



SHELL ALVANIA[®] GREASES WFX

Wheel-flange railroad greases

Product Description

Shell Alvania[®] Greases WFX 0, 1 and 2 are lithium soap greases fortified with a specifically formulated multipurpose additive package for use as railroad track lubricants. These greases may also find applications in construction, mining and agricultural equipment.

Application

The frictional forces developed by steel train wheels on the rail combined with the steering forces exerted by the rail rubbing against the wheel increases energy consumption and accelerates the wear of both wheel (tread and flange) and rail. This can be a serious problem, particularly for railway systems operating heavily loaded unit trains or those having numerous curves.

Shell Alvania[®] Greases WFX are specially formulated to meet the pumpability, adhesion, and load carrying requirements of a track lubricant. Additionally, Shell Alvania[®] Greases WFX 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. Shell Alvania[®] Grease WFX 0 is especially suited for severe cold weather operations.

Features

Shell Alvania[®] Greases WFX are lithium soap thickened greases made with highly refined base oils, a special EP additive package and 3% molybdenum disulfide. The molybdenum disulfide acts to enhance anti-wear and load carrying properties, which are critical for the transport of railcars over the track. A highly shear stable tackifier improves grease adhesion to track surfaces and helps prevent oil bleeding. These greases also offer good resistance to the mechanical shear associated with trackside lubricator operation. Shell Alvania[®] Grease WFX 1 has shown to be very pumpable and to carry especially well on the track in cold weather. It is suitable for cold weather (winter) applications. Shell Alvania[®] Grease WFX 2 has been designed to improve the lubricity and durability of the grease under the conditions imposed by hot weather. It is suitable for warm weather (summer) applications. Shell Alvania[®] Grease WFX 0 was designed for maximum pumpability and ease of handling under extreme cold conditions.

Benefits

- enhanced wear protection of wheels and track
- excellent heavy and shock load protection
- excellent adherence to track even under adverse weather conditions
- suitability for a variety of track and wheel lubricator systems
- special formulation to reduce product loss at the application site

Approvals and Recommendations

Shell Alvania[®] Greases WFX 0, 1 and 2 are suitable for 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. Though all three greases can be used for winter and summer applications, Shell Alvania[®] Grease WFX 1 is recommended for use in cold weather because of its excellent pumpability. Shell Alvania[®] Grease WFX 0 is recommended for extreme cold weather applications. It has been formulated for maximum pumpability and ease of handling under such conditions. Shell Alvania[®] Grease WFX 2 is best suited for warm weather applications.

Product Maintenance

Trackside and wheel lubricators require routine maintenance for proper long-term operation. Seals must be kept in good condition to prevent leakage and lubricator nozzles should be kept clear so that they apply the correct spray pattern.

Typical Properties of Shell Alvania® Greases WFX

| | Test Method | 0 | 1 | 2 |
|----------------------------------------------------|-------------|-----------|-----------|------------------|
| Code No. | | 71207 | 71040 | 71041 |
| NLGI Grade | | 0 | 1 | 2 |
| Appearance | | Dark Gray | Dark Gray | Dark Gray, Tacky |
| Lithium Soap, wt% | | 4.0 | 6.0 | 6.0 |
| Molybdenum Disulfide, wt% | | 3.0 | 3.0 | 3.0 |
| Base Oil Viscosity @40°C, cSt | D 445 | 68 | 168 | 220 |
| @100°C, cSt | D 445 | 7.9 | 15.6 | 15.0 |
| Penetration, dmm Unworked | D 217 | 375 | 330 | 270 |
| Worked, 60X | | 370 | 325 | 270 |
| Dropping Point, °F | Mettler | 385 | 385 | 385 |
| Rust Protection | D 1743 | Pass | Pass | Pass |
| Copper Corrosion | D 4048 | 1b | 1b | 1b |
| Timken, OK Load, lbs | D 2509 | 30 | 30 | 30 |
| Four-Ball EP Load Wear Index, kgf | D 2596 | 46 | 46 | 46 |
| Weld Point, kgf | | 250 | 250 | 250 |
| Four-Ball Wear, mm 1 hr, 75°C, 1200 rpm, 40 kgf | D 2266 | 0.4 | 0.4 | 0.4 |
| Guide to Usable Temperatures Min, °F | | -40 | -30 | -20 |
| Continuous Service, Max, °F | | 250 | 250 | 250 |
| Short Exposure, Max, °F | | 350 | 350 | 350 |

Safety & Handling Information

Shell Alvania® Greases WFX 0, 1 and 2 are considered to be practically non-toxic by either ingestion or dermal contact. No special precautions are required beyond good personal hygiene practices. Repeated or prolonged contact should be avoided. For information on the safe handling and use of these products, refer to their Material Safety Data Sheets at <http://www.shell-lubricants.com/msds/>. If you are a Shell Distributor, please call **1+800-468-6457** for all of your service needs. All other customers, please call **1+800-840-5737** for all of your service needs. Information is also available on the World Wide Web: <http://www.shell-lubricants.com/>.