



# MINING LUBRICANTS

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## PRODUCT GUIDE



**FLEX YOUR ENGINE**



FLEX YOUR ENGINE

## LEGACY

For over 60 years, Bel-Ray products have proven their value, setting the highest standards of quality and performance. A leader in lubrication technology, our company has engineered products to protect, while delivering superior business value for applications in aerospace, automotive, energy, food, marine, military, mining, motorcycle, OEM, powersports, steel, textile and other industries served by our Powersports, Industrial and Mining Divisions.

For over fifty years, Bel-Ray has been the hardest working lubricant in the mining industry.

Through our Total Lubricant Partnership (TLP) we help you choose the best solutions for your machinery, always matching the right products to the right applications. This custom-fit approach helps release the full potential of your mining operations.

Maintenance costs are reduced and breakdowns are kept to a minimum. Everything flows more smoothly so productivity increases and you maximize the value of your equipment.

We also find ways to reduce your lubricant consumption and lessen your impact on the environment. Manufactured in the USA, Bel-Ray has a global support network to meet your specific needs.

In an industry like Mining, where you can't afford to take any risks, Bel-Ray is right for the job. **FLEX YOUR ENGINE.**

## VALUE

- Over 60 years' experience
- On-site R&D
- Unrivaled customer support
- Global distribution
- Products made in the USA
- Strategic network of regional offices

## SUSTAINABILITY



**Environmental Carbon Management (ECM)** reduces the overall carbon footprint with responsible waste management and eco-friendly / partially recycled products, packaging, collateral and more. Look for the ECM logo on all Bel-Ray products!

As part of our commitment to quality and success, Bel-Ray continually develops new products to better serve your Mining needs. For the most current product selection, please visit [belray.com](http://belray.com).

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Product Name	Product No.	Product Grade	Product Description	Product Base Fluid
<b>ANTI-FRICTION BEARINGS &amp; BUSHINGS (MEDIUM - HIGH SPEED)</b>				
Bel-Ray Molyube 126 EP Grease	23201 23200 23220 23230 23240	NLGI 00 NLGI 0 NLGI 1 NLGI 1.5 NLGI 2	A severe-duty, impact-resistant aluminum complex grease fortified with Molyube solids. Excellent Extreme Pressure capabilities. Outstanding mechanical and thermal stability. Exceptional water washout resistance, rust and corrosion protection. Grades 00, 0, 1, 2-460 are Bucyrus International certified for the Bucyrus SD4711 Specification for multipurpose grease. Useful temperature range -12°C to 177°C (10°F to 350°F).	Mineral Oil ISO VG 150 ISO VG 150/220 (23240) ISO VG 460 (23242)
Bel-Ray Molyube AC 1000 Grease	40881 40890 40900 40920 40922	NLGI 00 NLGI 0 NLGI 1 NLGI 2 NLGI 2-460	An aluminum complex multipurpose grease fortified with Molyube solids for effective heavy-duty service. Outstanding mechanical and thermal stability to withstand shock and heavy loading found in severe environments of mining, construction and process industries. Exceptional water washout resistance, rust and corrosion protection. Exhibits good cohesive and adhesive characteristics. Grades 00, 0, 1, 2-460 are Bucyrus International certified for the Bucyrus SD4711 Specification for multipurpose grease. Useful temperature range -26°C to 177°C (-15°F to 350°F).	Mineral Oil ISO VG 150 ISO VG 220 (40920) ISO VG 460 (40922)
Bel-Ray Molyube 8626 EP Grease	46420	NLGI 1	An aluminum complex grease fortified with Molyube solids. Excellent Extreme Pressure capabilities. Outstanding mechanical and thermal stability. Exceptional water washout resistance, rust and corrosion protection. It has excellent pumpability characteristics for exceptionally cold ambient conditions. Useful temperature range -40°C to 149°C (-40°F to 300°F).	Mineral Oil ISO VG 32
Bel-Ray Molyube LC131 Grease	27660 27670 27680 27690 27692	NLGI 00 NLGI 0 NLGI 1 NLGI 2 NLGI 2-460	A lithium complex grease fortified with molybdenum disulfide at 1%. Excellent Extreme Pressure capabilities. Outstanding mechanical and thermal stability. Exceptional water washout resistance, rust and corrosion protection. Grades 00, 0, 1, 2-460 are Bucyrus International certified for the Bucyrus SD4711 Specification for multipurpose grease. Useful temperature range -18°C to 177°C (0°F to 350°F).	Mineral Oil ISO VG 150 ISO VG 220 (27690) ISO VG 460 (27692)
Bel-Ray Molyube LC135 Grease	67800 67810 67820 67830 67832	NLGI 00 NLGI 0 NLGI 1 NLGI 2 NLGI 2-460	A high performance lithium complex grease fortified with molybdenum disulfide at 5% as recommended by many equipment manufacturers. Excellent Extreme Pressure capabilities as well as outstanding mechanical and thermal stability. Unsurpassed rust and corrosion protection and resistance to water. Grades 00, 0, 1, 2-460 are Bucyrus International certified for the Bucyrus SD4711 Specification for multipurpose grease. Useful temperature range -18°C to 177°C (0°F to 350°F).	Mineral Oil ISO VG 150 (67800) ISO VG 150 (67810) ISO VG 220 (67820) ISO VG 220 (67830) ISO VG 460 (67832)
Bel-Ray PA Grease	62530	NLGI 2	<b>A fully synthetic, heavy-duty, aluminum complex grease. Outstanding mechanical and thermal stability. Exceptional water washout resistance, rust and corrosion protection. Its synthetic PAO base fluid provides excellent low temperature pumpability. Useful temperature range -40°C to 204°C (-40°F to 400°F).</b>	<b>Synthetic ISO VG 100</b>
Bel-Ray Molyube SP Lubricant	69530 69480 69500	NLGI 0 (SP 4) NLGI 1 (SP 5) NLGI 2 (SP 6)	An aluminum complex grease fortified with excellent Extreme Pressure and anti-wear properties. 4-Ball EP Test performance – 800+ kg Weld Load and 135 kg Load Wear Index. Maximum wear protection. 5% molybdenum disulfide. SP-4 is approved by Caterpillar. Useful temperature range -18°C to 177°C (0°F to 350°F).	Mineral Oil ISO VG 220
Bel-Ray Molyube SP-4 Lubricant	69360 69510 69520 69530	NLGI 0 NLGI 0 NLGI 0 NLGI 0	An aluminum complex grease fortified with excellent Extreme Pressure and anti-wear properties. 4-Ball EP Test performance – 800+ kg Weld Load and 135 kg Load Wear Index. Maximum wear protection. 5% molybdenum disulfide. This product is approved by Caterpillar. Useful temperature range -40°C to 79°C (-40°F to 175°F).	Mineral Oil ISO VG 46 (69360) ISO VG 100 (69510) ISO VG 150 (69520) ISO VG 220 (69530)
Bel-Ray Termalene EP Grease	72400 72420 72440	NLGI 0 NLGI 1 NLGI 2	An aluminum complex grease with exceptional retention properties high load-carrying capacity. Adhesive and virtually waterproof. Excellent for bushing and pin applications. Its performance in General Electric's wheel motor hub bearings is unsurpassed. Low oil separation and good pumpability make it ideal for use in automatic lubrication systems. Useful temperature range -18°C to 177°C (0°F to 350°F).	Mineral Oil ISO VG 150/220

