



Shell GadusRail S3 Wheel Flange Grease 2

- Outstanding Protection
- Highly Reduced Friction
- Lithium/Calcium

Top Tier Semi-Synthetic Wheel Flange Grease

Shell GadusRail S3 Wheel Flange Grease 2 is a lithium/calcium soap grease which allows better protection specifically in wet and other harsh conditions. The advanced amount of solid additives and specifically tested combination in addition to a specifically formulated multipurpose additive package make it the best in class of our railroad track lubricants. Its outstanding friction reduction and long lasting protection has been proven in extensive field trial on test tracks. This grease can also be used in applications in construction, mining and agricultural equipment.

DESIGNED TO MEET CHALLENGES

Performance, Features & Benefits

• Features

GadusRail S3 WF 2 is one of the next generation of wheel flange greases designed to provide wear protection at the rail / wheel interface on tangent and curved track. It is formulated with a specialized dual soap thickener (LiCa) and a combination of mineral and synthetic components to provide excellent wear protection, load carrying capacity and mobility over the entire operational temperature range. It is the complementary product to GadusRail S3 WF1 (arctic conditions). This two-grease system covers an ambient temperature range from -40°C up to, and in excess of 60°C rail temperatures. The solids content facilitates sliding contact at the rail wheel interface. It is formulated with performance additives that enhance track adhesion and carry for optimum lubricator placement.

Shell GadusRail S3 Wheel Flange 2 has been designed to improve the lubricity and durability of the grease under the challenging track conditions including high curvature rates, steep grades and high ambient temperatures. It is designed to perform in moderately cold to hot ambient temperatures and provides a wide transition window for pairing with its complementary product, GadusRail S3 WF 1 to provide an optimized all-season solution for rail operators.

• Benefits

- Outstanding wear protection demonstrated in field conditions
- Excellent load carrying capacity and extreme pressure and shock loading protection.

- Suitable for use in a variety of automatic lubricators. Gadus S3 Wheel Flange Grease has an expanded temperature range that allows Rail operators to supply grease to the track reliably.
- Formulated to minimize oil separation and accumulation in the lubricator.
- Designed for optimal consumption rates and performance on the rail.
- Excellent adherence to the rail under adverse track and weather conditions.

Main Applications



- The application of high performance wheel flange lubricants provides wear reduction and efficiency benefits. The GadusRail S3 WF products provide these benefits in combination with logistical advantages over other seasonal change and all-season solutions.
- Shell GadusRail S3 Wheel Flange Greases are specially formulated to meet the pumpability, adhesion, and load carrying requirements of a track lubricant. Additionally, Shell GadusRail S3 Wheel Flange Greases are formulated to perform well when used on any equipment subjected to conditions of high loads and temperature extremes and provide excellent resistance to rust and corrosion.

Specifications, Approvals & Recommendations

- Shell GadusRail S3 Wheel Flange Greases are specifically designed to perform well in all conventional railroad trackside and/or wheel/flange lubrication systems designed to handle greases, including lubricators made by KLF Lubriquip (formerly Madison-Kipp), Bijur, Portec and Moore and Steele.

For a full listing of equipment approvals and recommendations, please consult your local Shell Technical Helpdesk.

Typical Physical Characteristics

Properties	Method	Shell GadusRail S3 Wheel Flange Grease 2
NLGI Grade		2
Appearance		Dark Grey, Tacky
Soap Type		Lithium/Calcium
Solid Lubricant	minimum	6
Base Oil Viscosity	@40°C cSt	IP 71 / ASTM D445 220
Penetration worked	0.1mm	ASTM D217 265-295
Dropping Point	°F (°C)	IP 396 min. 356 (180)
Rust Protection		ASTM D1743 Pass
Oil Separation (18 hrs)	%m maximum	IP 121 3
Four Ball Weld Load	kgf minimum	ASTM D2596 250
Four-Ball Wear (1 hr, 1200 rpm, 40 kgf)	@75°C mm maximum	ASTM D2266 0.6
Four Ball Load Wear Index		ASTM D2596 50
Timken OK Load	lbs	ASTM D2509 35
Copper Corrosion	24h @ 100°C maximum	ASTM D4048 1
Mobility	g/min	USS DM 43 2.1
Low Temperature Flow Pressure	mbar maximum	DIN 51805 1 400
Guide to Usable Temperatures	°F (°C)	Min -22 (-30)
Guide to Usable Temperatures, Continuous Service	°F (°C)	Max 270 (132)

These characteristics are typical of current production. Whilst future production will conform to Shell's specification, variations in these characteristics may occur.

Health, Safety & Environment

• Health and Safety

Shell GadusRail S3 Wheel Flange Grease 2 is unlikely to present any significant health or safety hazard when properly used in the recommended application and good standards of personal hygiene are maintained.

Avoid contact with skin. Use impervious gloves with used oil. After skin contact, wash immediately with soap and water.

Guidance on Health and Safety is available on the appropriate Safety Data Sheet, which can be obtained from <https://www.epc.shell.com>

• Protect the Environment

Take used oil to an authorised collection point. Do not discharge into drains, soil or water.

Additional Information

- **Product Maintenance**

Trackside and wheel lubricators require routine maintenance for proper long-term operation. Seals must be kept in good condition to prevent leakage.

- **Advice**

Advice on applications not covered here may be obtained from your Shell representative.