

Product Data Sheet



BIORAIL®

HIGH-PERFORMANCE RAIL LUBRICANT

BioRail high-performance rail curve grease is formulated from 100% biodegradable vegetable oils, combining superior lubrication with environmental responsibility.

In wayside systems, BioRail forms a vertical bead that is easily picked up, carrying through multiple curves and creating a visible coating on the gauge face for easy inspections. This grease often leads to reduced consumption as it empties evenly from the holding tank, preventing the formation of a “V” shape and minimizing pump cavitation. Unlike some vegetable-based products, BioRail remains pumpable and does not plug ports.

Extensively tested on Class 1 freight railroads in the United States, BioRail has proven its effectiveness under the most demanding conditions worldwide. Field experience demonstrates that its carry-down capability, rail coating, and wear protection are equal to Whitmore’s non-biodegradable rail curve greases.

BioRail - sustainable, efficient, and reliable rail lubrication



HIGH-PERFORMANCE RAIL LUBRICANT



APPLICATION:

- Suitable for lubrication of rail curves
 - Protects the gauge face and wheel flanges
- Bearings
- Wire ropes, particularly in ecologically sensitive areas

BENEFITS:

- **BIODEGRADABLE** - all grades are classified as “Readily Biodegradable”.
- **NO HAZARDOUS COMPONENTS** - the non-oil components are partially biodegradable and nonhazardous.
- **NOISE REDUCTION** - especially valuable in urban areas.
- **ADHESIVE AND COHESIVE** - excellent track carry down, reducing the number of wayside lubricators.
- **WIDE TEMPERATURE RANGE** - the need for seasonal product grade changes is eliminated in many areas.

| ASTM # | TYPICAL CHARACTERISTICS | | | |
|-----------------|---|-------------------|-------------------|-------------------|
| | Grade | EP 1 | EP 1.5 | EP 2 |
| D-217 | Penetration (Worked) | 310-340 | 285-315 | 265-295 |
| D-2265 | Dropping Point, °F (°C) | 400 (204) | 400 (204) | 400 (204) |
| D-445 | Base Oil Viscosity cSt @ 40°C cSt @ 100°C | 57.5 | 57.5 | 57.5 |
| | | 11 | 11 | 11 |
| D-2270 | Viscosity Index | >150 | >150 | >150 |
| Gardener Method | Density, lb/gal @ 60°F (15.5°C) | 8.85 | 8.82 | 8.89 |
| | Specific Gravity, g/cc @ 60°F (15.5°C) | 1.060 | 1.057 | 1.065 |
| D-2596 | Four Ball EP, Weld Point, kg | 500 | 500 | 500 |
| D-2266 | Four Ball Wear, Wear Scar mm | 0.60 | 0.68 | 0.68 |
| | Coefficient of Friction | 0.075 | Not Tested | Not Tested |
| | Operational Temperature Range (on the rail) | -25 to 175 °F | -27 to 185 °F | -22 to 195°F |
| | | -32 to 80 °C | -33 to 85 °C | -30 to 90 °C |
| | Thickener Type | Calcium Sulfonate | Calcium Sulfonate | Calcium Sulfonate |
| FTM 321.2 | Screen Bleed, % | 4.46 | 4.10 | 3.14 |
| | MITI Test OECD 301B | Pass | Pass | Pass |

The above are average values. Minor variations which do not affect product performance are to be expected in normal manufacturing

Learn more
whitmores.com/products/biorail-ep





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