■ = SYNTHETIC/SILICONE LUBRICANTS   
■ = BIODEGRADABLE LUBRICANTS   
■ = MINERAL OIL LUBRICANTS   
■ = RUST PREVENTIVES

For detailed information, please consult the Product Data Sheets (PDS).

Product Name

Product No.

Product Grade

Product Description

Product Base Fluid

**ANTI-FRICTION BEARINGS & BUSHINGS (LOW - MEDIUM SPEED)**

Bel-Ray Termalene EP Extra Tacky Grease	72560 (2C)	NLGI 2	An aluminum complex grease with exceptional retention properties. Extremely adhesive and virtually waterproof. Excellent for bushing and pin applications. Its performance in General Electric's wheel motor hub bearings is unsurpassed. Load carrying and anti-wear capabilities far surpass conventional greases in applications where bearings are subjected to very high loads, slow speeds and elevated temperatures. Appropriate when temperatures are elevated to 232°C (450°F) for short bursts and not continuous use. Useful temperature range -12°C to 177°C (10°F to 350°F).	Mineral Oil 269 cSt @ 40°C
Bel-Ray Molyube 87M EP Grease	20252 20262 20254 20264 20256 20266	NLGI 1-ISO VG 460 NLGI 2-ISO VG 460 NLGI 1-ISO VG 680 NLGI 2-ISO VG 680 NLGI 1-ISO VG 1000 NLGI 2-ISO VG 1000	An aluminum complex grease fortified with moly and excellent Extreme Pressure properties. Excellent mechanical and thermal stability. Highly water resistant. Grades 680-1 and 1000-1 are Komatsu approved.	Mineral Oil
Bel-Ray Molyube 87 EP Grease	20290 20300 20320	NLGI 0 NLGI 1 NLGI 2	An aluminum complex grease fortified with Molyube solids and high-viscosity base oil. Excellent Extreme Pressure properties. Excellent performance history in severe applications such as ball mill trunnion bearings and vibrating screens. Useful temperature range 0°C to 177°C (32°F to 350°F).	Mineral Oil ISO VG 680/1000
Bel-Ray Molyube SF 100	76990 77010 77000 77020 77070 76850	Light Medium Heavy Arctic Sub-Arctic Arctic NS	A state-of-the-art lubricant that excels as a multi-service dragline and shovel lubricant, or simply as a dedicated mill open gear lubricant. An aluminum complex grease fortified with Molyube solids in a semi-synthetic base oil. Excellent Extreme Pressure and anti-wear properties. Environmentally friendly. Proven unsurpassed performance in bushings. All grades are Bucyrus International approved.	Semi-Synthetic 1849 cSt @ 40°C (76990) 1849 cSt @ 40°C (77010) 3450 cSt @ 40°C (77000) 707 cSt @ 40°C (77020) 707 cSt @ 40°C (77070)
Bel-Ray Molyube Unee Lubricant 7060	70600	See Product Data Sheet	An aluminum complex thickened multi-service lubricant for use on large mining machinery such as draglines, shovels, blast hole drills and other heavy industrial equipment operating at or above -43°C (-45°F) with exceptional retention properties. Contains Molyube solids. It is Bucyrus International certified for the Bucyrus SD4713 Specification for Open Gear Lubricant (OGL).	Mineral Oil 1437 cSt @ 40°C
Bel-Ray Molyube SD-1 Lubricant	70620 70626 70628	NLGI 0 NLGI 0 (Heavy) NLGI 0 (Extra Heavy)	A mineral oil-based, aluminum complex, multi-service lubricant for temperate climates. Perfect for the climates of Africa, Australia, parts of the United States and South America. Contains Molyube solids. Provides excellent anti-wear and Extreme Pressure properties. Product No. 70620 is Bucyrus International certified for the Bucyrus SD4713 Specification for Open Gear Lubricant (OGL).	Mineral Oil 707 cSt @ 40°C (70620) 1849 cSt @ 40°C (70626)
Bel-Ray Molyube Gear Tac	68990 68940 68950	Light Regular Medium	A high-viscosity paraffinic oil chemically fortified with Molyube solids and Extreme Pressure additives. Bel-Ray's proprietary polymer technology promotes superior retention properties, minimizing consumption and housekeeping. Maintains lube film in wet conditions. See Product Date Sheet for temperature range and application instructions.	Mineral Oil 24500 cSt @ 40°C (68990) 37900 cSt @ 40°C (68940) 37900 cSt @ 40°C (68950)

