200 – 5,050
Application & Performance	
Friction Coefficient	• Intermediate friction coefficient (0.3 – 0.4) for dried thin film coated onto top of rail. • Positive friction characteristic.
Application	Recommended application to top of rail using Portec Rail wayside PROTECTOR® Top-of-Rail application system. When applied, the product leaves a dry Thin Film on the top of rail. The thin film is transferred to train wheels. The product provides friction control at the wheel/rail interface and is intended for use in targeted curve locations in transit systems.
Regulation	The application rate of the product is adjustable by PROTECTOR® Top-of-Rail digital controller.
Contamination	After water evaporation a dry film remains which does not attract or hold dirt or other contaminants.
Performance Validation	The primary product performance purpose is to reduce curve noise, corrugation development and RCF. Product performance is supported by wide range of successful case histories and detailed technical reports.