# HARMFUL RUST AND CORROSION?

DAMAGED EQUIPMENT?

COSTLY REPAIRS?

FS HAS PREMIUM GREASE PRODUCTS
FOR YOUR TOUGHEST CHALLENGES

SPECTRA LUBE...



Fuels | Lubricants | Knowledge | Service

# ON-ROAD OR OFFEDADOAD

# WEKEPYOUR MACHINERY MORING

## Improved Load-Carrying Capability (EP/AW)

Dynamic film formation under heavy-load conditions when combined with high temperatures is a primary performance requirement from modern lubricating greases.

**Benefits:** Extended equipment life, reduced equipment downtime, increased operational efficiency

## Increased Oxidation Resistance

Resistance against oxidation is a key property when temperatures get elevated.

**Benefits:** Longer service periods at high temperatures, reduced wear, extended re-greasing intervals, reduced grease consumption

## Enhanced Rust and Corrosion Protection

Protecting equipment from rust and corrosion requires continuous utilization of grease components during idle and running periods.

**Benefits:** Protection against corrosive salt and acidic environments, extended spare part storage life, maintenance costs savings

## Improved Water Resistance and Surface Adhesion

Formation of an ideal lubricating and protective film under continuously wet working conditions is made possible with a polymer fortified functional grease matrix.

**Benefits:** Increased equipment reliability in wet environments, extended re-greasing intervals, reduced grease consumption

### FS SPECTRA LUBE® GREEN SEMI-SYNTHETIC #2

PREMIUM EP/AW, HIGH-PERFORMANCE, MULTIPURPOSE, WATER-RESISTANT GREASE

FS Spectra Lube Green Semi-Synthetic #2 is an overbased calcium sulfonate complex grease formulated with a semi-synthetic base oil blend. The overbased thickener allows for rapid neutralization of acidic, corrosive contaminants. FS Spectra Lube Green features exceptional mechanical stability; very high load-carrying ability; and excellent resistance to water, oxidation, and corrosion.

High-temperature performance is outstanding, and low-temperature pumpability is excellent. With its wide range of performance attributes, FS Spectra Lube Green can replace multiple greases and remove the potential for misapplication or incompatibility with other products.

FS Spectra Lube Green Semi-Synthetic #2 is formulated to meet high performance requirements and provide safe operation under severe conditions.



Heavy-duty and specific applications in mining, construction, and agriculture. Specific applications include farm and earthmoving equipment, bucket pins, kingpins, anti-friction bearings, and automotive chassis and wheel bearings.

Marine (inland waterways and off-shore) applications, including underwater, on-deck equipment, and wire-rope lubrication. A wide application temperature range makes this product the single suitable choice for long-distance marine vessels traveling between arctic and tropic sea routes.

Steel mill roller bearings, particularly in areas of elevated temperatures, shock loading, and high levels of water exposure (e.g., cold mill rollers), from medium to high speeds.

Bearings from medium to high speeds that are exposed to hot air, dust, and moisture under elevated operating temperatures. These are commonly found in textile, cement, paper, and chemical processing industries, and its excellent water and corrosion resistance makes this grease a first choice.

Corrosive environments found in chemical plants, deep sea and land oil drilling sites, fertilizer plants, and water pumps where the bearings are continuously exposed to aggressive atmospheric conditions.

Long-term rust-preventive applications for spare-part storage.

Fifth-wheel lubrication to extend the fifth-wheel life, which provides the extension of axle components and rear-wheel bearing life of the trailer by reducing the possibility of misaligned trailer load and over-vibration during cruising.

#### **BENEFITS & FEATURES**

Superior film strength and corrosion resistance for long-term equipment reliability

Excellent shock load-carrying capability and enhanced extreme-pressure/anti-wear (EP/AW) performance for extended bearing life under extreme-load conditions

Higher film strength and improved resistance against oxidation due to its synthetic-based structure

Increased load-carrying capacity

Outstanding rust-protection performance\*

Improved low-temperature working characteristics

Extends re-lubrication intervals to provide savings from reduced grease consumption

Carries NLGI's highest automotive chassis and wheelbearing lubricant classification, GC-LB

#### **GRADE AND PACKAGING**

FS Spectra Lube Green Semi-Synthetic #2 is available in 120-lb kegs, 35-lb pails, 16-oz tubes.

\*The specially formulated corrosion-inhibiting compound makes equipment last longer by not only protecting against the harmful effects of seawater exposure, but also by providing protection from other aggressive corrosive environmental conditions. These very severe atmospheric conditions routinely occur when airborne particles from on-site processes react with humid air to increase the alkalinity or acidity of the working environment. These super-corrosive environments are commonly found in the mining, oil drilling, steel, food processing, and aggregation industries and surprisingly can often be more aggressive to equipment components than even marine environments.