**ELECTRIC MOTOR BEARINGS**

Bel-Ray Termalene Ball & Roller Bearing Grease	72200	NLGI 2.5	An excellent blend of aluminum and sodium complex greases for general applications, including journal bearings. This unique grease provides controlled mobility under shear, resulting in lower temperatures and longer service life of both grease and bearings. It has outstanding shear, thermal and oxidation stability. Exceptional performance for electric motor bearings. Useful temperature range -23°C to 177°C (-10°F to 350°F).	Mineral Oil ISO VG 68/100
Bel-Ray Termalene EP Grease	72400 72420 72440	NLGI 0 NLGI 1 NLGI 2	An aluminum complex grease with exceptional mechanical stability and Extreme Pressure resulting in excellent performance in severe-duty electric motors. Exceptional shock load performance. Designed for heavy loads and wide temperature ranges. Virtually waterproof. Useful temperature range -18°C to 177°C (0°F to 350°F).	Mineral Oil ISO VG 150/220

Product Name	Product No.	Product Grade	Product Description	Product Base Fluid
<b>WIRE ROPES &amp; CABLES</b>				
Bel-Ray Wire Rope Lubricant	66700	ISO VG 460 See Product Data Sheet	A specially formulated penetrating lubricant for wire ropes. Can be applied directly onto wet ropes while providing excellent adhesive properties, reducing consumption. Prevents inner strand corrosion and rubbing wear. It is an all-season product not requiring change of grades as temperatures fluctuate. Applicable manually or through most automatic lube systems. Useful temperature range -46°C to 60°C (-50°F to 140°F).	Mineral Oil
Bel-Ray Wire Rope Lubricant 999	66680	See Product Data Sheet	A specially formulated lubricant to provide maximum rope, sheave and drum protection while remaining extremely cost-effective. Provides excellent corrosion, rust and wear protection to reduce premature rope failure or fatigue. Prevents inner strand corrosion and rubbing wear. Proven extended rope life in severe applications and environments. Useful temperature range -34°C to 60°C (-30°F to 140°F).	Mineral Oil
Bel-Ray Drag Cable Lubricant	58000	Summer	An asphaltic lubricant designed to offer initial penetration and superior exterior shielding by forming a dirt-impervious barrier for longer rope life and reduced sheave, fairlead and drum wear. An exclusive non-chlorinated solvent. Lubricates and protects core and strands as the cable works, reducing fatigue and friction. Superior lubricant film strength that extends rope life and serviceability to sheaves and drums. The solvent evaporates after application, leaving a tenacious ductile film with Extreme Pressure and anti-wear compounds, which greatly improve strength and wear protection.	Mineral Oil
Bel-Ray Drag Cable Lubricant 888	57950 57960	Light Regular	An effective coating type lubricant for heavily loaded operating conditions, such as dragline drag ropes. It is designed to overcome abrasion and corrosion by providing initial penetration of wire rope and then forming a dirt-impervious barrier to reduce abrasive wear. Forms a tough lube film resistant to harsh environments. Its load carrying capacity also helps reduce wear and additionally extends rope and sheave life.	Mineral Oil
Bel-Ray Bio-Bel Cable & Rope Lubricant	56850		A unique rope lubricant that maximizes rope, sheave and drum life without harming the environment. Approximately 85% biodegradable in 28 days. Excellent for sensitive environments including marine areas.	Natural Oil ISO VG 46/68
Bel-Ray RP-30	15600	See Product Data Sheet	A waxy type barrier film rust preventive. Provides maximum protection in severe environments. Excellent for any stationary rope application. For parts storage, a 5 mm to 7 mm film will provide covered outdoor protection for up to two years and indoor protection for up to three years. Apply by spray, dip or brush.	Rust Preventive and Carriers
<b>ENCLOSED GEARS &amp; WORM DRIVES (REGULAR GEAR OILS)</b>				
Bel-Ray 100 Gear Oil 100	21600 21481 21510 21525 21585 21592 21594 21596	ISO VG 100 ISO VG 150 ISO VG 220 ISO VG 320 ISO VG 460 ISO VG 680 ISO VG 1000 ISO VG 1500	An excellent extra heavy-duty gear oil formulated for all types of gearing. Provides Extreme Pressure and anti-wear properties. Excellent demulsibility. Exceeds manufacturers' specifications. 30-year history of component life extension. Grades ISO VG 460, ISO VG 1000, ISO VG 1500 are certified for Bucyrus International SD4721 Part A Specification for dragline enclosed gear case lubricant. Grades ISO VG 150, ISO VG 220 are Bosch Rexroth approved. Boasts 100 pound Timken OK Load, 12 loading stages of the FZG Test and 4500 pounds on the Falex EP Test. Batch level cleanliness to ISO Standard 4406:1999 18/15/12 or better reducing the impact of contamination on gears and bearings.	Mineral Oil
Bel-Ray 100 Gear Oil SBF	57750 57751 57752 57753 57754 57755 57756 57757 57758	ISO VG 68 ISO VG 100 ISO VG 150 ISO VG 220 ISO VG 320 ISO VG 460 ISO VG 680 ISO VG 1000 ISO VG 1500	An excellent extra heavy-duty gear oil formulated for all types of gearing. Extreme Pressure and anti-wear properties. Superior thermal stability and excellent demulsibility. Grades ISO VG 460, ISO VG 1000, ISO VG 1500 are certified for Bucyrus International SD4721 Part A Specification for dragline enclosed gear case lubricant. Exceeds manufacturers' specifications. Does not contain hazardous chemicals such as chlorine, lead, zinc or antimony. Boasts 100 pound Timken OK Load. Batch level cleanliness to ISO Standard 4406:1999 18/15/12 or better reducing the impact of contamination on gears and bearings.	Mineral Oil

