Esso Imperial Oil

Product Data Sheet

RONEX EXTRA DUTY

PREMIUM GREASE FOR HEAVY-DUTY BEARING APPLICATION

November 2006

RONEX™ Extra Duty is a premium grease designed for heavy-duty bearing applications in paper mill, steel mill, construction, and mining environments. RONEX Extra Duty offers the following features and benefits:

- **High base oil viscosity (460 cSt @ 40°C / 2500 SSU @ 100°F) provides outstanding high load performance**
- **Extreme-pressure additives provide enhanced protection (>50-lb Timken typical) under high loads and shock load operating conditions**
- **High dropping point (>250°C) offers extra reliability at high operating temperatures**
- **Tacky, water resistant, inhibited against rust and corrosion**
- **Very good mechanical stability and resistance to shear**
- **Available in both NLGI 1 and 2 grades and as a NLGI 2 grade fortified with molybdenum disulphide**

Primary Applications

RONEX Extra Duty is the brand name for a line of premium lithium-complex high-base-oil-viscosity greases designed for the heavy-duty applications often encountered in steel mill, paper mill, construction, and mining environments. RONEX Extra Duty is formulated with a 460 cSt viscosity base oil for higher load carrying capability.

RONEX Extra Duty is available in three grades: RONEX Extra Duty 1, an orange NLGI 1 grease; RONEX Extra Duty 2, an orange NLGI 2 grease; and RONEX Extra Duty Moly 2, a gray-black NLGI 2 grease containing 3% molybdenum disulphide. RONEX Extra Duty Moly 2 is recommended for applications where vibrations or oscillating movements tends to squeeze out the grease. In such cases molybdenum disulphide provides added wear protection.

Paper Industry
RONEX Extra Duty has been shown to provide excellent lubrication of felt roll bearings, wet end bearings, and press section bearings. It is also an outstanding multi-purpose grease for general mill applications. Especially desirable features of RONEX Extra Duty in paper mills are its water resistance and its ability to stay in place under high water washout conditions, providing effective lubrication and protection against rust and corrosion.

Construction and Mining
RONEX Extra Duty has demonstrated excellent performance as a versatile, multi-purpose grease

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in the construction and mining industries. With its ISO 460 base oil, RONEX Extra Duty is ideally suited for the slow-to-moderate speed, high-load bearings commonly found in these industries. Because these applications are often associated with wet environments, the excellent water resistance of RONEX Extra Duty is another plus. RONEX Extra Duty also can be used in off-highway wheel bearings in vehicles moving at speeds of 55 km/h or less. RONEX MP is recommended for wheel-bearings in high-speed vehicles.

Performance Features

RONEX Extra Duty has excellent structural and oxidative stability, a high degree of water resistance, and anti-rust / anti-corrosion properties. Additionally, it contains a tackiness additive to aid retention on the lubricated part.

High Base Oil Viscosity
Bearing manufacturers generally recommended a high-viscosity base oil as the best assurance of proper lubrication and maximum bearing life when lubricating slow-moving grease-lubricated bearings. RONEX Extra Duty, with its naturally high viscosity of 460 cSt, meets these requirements.

Extreme-Pressure Performance
The wear protection provided by the high-viscosity base oil in RONEX Extra Duty is enhanced with special extreme-pressure (EP) and anti-wear (AW) additives. These additives are especially important for protecting bearings subjected to shock loading.

High Dropping Point
RONEX Extra Duty provides a much higher dropping point than competitive greases that utilize a simple lithium 12-hydroxy soap base. This high dropping point provides a valuable extra margin of bearing protection in high-temperature operations.
Extra TackinessRONEX Extra Duty exhibits a high degree of tackiness and self-adhesion, which enhances the grease's ability to hold tenaciously to lubricated surfaces.

Excellent Water Resistance
Still another assurance of long lubrication life is the excellent water resistance of RONEX Extra Duty. This property is highly desirable in the wet environments often found in the construction, mining, and paper mill industries.

Rust and Corrosion Protection
RONEX Extra Duty, applied to rust- and corrosion-free surfaces, is specifically formulated to protect against rust and corrosion.

Pumpability
RONEX Extra Duty is pumpable down to 0°C (32°F). Below this temperature, a grease with a lower base oil viscosity should be used. Use of a lower-viscosity-base-oil grease, however, will necessitate more frequent relubrication.

Good Compatibility with Other Greases
RONEX Extra Duty is compatible with most competitive lithium-based greases. However, the best way to prevent a potential compatibility problem is to completely purge the previous grease with RONEX Extra Duty.

Precautions

RONEX Extra Duty is manufactured from high quality petroleum base stocks, carefully blended with selected soaps and additives. As with all of our products, good personal hygiene and careful handling should always be practiced. Avoid prolonged contact to skin, splashing into the eyes, ingestion or vapour inhalation. High-pressure injection of any grease under the skin can cause serious delayed soft tissue damage and should be treated immediately by a physician. To avoid injection injuries, inspect greasing equipment regularly for worn hoses and fittings. Keep fingers away from the nozzle and ensure the nozzle is firmly in place before discharging the grease. Please refer to the Material Safety Data Sheet for further information.

Note: This product is not controlled under Canadian WHMIS legislation.

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Typical Properties

	RONEX Extra Duty 1	**RONEX Extra Duty 2**	**RONEX Extra Duty Moly 2**
NLGI grade	1	2	2
Thickener type	Lithium-complex	Lithium-complex	Lithium-complex
Color	Orange	Orange	Gray-Black
Worked Penetration, 60 strokes	325	280	280
Dropping point, °C	280	280	280
Base fluid viscosity, cSt @ 40°C	460	460	460
Worked penetration change after 100,000 strokes	+5	+5	+5
Roll stability, % change in penetration	5	5	5
Timken OK load, kg	>22.7	>22.7	>22.7
Rust test,	Pass	Pass	Pass
Water Washout, 79°C	5	3.5	3.5

The values shown here are representative of current production. Some are controlled by manufacturing specifications, while others are not. All may vary within modest ranges.

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