# FS SPECTRA LUBE® RED PREMIUM EP/AW, LITHIUM COMPLEX, HEAVY-DUTY GREASE

FS Spectra Lube Red is a high-quality lithium complex lubricating grease formulated with an advanced extreme-pressure/anti-wear (EP/AW) package for use in extreme-pressure and high-temperature operating conditions. Its wellbalanced additive-thickener structure provides superior protection against water, rust, and corrosion for prolonged equipment life. FS Spectra Lube Red features a high dropping point in excess of 500°F and exhibits superior corrosion resistance, load-carrying ability, and compatibility with other greases. It is smooth textured with a tacky consistency and features a red color.

FS Spectra Lube Red is a multipurpose product suitable for farming, mining, and construction industries. It is ideal for garages that perform maintenance on trucks and automobiles.



Long-haul truck and heavy-duty fleets for extended service intervals

Agricultural, automotive, and industrial chassis and wheel bearings

Roller bearings, wheel bearings (with disc and conventional brakes), universal joints, ball joints, kingpins, sliding surfaces, bucket pins, ball bearings, needle bearings, anti-friction bearings, and similar applications

Sliding applications

Bearings working under wet, moderate- to hightemperature, and heavily loaded conditions

#### **BENEFITS & FEATURES**

Enhanced film strength with special anti-wear and extreme-pressure additive system.

Well-balanced corrosion protection and load-carrying capability for extended bearing life.

High-temperature dropping point.

Pumpability in wide temperature ranges.

High mechanical stability provides prolonged relubrication intervals such as for bearings that are continuously running under heavy loads and elevated temperatures (e.g., truck wheel bearings during longdistance hauling).

Carries NLGI's highest automotive chassis and wheelbearing lubricant classification, GC-LB.

#### **GRADE AND PACKAGING**

FS Spectra Lube Red is available in NLGI No. 2 and packaged in 400-lb drums, 120-lb kegs, 35-lb pails, and 14-oz tubes.

Also available in NLGI No. 1 and packaged in 120-lb kegs, 35-lb pails, and 14-oz tubes.







### FS SPECTRA LUBE® BLUE

#### PREMIUM EP/AW, ALL-SEASON, MULTIPURPOSE GREASE

FS Spectra Lube Blue is a premium polyurea-thickened lubricating grease formulated with a high-quality base oil, antioxidants, corrosion inhibitors, and extreme-pressure/anti-wear (EP/AW) and other additives. It features a high dropping point in excess of 500°F and exhibits superior shear stability, corrosion resistance, and load-carrying ability. Cold-temperature pumpability is outstanding, making it a great choice for centralized lube systems. It has a distinctive blue color, making it easy to identify.

FS Spectra Lube Blue is an excellent multipurpose performer. In high-speed bearing applications, it has been proven to last longer, requiring less frequent re-lubrication. Superior pumpability makes it particularly well suited to machinery with centralized lube systems. Specific applications include electric motors, automotive chassis points and wheel bearings, high-speed bearings, ball bearings, roller bearings, farm implements, construction machinery, and more.

#### **APPLICATIONS**

Applications requiring extended service intervals

Agricultural, automotive, and industrial chassis and wheel-bearing applications

Roller-bearing applications

Sliding applications

Disc brake-equipped wheel-bearing applications

Highly loaded industrial applications

#### **BENEFITS & FEATURES**

Superior corrosion and rust protection to extend equipment life.

Excellent resistance to shock loads.

Outstanding thermal resistance to provide superior lubrication and wear protection at high temperatures.

Superior protection against leakage, dust, and water with enhanced sealing characteristics.

Unsurpassed mechanical stability.

Pumpability in a wide temperature range.

Excellent resistance to water washout.

Excellent long-life bearing performance.

Carries NLGI's highest automotive chassis and wheel-bearing lubricant classification, GC-LB.

#### **GRADE AND PACKAGING**

FS Spectra Lube Blue is available in NLGI No. 2 and packaged in 120-lb kegs, 35-lb pails, and 14.5-oz tubes.





## FS SPECTRA LUBE® GRAY

#### PREMIUM EP/AW, LITHIUM COMPLEX HEAVY-DUTY GREASE CONTAINING 3% MOLYBDENUM DISULFIDE

FS Spectra Lube Gray is a premium, state-of-the-art lithium complex grease with 3% molybdenum disulfide for additional load-carrying capacity and anti-wear performance. This lithium complex grease has a high dropping point in excess of 500°F to ensure retention where high temperatures are encountered. The formulation features a unique blend of extreme-pressure and anti-wear additives as well as rust and oxidation inhibitors, along with a high content of molybdenum disulfide.

FS Spectra Lube Gray is a heavy-duty product designed for construction and mining equipment with heavy shock load applications. It is also ideal for heavy equipment such as motor graders, wheel loaders, bulldozers, fixed and mobile crane systems, and mining and cement plant equipment like conveyors, crushers, hammer mills, screens, feeders, and hole drillers that need extra wear protection provided by greases containing molybdenum disulfide.

#### **APPLICATIONS**

Roller and plain bearings\* working under continuous vibration and oscillating conditions with heavy shock loads in industrial and mobile equipment where the manufacturer specifies high-temperature, extreme-pressure grease with 3% molybdenum disulfide.