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Product Name

Product No.

Product Grade

Product Description

Product Base Fluid

## ENCLOSED GEARS & WORM DRIVES (REGULAR GEAR OILS) continued

Bel-Ray Raylene EP Lubricants	71600 71610 71620 71630 71640 71650 71660 71670	ISO VG 100 ISO VG 150 ISO VG 220 ISO VG 320 ISO VG 460 ISO VG 680 ISO VG 1000 ISO VG 1500	An excellent extra heavy-duty gear oil formulated for all types of gearing. Provides Extreme Pressure and anti-wear properties. Excellent thermal stability and demulsibility. Does not contain hazardous chemicals such as chlorine, lead, zinc or antimony. Boasts a 100 pound Timken OK Load.	Mineral Oil
Bel-Ray HP Worm Gear Oil	11030 11000	ISO VG 320 ISO VG 460/680	A non-metallic oil formulated for steel on bronze worm gear drives. Excellent lubricity for sliding contacts. Also recommended for heavily loaded systems. It is chemically compounded with state-of-the-art "zero shear" polymeric film enhancers meeting AGMA 6, 7 or 8 compound specifications.	Mineral Oil
Bel-Ray SE2 Lubricant	63600 63620 63640 63660 63680	ISO VG 15 ISO VG 22/32 ISO VG 32 ISO VG 68 ISO VG 100	<b>A technologically innovative heavy-duty synthetic gear lubricant formulated for all types of gearing under severe loads. Totally synthetic hydrocarbon and ester combinations. Outstanding Extreme Pressure and anti-wear properties as well as excellent viscosity-temperature properties. Exceptionally low coefficient of friction. Compatible with mineral oils. This is the perfect product for low temperature applications. Grade ISO VG 1000 provides exceptional protection of cement kiln trunnion bearings. Useful temperature range -62°C to 191°C (-80°F to 375°F).</b>	Synthetic
Bel-Ray Synthetic Gear Oil	66880 66900 66920 66940 66960 66980 66982	ISO VG 150 ISO VG 220 ISO VG 320 ISO VG 460 ISO VG 680 ISO VG 1000 ISO VG 1500	<b>A totally synthetic hydrocarbon and ester combination gear lubricant. Outstanding Extreme Pressure and anti-wear properties as well as excellent viscosity-temperature properties. Extremely low coefficients of friction and traction coefficients. Compatible with mineral oils. Grades ISO VG 220 thru ISO VG 1000 are approved by Flender. Grade ISO VG 460 is approved by LeTourneau. Grades ISO VG 150 thru ISO VG 460 are approved by Bosch Rexroth. ISO VG 680 is approved by General Electric for wheel motor application. Grades ISO VG 320, ISO VG 460, ISO VG 1000 are certified for Bucyrus International SD4721 Part A Specification for dragline enclosed gear case lubricant.</b>	Synthetic

## ENCLOSED GEARS & WORM DRIVES (ANTI-LEAK OILS)

Bel-Ray MA-1500 Lubricant	43520	Heavy	A semi-fluid aluminum complex lubricant that provides superior water repellence and heat resistance while remaining stable to protect against severe shock loads. For use in semi-enclosed or leaky gear cases. This lubricant is rheopectic (shear thickening) to control leakage. Exceptional Extreme Pressure properties.	Mineral Oil
Bel-Ray Molyube MA-1500 Special	43700	See Product Data Sheet	A high-viscosity aluminum complex semi-fluid lubricant that provides superior water repellence and heat resistance while remaining stable to protect against severe shock loads. This lubricant is rheopectic (shear thickening) to control leakage. Exceptional Extreme Pressure properties. Contains Molyube solids.	Mineral Oil
Bel-Ray Anti-Leak Gear Oil	55280	ISO VG 460	A thixotropic gear lubricant that forms a weak gel when idle but is a liquid lubricant when sheared. Cycles from gel to liquid to gel continuously. Designed for heavily loaded mining equipment. Excellent shock load protection and anti-leak properties for final drive and differential applications.	Mineral Oil

