

## EPIC GREASE

ALL-WEATHER SEMI-SYNTHETIC EXTREME PRESSURE GREASE

October 2009



EPIC\* EP 102, EPIC\* EP MOLY and EPIC\* MQ lubricants are premium quality, all-weather greases that offer excellent wear and corrosion protection over a wide operating temperature range. The combination of a Lithium Complex thickener, a conventional low temperature mineral oil and synthesized hydrocarbon fluid allows EPIC brand greases to offer the following features and benefits:

- ◆ High film strength at elevated temperatures
- ◆ Excellent dispensability at low temperatures
- ◆ Low torque at low temperatures
- ◆ Energy savings at low temperatures.

### *Primary Applications*

EPIC EP 102 and EPIC EP MOLY greases were formulated to provide year-round lubrication of bucket wheel hollow shaft anti-friction bearings and the conveyor belt anti-friction bearings throughout the Syncrude operation in northern Alberta the excellent all season characteristics these greases have been proven in many applications since the introduction. EPIC EP MOLY has been proven as low temperature grease in the MPG systems of mining shovels.

EPIC MQ fortified with 5% Molybdenum disulphide solid lubricant as required by Caterpillar-CAT<sup>®</sup>, provides added wear protection in pins and bushings operating in boundary conditions. EPIC MQ is designed for winter application dispensible down to -50°C as a chassis lubricant on open-pit mining equipment outfitted with central lubrication systems.

Based on this service, EPIC greases are recommended for multi-service application in plain and anti-friction bearing, gears, slides and other applications where friction reduction and low wear are required. EPIC greases perform well in tough applications and under extreme temperature conditions.

EPIC EP MOLY and EPIC MQ greases offer additional protection in bearing and bushing applications where high load, slow reciprocating and oscillating conditions are found.

### *Performance Features*

The lithium complex soap technology used in EPIC brand greases contributes to long life through good oxidation stability, good shear

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stability, high temperature protection and water resistance. The additives in EPIC greases provide excellent corrosion protection, good wear protection and high load carrying ability.

#### **Start-Up Motion**

EPIC EP grease is good to temperatures as low as -40°C. EPIC MQ is good to temperatures as low as -50°C.

#### **Long Lubrication Life**

Lubrication life is sustained at service temperatures as high as 150°C. Occasional service to 200°C can be tolerated.

#### **Low Temperature Dispensing**

EPIC EP 102 and EPIC EP MOLY have excellent low temperature dispensing with good pumpability at -40°C. EPIC MQ can be dispensed to -50°C.

#### **Energy Savings**

Very good low temperature torque characteristics.

#### **Stay in Place Quality**

Good stay in place quality at high temperatures.

#### **Reliability**

A unique combination of thickeners and additives has provided years of excellent service.

#### **Performance Proven**

EPIC brand greases have proven ability in protecting severely loaded bearings in arctic and normal operating conditions.

#### **Typical Properties**

	<b>EPIC EP 102</b>	<b>EPIC EP MOLY</b>	<b>EPIC MQ</b>
Colour	Red	Grey-Black	Grey-Black
Texture	Smooth	Smooth	Smooth
NLGI Grade	1.5	1.5	0.5
Thickener Type	Lithium Complex	Lithium Complex	Lithium Complex
Molybdenum disulphide Content, %	0	3	5
Penetration, mm/10 @ 25°C worked 60 strokes change after worked 100,000 strokes, %	310 +/- 10	310 +/- 10	350 +/- 10
Dropping Point, °C	260	260	230
Base Oil Viscosity cSt @ 40°C cSt @ 100°C	130 14.5	130 14.5	60 9.7
Viscosity Index	150	150	150

#### **Dispensibility**

The most unique characteristic of EPIC EP 102 and Epic EP Moly greases is the ability to flow through the long and narrow lines of automatic grease dispensing systems, even at very low temperatures, despite a relatively high oil viscosity of 100 cSt at 40°C.

#### **Precautions**

EPIC greases are 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.

	<b>EPIC EP 102</b>	<b>EPIC EP MOLY</b>	<b>EPIC MQ</b>
Timken OK Load, kg	28	28	28
Low Temperature Torque (-40°C)			
Starting, g cm	2000	2000	1000
Running, g cm	1000	1000	234
Apparent Viscosity 20 sec-1, P			
@-40°C	8,000	8,000	4,000
@-50°C			15,000
4-Ball Weld, kg	250	400	400

*The values shown above are representative of current production. Some are controlled by manufacturing and performance specifications while others are not. All may vary within modest ranges.*