

PROPERTIES

- Corrosion protection
- Rust remover
- Dust/dirt remover
- High pressure
- High speed
- Low speed
- Strong lube-film
- Penetrating
- Water/humidity expulsion
- High temperature (>200°C)
- Normal temp. (<200° and >-30°)
- Low temperature (<-30°C)
- Adhesive
- Stability
- Resistant to acids
- Resistant to bases
- Resistant to salts
- Food industry - direct contact
- Food industry - indirect contact

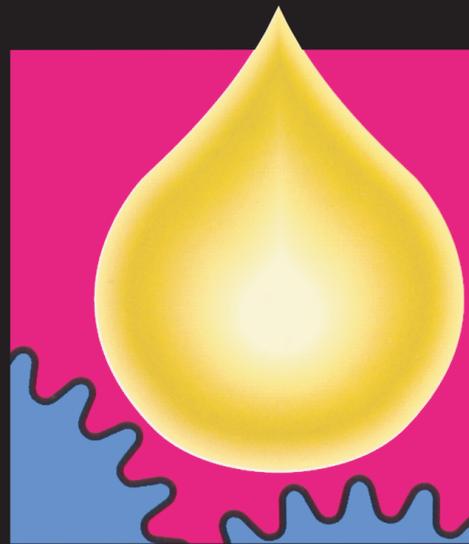
APPLICATIONS

- Open lubrication
- Closed crankshaft
- Central lubrication
- Roller bearing - Chains
- Chains - general
- Chains - heavy load
- Chains - high speed
- Chains - high temperature
- Chains - large joints
- Usable under open sky
- Pneumatic
- Twistlock / Frontage racks
- Wire - Steelrope
- Bearing w/washer
- Sliding rails - open bearing
- Additive gas-engine
- Additive diesel-engine
- Additive liquified gas-engine
- Additive hydraulic system
- Additive screw compressor
- Additive flask compressor
- Additive coarse compressor
- Additive gear case
- Additive variator
- Additive worm gear

VG	VG-HT	VG-ET	T&D	Jeep	OGW	PO	DL	SG	Anti-S	SC	ZiGa	MP	RO	BC	B1	B2	BGC7	BTO	BIO-30	FIO	FIG	BASC	MPG	MPG soft	NMG	N-720	N1-720	LTG
Green	Green	Green	Green	Green																								
Blue	Blue	Blue	Blue	Blue																								
Yellow	Yellow	Yellow	Yellow	Yellow																								
Red	Red	Red	Red	Red																								
Black	Black	Black	Black	Black																								

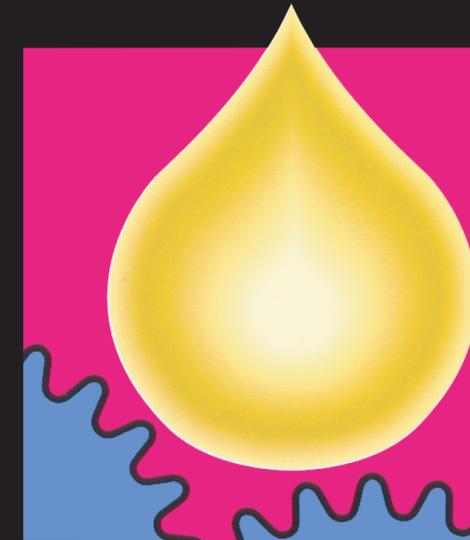
Green																												
Blue																												
Yellow																												
Red																												
Black																												

- Very good
- Good
- Applicable
- Not applicable
- Not relevant



BIRAL

BIRAL Special lubricants. A Norwegian product which solves the most difficult lubricating tasks within all areas of the industry - all over the world.



THIS IS HOW BIRAL WORKS

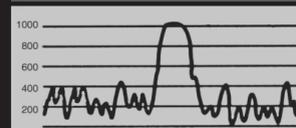
Seen under a microscope any clean and polished steel plate is represented by numerous peaks and valleys.



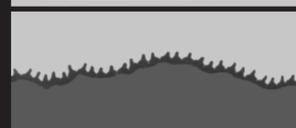
The real contact points f.inst. between plane steel plates are very small and local pressure is therefore very high.