## OPEN GEARS, SWING RACK & PINIONS, HOUSE ROLLERS & RAILS, DIPPER STICKS & HANDLES, AND LOW SPEED BUSHINGS (GREASE)

Bel-Ray Molyube SF 100	76990 77010 77000 77020 77070 76850	Light Medium Heavy Arctic Sub-Arctic Arctic NS	A state-of-the-art lubricant that excels as a multi-service dragline and shovel lubricant, or simply as a dedicated mill open gear lubricant. An aluminum complex grease fortified with Molyube solids in a semi-synthetic base oil. Excellent Extreme Pressure and anti-wear properties. Environmentally friendly. Proven unsurpassed performance in bushings. All grades are Bucyrus International approved.	Semi-Synthetic 1849 cSt @ 40°C (76990) 1849 cSt @ 40°C (77010) 3450 cSt @ 40°C (77000) 707 cSt @ 40°C (77020) 707 cSt @ 40°C (77070)
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Product Name	Product No.	Product Grade	Product Description	Product Base Fluid
Bel-Ray Molyube Unee Lubricant 7060	70600	See Product Data Sheet	An aluminum complex thickened multi-service lubricant for use on large mining machinery such as draglines, shovels, blast hole drills and other heavy industrial equipment operating at or above -43°C (-45°F) with exceptional retention properties. Contains Molyube Solids. It is Bucyrus International certified for the Bucyrus SD4713 Specification for Open Gear Lubricant (OGL).	Mineral Oil 1437 cSt @ 40°C
Bel-Ray Molyube SD-1 Lubricant	70620 70626 70628	NLGI 0 NLGI 0 (Heavy) NLGI 0 (Extra Heavy)	A mineral oil-based, aluminum complex, multi-service lubricant for temperate climates. Perfect for the climates of Africa, Australia, parts of the United States and South America. Contains Molyube solids. Provides excellent anti-wear and Extreme Pressure properties. Product No. 70620 is Bucyrus International certified for the Bucyrus SD4713 Specification for Open Gear Lubricant (OGL).	Mineral Oil 707 cSt @ 40°C (70620) 1849 cSt @ 40°C (70626)

## OPEN GEARS, SWING RACK & PINIONS, HOUSE ROLLERS & RAILS, DIPPER STICKS & HANDLES, AND LOW SPEED BUSHINGS (RESIDUAL)

Bel-Ray Molyube Gear Tac	78990 68940 68950	Light Regular Medium	A high-viscosity paraffinic oil chemically fortified with Molyube solids and Extreme Pressure additives. Bel-Ray's proprietary polymer technology promotes superior retention properties, minimizing consumption and housekeeping. Maintains lube film in wet conditions. See Product Data Sheet for temperature range and application instructions.	Mineral Oil 24500 cSt @ 40°C (78990) 37900 cSt @ 40°C (68940) 37900 cSt @ 40°C (68950)
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## MILL GEARS & MILL DRIVES (GIRTH & PINIONS)

Bel-Ray Molyube SF100 Mill	76980	Mill  See Product Data Sheet	A high-viscosity open gear lubricant designed for shovel dipper sticks, kilns and mills. This product forms a strong tenacious paste-like film, providing maximum protection in the load zone while flowing well and draining freely from gear shrouds, greatly reducing consumption. Contains a volatile solvent that insures fluidity during application. Contains no heavy metal carcinogens or chlorinated solvents. Meets ANSI/AGMA 9005-EO2 Specification for minimum viscosity recommendations for open gearing intermittent lubricant application and for gravity feed or forced drip lubrication of open gears. Approved by Metso Minerals.	Asphaltic (76960) Semi-Synthetic (76980)
Bel-Ray Molyube SF100 Mill FGC	76986	NLGI 00	An aluminum complex semi-fluid gear lubricant specifically formulated to provide superior lubrication of Type 2 open gear systems. It provides retention characteristics, yet it drains freely from shrouds and troughs. Superior Extreme Pressure, anti-wear and anti-rust capability for extended component life while reducing consumption.	Mineral Oil ISO VG 680 ISO VG 1000 ISO VG 1500
Bel-Ray ClearGear Lubricant	21322 21324 21326 21328	LV MV HV XHV46 See Product Data Sheet	A high-viscosity fully synthetic fluid gear lubricant specifically formulated to provide superior lubrication of Type 2 open gear systems. These systems are used to transmit a continuous load (load, speed and direction are generally fixed). Completely fluid for superior drainage from open gear shroud. Exceeds ANSI/AGMA 9005-EO2 Specification Annex D for minimum viscosity recommendations for open gearing - intermittent lubricant application. It is approved by Metso Minerals for intermittent spray lubrication of open gears. Available in low, mid and high-viscosity grades. Useful temperature range of -15°C to 50°C (5°F to 122°F).	Synthetic 4270 cSt @ 40°C (21322) 10859 cSt @ 40°C (21324) 28204 cSt @ 40°C (21326)