Chassis components, fifth wheels, tie rod ends, universal joints, bucket pins, kingpins, steering joints, slew gears, off-highway wheel and truck bearings, turret (slewing gear) locking mechanism (or locking pins), and crane wire rope lubrication where molybdenum-containing grease is recommended for use.

Sliding applications, bearings, and chassis elements working under vibrating, high-temperature, and heavily loaded conditions.

\*Lubricating greases with molybdenum disulfide are not suitable for roller bearings at high speeds.

#### **BENEFITS & FEATURES**

Excellent lubricating performance under heavily loaded, vibrating conditions.

Excellent rust and corrosion protection.

Superior shock load-carrying capability.

Excellent resistance to water washout.

Extends pin and bushing service life in off-road equipment.

Excellent mechanical stability provides better grease retention in severe applications.

Increases equipment life with enhanced wear protection and improved sealing characteristics against dirt and water.

#### **GRADE AND PACKAGING**

FS Spectra Lube Gray is available in NLGI No. 2 and packaged in 400-lb drums, 120-lb kegs, 35-lb pails, and 14-oz tubes.

Also available in NLGI No. 1 and packaged in 120-lb kegs and 14-oz tubes.







## FS SPECTRA LUBE® CONSTRUCTION RED

PREMIUM EP/AW, LITHIUM COMPLEX, HEAVY-DUTY, MULTIPURPOSE GREASE

FS Spectra Lube Construction Red Grease is a premium lithium complex grease containing the highest base oil viscosity within the Spectra Lube grease line.\* The grease has a high dropping point in excess of 500°F, ensuring retention when high temperatures are encountered. The product has also been formulated with a special additive package that ensures high film strength, extreme-pressure protection, and anti-wear properties.

The polymer-fortified thickener structure, combined with its special additive package, makes this product a primary choice for mining and construction equipment. It exhibits improved adhesion to metal surfaces and superior protection against water washout, rust, and corrosion.

FS Spectra Lube Construction Red Grease can be used as a multipurpose grease but is best suited for heavy-duty applications such as construction equipment working under heavy loads.

#### **APPLICATIONS**

Construction and agricultural equipment that operates continuously in both on- and off-highway conditions.

Roller bearing applications with continuous exposure to water, oscillating movements, and vibration with heavy shock loads (i.e., mining and manufacturing industries like steel, paper, glass, and textile).

Sliding applications, bearings, and chassis elements working under wet, moderate- to high-temperature, and heavily loaded conditions.

Low- to medium-speed bearings where heavy shock load conditions are common.

Agricultural or earthmoving equipment lubrication in red soil and fertilizer-rich soil environments.\*\*

\*Because of the formulation's heavy base oil, cold weather may adversely affect pumpability. Under cold operating conditions, the traditional formula of FS Spectra Lube Red is recommended.

\*\*Dust formations generally develop sticky sludge and, with the help of moisture on the seals, cause the seals to lose their elasticity and face structural deformation. FS Spectra Lube Construction Red Grease, used at recommended greasing intervals, develops a positive pressure safety barrier behind the bearing seals and protects the bearings for longer periods by significantly limiting the entry of contaminants.

#### **BENEFITS & FEATURES**

Superior shock load-carrying capability and protection against wear.

Enhanced protection against severely wet operating conditions and resistance to water washout.

Extended lubricating performance under vibrating and oscillating working conditions.

High-temperature dropping point.

Thickener structure and enhanced additive performance prolongs re-lubrication intervals.

High-quality base fluids and rust/oxidation/corrosion inhibitors provide protection for metals in storage.

Carries NLGI's highest automotive chassis and wheel-bearing lubricant classification, GC-LB.

#### GRADE AND PACKAGING

FS Spectra Lube Construction Red Grease is available in NLGI No. 2 and packaged in 400-lb drums, 120-lb kegs, and 14-oz tubes.





#### **GREASE COMPATIBILITY CHART**

I = Incompatible

C = Compatible

BC = Borderline Compatible

	Aluminum Complex	Barium	Calcium	Calcium 12-Hydroxy	Calcium Complex	Bentone (Clay)	Lithium	Lithium 12-Hydroxy	Lithium Complex	Polyurea	Sodium
Aluminum Complex		I	I	С	I	I	I	I	С	I	I
Barium	I		I	С	I	I	I	I	I	I	I
Calcium	I	I		С	I	С	С	BC	С	I	I
Calcium 12-Hydroxy	С	С	С		ВС	С	С	С	С	I	I
Calcium Complex	I	I	I	BC		I	I	I	С	С	I
Bentone (Clay)	I	I	С	С	I		I	I	I	I	I
Lithium	I	I	С	С	I	I		С	С	I	I
Lithium 12-Hydroxy	I	I	ВС	С	I	I	С		С	I	I
Lithium Complex	С	I	С	С	С	I	С	С		I	I
Polyurea	I	I	I	I	С	I	I	I	I		I
Sodium (Soda Base)	I	I	I	I	I	I	I	I	I	I	



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