

TECHNICAL DATA SHEET

Matrix 460SFX™ Product Overview:

- Full synthetic semi-fluid 00 EP grease featuring an advanced aerospace/synthetic design for all season and is energy-efficient. **Fulfills TMC RP 631, 631A, 631B Technical & Maintenance Counsel – Recommended Practice for Wheel End Lubrication regarding Truck & Trailer (non-drive) Axle Hub application.** Formulated with a specific combination of Lithium Complex Extreme Pressure Grease, PAO Full Synthetic ISO 460 Gear Lube and sophisticated additive package, providing a premium protection system that reduces wear and prevents damage. These advanced extreme pressure additives provide superior protection and performance in shock loading applications.
- **PERFORMANCE** excels within bearing contact surfaces and seals with high temperature durability, cooler operation temperatures providing reduced friction and long lasting benefits. Tacky makeup “coats” surfaces, with cleaner component performance to increase overall component lifecycles.
- **ALL SEASON PROTECTION** includes water resistance, anti-corrosion, anti-oxidation, and cold flow -40°C (-40°F) for both hot and arctic (all weather) conditions; safe for Modern OEM Grease Seal applications.

Commercial Applications & Use:

- Truck Trailer Axle Hubs, Truck Steering Axle Hubs (non-drive), Truck Wheel Axle Hubs (non-drive).
- Primary semi-fluid 00 EP synthetic grease premium product design and formulation; application uses as outlined for a semi-fluid grease within the **TMC RP 631 (Technology & Maintenance Counsel Recommended Practice) of the American Trucking Association.**
- **SPECIAL NOTE:** To insure performance, use MATRIX 460SFX™ 100% only with FACTORY CLEAN PARTS (bearings, spindle, axle hub assembly and seals). **PREVENT CROSS-CONTAMINATION:** Do not mix Matrix 460SFX™ with other grease or gear lubes, even if it is the same Lithium or PAO, as this affects product's specific chemical balance. **Follow OEM factory fill and volume directives.**

Features & Benefits:

- Matrix 460SFX™ 28 oz heavy-duty caulk tube applicator enables technician to quickly and accurately fill axle wheel end (hub) with proper amount of semi-fluid grease (OEM state: 40% min to 50% MAX = 4 & 8 o'clock fill level).
- Over or under greasing is virtually eliminated, which improves safety and can help prevent premature seal, bearing and component failure. **CONSULT OEM TECHNICAL DIRECTIVE FOR FILL AMOUNT.**
- Lithium complex thickener and aerospace FULL synthetic PAO base fluids (gear lube) provides stability and staying power in all operating and ambient temps with ability to lubricate and protect bearings to -40C.
- Combining stay-put power of a grease and mobility of a gear lube to maximize service and component life.
- **Thixotropic to reduce leakage** relative to gear oils and is naturally tacky to adhere to metal surfaces.
- **GREATLY REDUCES wheel seals from leaking**, which pose a threat to brake shoes, increased maintenance costs and compromise the safety of the truck, trailer and most important – the driver.
- **PROTECTS** bearings while preventing rust and corrosion on critical wheel end (hub) components as a result of using high quality anti-wear and extreme pressure additives.
- **SHOCK LOAD PROTECTION** (Shock loading can lead to rupture of the oil film and cause metal-to-metal contact—a major cause of severe wear.) Matrix 460SFX™ EP additives coat and react with the surface to reduce or even prevent the damage that leads to worn surfaces.

Limited Liability Warranty Terms & Conditions:

- **CONSUMER-COMMERCIAL NOTICE:** Read and understand Matrix 460SFX™ product Limited Liability Warranty, Conditions & Coverage before use. Matrix 460SFX™ Limited Liability Warranty document describes in greater detail technical directives regarding product application, installation, and warranty terms. NeoBrake Systems, Inc. stands behind its manufacturing and use. **Any warranty claims are 100% the responsibility of NeoBrake not that of the distributor, dealer, or retail outlet.**

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Product Cross-Reference/Direct Replacement:

- Shell Renitax® Grease TL 00 - Trailer Wheel & Hub Lube PN 70460 (Lithium Complex/PAO 460)
- Mobilith SHC 007 00 - Synthetic Grease ISO 460 PN GPHC00K-30 (Lithium Complex/PAO 460)
- AMSOIL GSF - Semi-Fluid 00 Synthetic EP Grease (Lithium Complex/PAO 460)
- Castrol SHL 00 - Semi-Fluid EP Grease PN 464309 (Lithium Complex/PAO 460)
- Chevron Delo SF - Semi-Fluid PN 235253 (Polyurea*/PAO 130) *Does not mix w/Lithium Complex

When a Semi-Fluid 00 EP Grease Product has a PAO Base Oil (Viscosity Index) of ISO-460, historic performance shows improved component durability as the premium choice for TMC RP 631.

Typical Properties of Matrix 460SFX™:

NLGI Grade	00
Color	Red
Structure	Smooth
Thickener	Lithium Complex
Worked Penetration@77°F	
60 strokes	D 217.....400-430
10,000 strokes, % change	D 217.....<9
PAO Base Fluid Viscosity	ISO-460 PAO
cSt @ 40°C	D 445.....420-502
cSt @ 100°C.....	D 445.....20-38
Pour Point °C (°F)	-40°C (-40°)
Dropping Point °C (°F)	D 2265 246°C (475°F)
Corrosion Protection,	
5% Synthetic Sea Water.....	D 1743 ModifiedPASS
Copper Corrosion.....	D 40481b
Timken OK Load, lb.	D 250951
Four-Ball EP, Load Wear Index.....	D 259648
Four-Ball EP, Weld, kg	D 2596210
Guide to Usable Temperature	
Min °C (°F).....	-40°C (-40°F)
Continuous Service, Max °C (°F)	177°C (350°F)
Short Exposure, Max °C (°F)	233°C (450°F)

Matrix 460SFX™ May Contain:

- Solvent refined highly-finished paraffin base oils, polyalphaolefin, synthetic base oils, lithium complex thickener, tackiness agents, including the following CAS#: 64742-54-7, 64742-65-0, 64741-88-4I, 64742-62-7.

Handling & Safety Information:

- Matrix 460SFX 100% Pure Synthetic Semi-Fluid 00 EP Grease produces no adverse effects to personal health when properly handled and used based upon toxicology information.
- No special handling requirements are necessary beyond good personal hygiene, including but not limited to, washing skin contact areas with soap and water and cleaning oil soaked clothing.
- Additional information on safe handling and use of this product, refer to its Material Safety Data Sheet at www.NeoBrake.com.

If you are a NeoBrake Systems, Inc. distributor, please call (414) 764-4211 for service needs. All other customers please contact your local dealer. Additional information is available at NeoBrake.com.