## PROPEL MECHANISMS: CAM & FRAME OR MONIGHAN CAM

Bel-Ray Cam Compound L-55	67750	NLGI 2 See Product Data Sheet	A synthetic lubricant developed for the Bucyrus International Monighan rolling cam system. Forms a tough, durable film highly resistant to dusty environments while resisting erosion and peeling. An all-season product pumpable through all types of automatic lubrication systems at temperatures as low as -48°C (-55°F) without external heat. No grade change required for warmer seasonal temperatures. Contains no heavy metals and is environmentally friendly. Useful temperature range >-48°C (>-55°F).	Synthetic
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Product Name	Product No.	Product Grade	Product Description	Product Base Fluid
<b>PROPEL MECHANISMS: CAM &amp; FRAME OR MONIGHAN CAM</b> continued				
Bel-Ray Molyube Cam Compound P90FD	68090	NLGI 1	A state-of-the-art, high performance lubricating compound specifically formulated to fulfill the extremely demanding lubrication requirements of the Bucyrus International Monighan rolling cam system. Forms a resilient, tenacious black film on both the cam and rail while providing unsurpassed friction and temperature control. Contains no heavy metals and is environmentally friendly. This product exceeds the performance requirements of both Scopes A and B of the Bucyrus International SD4170 Specification for a Monighan Rolling Cam Lubricant. Also available in 1/2 pound bags. P90FD/1 can be applied through a standard centralized lubrication system. Useful temperature range >-5°C (>23°F).	Semi-Synthetic
Bel-Ray Molyube Cam Compound P90FD/1	68091	NLGI 1		
Bel-Ray Cam Compound K-9A	57100	See Product Data Sheet	A product based on a non-asphaltic paraffinic base oil that provides continuous wear control. It is specifically formulated with custom blended lubricating solids to meet the lubrication requirements of the Bucyrus International Monighan rolling cam system. Can also be used for high temperature open gears in industrial applications such as cement kilns. Proven in use for nearly three decades on the Bucyrus International Monighan cam. It is environmentally friendly and can be applied by hand or automatic lubrication system. Useful temperature range >-4°C (>25°F).	Mineral Oil
<b>PROPEL MECHANISMS: CAM &amp; SLIDE</b>				
Bel-Ray Cam and Slide Lubricant	64330 64310 64300	Light Medium Heavy  See Product Data Sheet	A product specifically formulated to exceed the requirements of Bucyrus 2500W Series dragline cam and slide propel mechanism. Its exceptional Extreme Pressure properties provide protection for plain bearings and sliding surfaces while reducing metal-to-metal contact and minimizing component wear under the severest operating conditions, thereby extending component life. Its unique mechanical stability maintains the necessary viscosity even under high load and high shear conditions. The product can be pumped through auto-lube systems without degradation to the lubricant or its properties.	Mineral Oil
<b>ROLLING STOCK: MOTORS</b>				
Bel-Ray 21st Century Motor Oil	61560 61580 61510	SAE 10W-30 T14 SAE 15W-40 T14 SAE 20W-50 T14	This is an exceptional motor oil formulated for use in diesel and gasoline engines where reduced consumption and extended oil drain intervals are desired. Provides superior lubrication performance in heavy-duty diesel or gasoline engine applications commonly found in the mining, transportation and marine industries. It is normal to experience extended engine life with Bel-Ray 21st Century Motor Oil. See Product Data Sheet for name grades and API Service Classifications.	Mineral Oil
<b>ROLLING STOCK: TRANSMISSIONS</b>				
Bel-Ray TL-4 Lubricant	66020 66040	SAE Grade 30 SAE Grade 50	A high-quality transmission and drive train oil that meets the requirements of Caterpillar TO-4 Specification while exceeding anti-wear requirements.	Mineral Oil
<b>ROLLING STOCK: DIFFERENTIALS &amp; FINAL DRIVES</b>				
Bel-Ray 100 Gear Oil	21440 21460 21480	ISO VG 220 ISO VG 320 ISO VG 460	An excellent extra heavy-duty gear oil formulated for all types of gearing. Exceptional Extreme Pressure and anti-wear properties. Superior thermal stability and excellent demulsibility. Exceeds manufacturers' specifications. 30-year history of component life extension. Grade ISO VG 460 is certified for Bucyrus International SD4721 Part A Specification for dragline enclosed gear case lubricant. Grade ISO VG 220 is Bosch Rexroth approved. Boasts 100 pound Timken OK Load, 12 loading stages of the FZG Test and 4500 pounds on the Falex EP Test.	Mineral Oil
Bel-Ray DFD High Performance Gear Oil	58250 58260	SAE 80W-90 SAE 85W-140	Standard API GL-5/Mil-L-2105D gear lubricant. Meets the requirements of many mining, transportation and process OEMs.	Mineral Oil



Product Name	Product No.	Product Grade	Product Description	Product Base Fluid
Bel-Ray Synthetic Gear Oil	66900 66920 66940	ISO VG 220 ISO VG 320 ISO VG 460	A totally synthetic hydrocarbon and ester combination Extreme Pressure gear lubricant. Outstanding Extreme Pressure and anti-wear properties as well as excellent viscosity-temperature properties. Extremely low coefficients of friction and traction coefficients. Compatible with mineral oils. Grades ISO VG 220, ISO VG 320, ISO VG 460 are approved by Flender. Grade ISO VG 460 is approved by LeTourneau. Grades ISO VG 220, ISO VG 320, ISO VG 460 are approved by Bosch Rexroth. Grades ISO VG 320, ISO VG 460 are certified for Bucyrus International SD4721 Part A Specification for dragline enclosed gear case lubricant.	Synthetic
Bel-Ray TL-4 Lubricant	66050	SAE Grade 60	A high-quality drive train oil that meets the requirements of Caterpillar TO-4 Specification. Outstanding Extreme Pressure properties, maximizing the life of gears and bearings when operating in high temperature, high load applications. Resists oxidation, minimizes varnish and sludge formation during severe operating conditions. Exceptional performance in off-highway haul truck differentials and final drive applications subjected to excessive stress.	Mineral Oil

## ROLLING STOCK: MOTORIZED WHEELS

Bel-Ray Synthetic Gear Oil	66900 66920 66940 66960	ISO VG 220 ISO VG 320 ISO VG 460 ISO VG 680	A totally synthetic hydrocarbon and ester combination Extreme Pressure gear lubricant. Outstanding Extreme Pressure and anti-wear properties as well as excellent viscosity-temperature and micropitting prevention properties. Extremely low coefficients of friction and traction coefficients. Compatible with mineral oils. Grade ISO VG 460 is approved by LeTourneau. Grade ISO VG 680 is approved by General Electric for wheel motor application.	Synthetic
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## ROLLING STOCK: HYDRAULICS

Bel-Ray Anti-Wear Lubricant	56010 56020 56030 56040 56050	ISO VG 22 ISO VG 32 ISO VG 46 ISO VG 68 ISO VG 100	A high performance anti-wear fluid designed to meet the requirements of modern high performance pumps and hydraulic systems operating under high loads or exposed to broad temperature ranges. Contains foaming, corrosion and oxidation inhibitors.	Mineral Oil
Bel-Ray Raylene Multi-Vis Hydraulic Oil 520	71750	ISO VG 46	An ashless, premium quality, multi-viscosity hydraulic oil designed for high and low pressure hydraulic systems. Contains foaming, corrosion and oxidation inhibitors. Its high Viscosity Index and low pour point eliminate pump cavitation while providing maximum protection. Approved by Racine.	Mineral Oil
Bel-Ray Bio-Bel Hydraulic Oil	56790	ISO VG 32	A non-toxic, ashless, biodegradable, anti-wear hydraulic fluid that meets the requirements of most major hydraulic pump manufacturers. Nearly 75% biodegradable according to OECD 301 Standard Test.	Synthetic

## ROLLING STOCK: CHASSIS & OTHER GREASE POINTS

Bel-Ray Molyube HD Auto-Chassis Grease	68800 68820 68840	NLGI 0 NLGI 1 NLGI 2	A lithium complex grease fortified with Extreme Pressure and anti-wear properties. Contains 5% molybdenum disulfide. Approved by Terex Unit Rig for use where Terex T5124 greases are specified.	Mineral Oil
Bel-Ray Molyube SP Lubricant	69530 69480 69500	NLGI 0 (SP 4) NLGI 1 (SP 5) NLGI 2 (SP 6)	An aluminum complex grease fortified with excellent Extreme Pressure and anti-wear properties. 4-Ball EP Test performance – 800+ kg Weld Load and 135 kg Load Wear Index. Maximum wear protection. 5% molybdenum disulfide. SP-4 is approved by Caterpillar. Useful temperature range -18°C to 177°C (0°F to 350°F).	Mineral Oil ISO VG 220
Bel-Ray Molyube SP-4 Lubricant	69360 69510 69520 69530	NLGI 0 NLGI 0 NLGI 0 NLGI 0	An aluminum complex grease fortified with excellent Extreme Pressure and anti-wear properties. 4-Ball EP Test performance – 800+ kg Weld Load and 135 kg Load Wear Index. Maximum wear protection. 5% molybdenum disulfide. Product is approved by Caterpillar. Useful temperature range -40°C to 79°C (-40°F to 175°F).	Mineral Oil ISO VG 46 (69360) ISO VG 100 (69510) ISO VG 150 (69520) ISO VG 220 (69530)

■ = SYNTHETIC/SILICONE LUBRICANTS    ■ = BIODEGRADABLE LUBRICANTS    □ = MINERAL OIL LUBRICANTS    ■ = RUST PREVENTIVES

Product Name

Product No.

Product Grade

Product Description

Product Base Fluid

## ROLLING STOCK: CHASSIS & OTHER GREASE POINTS continued

Bel-Ray Molylube 126 EP Grease	23201 23200 23220 23230 23240 23242	NLGI 00 NLGI 0 NLGI 1 NLGI 1 NLGI 2 NLGI 2-460	A severe-duty, impact resistant, aluminum complex grease fortified with Molylube solids. Excellent Extreme Pressure capabilities. Outstanding mechanical and thermal stability. Exceptional water washout resistance, rust and corrosion protection. Grades 00, 0, 1, 2-460 are Bucyrus International certified for the Bucyrus SD4711 Specification for multipurpose grease. Useful temperature range -12°C to 177°C (10°F to 350°F).	Mineral Oil ISO VG 150 ISO VG 150/220 (23240) ISO VG 460 (23242)
Bel-Ray Molylube AC 1000 Grease	40881 40890 40900 40920 40922	NLGI 00 NLGI 0 NLGI 1 NLGI 2 NLGI 2-460	An aluminum complex multipurpose grease fortified with Molylube solids for effective heavy-duty service. Outstanding mechanical and thermal stability to withstand shock and heavy loading found in severe environments of mining, construction and process industries. Exceptional water washout resistance, rust and corrosion protection. Exhibits good cohesive and adhesive characteristics. Grades 00, 0, 1, 2-460 are Bucyrus International certified for the Bucyrus SD4711 Specification for multipurpose grease. Useful temperature range -26°C to 177°C (-15°F to 350°F).	Mineral Oil ISO VG 150 ISO VG 220 (40920) ISO VG 460 (40922)
Bel-Ray Molylube LC131 Grease	27660 27670 27680 27690 27692	NLGI 00 NLGI 0 NLGI 1 NLGI 2 NLGI 2-460	A lithium complex grease fortified with molybdenum disulfide at 1%. Excellent Extreme Pressure capabilities. Outstanding mechanical and thermal stability. Exceptional water washout resistance, rust and corrosion protection. Grades 00, 0, 1, 2-460 are Bucyrus International certified for the Bucyrus SD4711 Specification for multipurpose grease. Useful temperature range -18°C to 177°C (0°F to 350°F).	Mineral Oil ISO VG 150 ISO VG 220 (27690) ISO VG 460 (27692)
Bel-Ray Molylube LC135 Grease	67800 67810 67820 67830 67832	NLGI 00 NLGI 0 NLGI 1 NLGI 2 NLGI 2-460	A high performance lithium complex grease fortified with molybdenum disulfide at 5% as recommended by many equipment manufacturers. Excellent Extreme Pressure capabilities. Outstanding mechanical and thermal stability. Exceptional water washout resistance, rust and corrosion protection. Grades 00, 0, 1, 2-460 are Bucyrus International certified for the Bucyrus SD4711 Specification for multipurpose grease. Useful temperature range -18°C to 177°C (0°F to 350°F).	Mineral Oil ISO VG 150 (67800) ISO VG 150 (67810) ISO VG 220 (67820) ISO VG 220 (67830) ISO VG 460 (67832)

## SERVICE PRODUCTS: AIR COMPRESSORS

Bel-Ray Compuvac Oil	57400 57420 57440 57460 57480	ISO VG 46 ISO VG 68 ISO VG 100 ISO VG 150 ISO VG 220	A high performance compressor oil designed for rotary and reciprocating compressors as well as most vacuum pumps. Superior anti-wear, thermal stability and clean operating. See Product Data Sheet for grades, temperature ranges and application instructions.	Mineral Oil
Bel-Ray DEB Compressor Lube	58140 58160 58180 58150 58200	ISO VG 32 ISO VG 46 ISO VG 68 ISO VG 100 ISO VG 150	A superior diester synthetic compressor oil specifically formulated for rotary and reciprocating compressors. (Ashless). Diester technology makes this a very clean, long life compressor lubricant. Low deposit formation. Excellent reliability.	Synthetic
Bel-Ray SC1 Compressor Lube	63530 63550 63560 63570	ISO VG 32 ISO VG 46 ISO VG 68 ISO VG 100/150	An exceptional PAO synthetic compressor lubricant with superior performance designed for rotary and reciprocating compressors. (Ashless). PAO technology makes this a very clean, long life compressor lubricant. Low deposit formation. Excellent reliability.	Synthetic

## SERVICE PRODUCTS: HYDRAULIC SYSTEMS

Bel-Ray Anti-Wear Lubricant	56010 56020 56030 56040 56050	ISO VG 22 ISO VG 32 ISO VG 46 ISO VG 68 ISO VG 100	A high performance anti-wear fluid designed to meet the requirements of modern high performance pumps and hydraulic systems operating under high loads or exposed to broad temperature ranges. Contains foaming, corrosion and oxidation inhibitors.	Mineral Oil
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Product Name	Product No.	Product Grade	Product Description	Product Base Fluid
Bel-Ray Raylene Multi-Vis Hydraulic Oil 520	71750	ISO VG 46	An ashless, premium quality, multi-viscosity hydraulic oil designed for high and low pressure hydraulic systems. Contains foaming, corrosion and oxidation inhibitors. Its high Viscosity Index and low pour point eliminate pump cavitation while providing maximum protection. Approved by Racine.	Mineral Oil
Bel-Ray Bio-Bel Hydraulic Oil	56790	ISO VG 32	A non-toxic, ashless, biodegradable, anti-wear hydraulic fluid that meets the requirements of most major hydraulic pump manufacturers. Nearly 75% biodegradable according to OECD 301 Standard Test.	Synthetic
<b>SERVICE PRODUCTS: PENETRATING OILS</b>				
Bel-Ray 6 in 1	12300	ISO VG 2	A water displacing penetrating lubricant with multiple uses. Helps bust rusted nuts, lubricates wire ropes, cable, chains, hinges, tools, etc. Its Extreme Pressure additives provide high film strength. Cleans as it lubricates and provides excellent rust protection. Also available in aerosol. The best all-purpose spray lubricant available.	Mineral Oil / Solvent
Bel-Ray Bio-Bel 6 in 1	12350	ISO VG 3	A thin film, biodegradable, multipurpose fluid lubricant that contains special additives which provide high film strength to resist metal-to-metal contact and reduce wear.	Semi-Synthetic / Solvent
<b>SERVICE PRODUCTS: RUST PREVENTIVES</b>				
Bel-Ray RP-30	15600	See Product Data Sheet	A waxy type barrier film rust preventive. Provides maximum protection in severe environments. Excellent for any stationary rope application. For parts storage, a 5 mm to 7 mm film will provide covered outdoor protection for up to two years and indoor protection for up to three years. Apply by spray, dip or brush.	Rust Preventive and Carriers
<b>SERVICE PRODUCTS: ROCK DRILLS &amp; PNEUMATIC TOOLS</b>				
Bel-Ray Pneumatic Tool Lubricant 100	62620	ISO VG 22	Designed for severe service in oil-lubricated pneumatic tools, controls and valves. Eliminates gumming, rusting and corrosive build-up. Keeps airlines free of water.	Mineral Oil
<b>SERVICE PRODUCTS: THREAD COMPOUNDS</b>				
Bel-Ray Molylube Tool Joint Compound L-94	21000	NLGI 2	Developed for severe applications such as those found in surface and underground mining rock drills and rotary head drills. Recommended for applications involving high temperature and pressure, vibration and worn or damaged threads. Provides optimum protection even when threads become very hot. Excellent rust prevention and wear protection while ensuring easy disassembly properties with low breakout torques.	Mineral Oil
Bel-Ray Molylube Tool Joint Compound A-25	21020	NLGI 2	A sprayable high-melting grease that can lubricate threaded drill pipe connectors prior to "make up". Its adhesive property assures the product to stay in application during all phases of the drilling operation. Absence of lead, antimony or other heavy metals create low environmental impact. Excellent rust prevention properties. Lubricating solids prevent seizing and galling, ensuring easy assembly and disassembly.	Mineral Oil

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