Temperature intervals between 300 and 1,000 degr.C. on moving steel plates are frequently occurring



This development of very high temperatures normally breaks down almost every type of lubrication. By means of resistant polar molecules, BIRAL is building up a great adherence to the metal surface.



BIRAL LUBRICANTS

NORWAY A.S is specialized in lubricants with a remarkably strong lubricating film

By means of large polar molecules, BIRAL builds up a smooth and strong lubricating film with high adhesive properties. The friction as well as wear and energy consumption is being reduced dramatically

BIRAL is developed and manufactured in Norway and is being marketed all over the world.

BIRAL is market leader in hightechnological market segments in many of the most advanced industrialized countries.

Extensive and repeated tests by among others TI (Teknologisk Institutt) in Norway and Yamazaki Seiki Institute in Japan shows that BIRAL has products that give better corrosion protection than any other known lubricant.

BIRAL has special products for lubrication of engines, machines and equipment in all sectors of the industry - from electronics to mechanics, from heavy industry to agriculture and the food industry.

BIRAL has almost 60 years of international experience in solving "impossible" lubricating problems

SPECIAL LUBRICANTS

SPECIALSMØREMIDLER

SPECIALSMØREMIDLER

SPECIALSMØRMEDEL

LUBRIFIANTS SPÉCIAUX

LUBRIFICANTI SPECIALI

LUBRIFICANTES ESPECIALIS

SPECIALNO MAZIVO

LUBRICANTES ESPECIALES

SPECIALNO MAZIVO

СПЕЦИАЛЬНЫЕ СМАЗОЧНЫЕ МАТЕРИАЛЫ

KÜLÖNLEGES KENŐANYAGOK

SPEZIAL SCHMIERMITTELN

SPECIALE SMEERMIDDELEN

POSEBNO MAZIVO

SPECIALNO MAZIVO

น้ำมันหล่อลื่น พิเศษ

特殊潤滑劑

特殊潤滑劑

BIRAL

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There is a BiRAL-product for any lubricating need. There is no lubricating function that cannot be improved, or lubricating problems that cannot be solved, by the correct use of BiRAL.



LUBRICANTS AND GREASES supplied in spray cans (*=product is also available in unpressurised containers)

VG visco grease (operates to +130°C)*.

Applied as a thin, easy-flowing liquid, Biral VG penetrates deeply before changing into a long fibred, highly adhesive non-drip grease film. VG is electrically NON-CONDUCTIVE and gives outstanding protection from corrosion. VG solves many lubrication problems.

JEEP powerful combination cleaner and lubricant.

Jeep is a very high quality, water repellent, strong lubricant and cleaner which also provides good rust protection. Jeep cleans off dirt, pollution, soot, contamination etc. and leaves a strong lubricating film. Unlimited industrial, maritime & domestic applications.

ANTI SEIZE (operates from -18°C to +1,100°C)*.

Highly resistant to water, naked flames and most chemicals, ANTI-SEIZE is a high pressure lubricant which prevents metal-to-metal contact and protects against galvanic corrosion in extremes of temperature. Apply to threads and screws for easy disassembly and re-use of components. Also improves torque tension on bolts etc. Resists drying out. Also see Biral BASC

VG-HT visco grease/high temperature (operates from -20°C to +270°C)*.

Sprayed initially as a thin liquid, VG-HT rapidly penetrates to normally inaccessible parts/components before setting to its grease consistency. The fine, non-drip grease film is incredibly strong and water repellent. Independent tests prove VG-HT to have the best corrosion inhibiting properties of all known lubricants even against SO₂ (atmospheric corrosion). Excellent for lubricating precision components in plastics & electronics manufacture, production tools, gear wheels, sliding surfaces, offshore/maritime equipment eg: wire ropes, chains etc. where corrosion causes problems.

OGW open gear and wire compound (operates from -25°C to +200°C)*.

OGW is designed to provide an extremely long lasting, lubricating and anti-wear grease film for open gears, wire ropes and chains. OGW penetrates deeply, is water repellent, protects against rust and can be used under water. Extends service intervals.

FIO food industrial oil (operates from -25°C to +150°C)*.

FIO is a pure non-toxic, harmless, colorless, odourless and tasteless transparent oil liquid, manufactured by medical white oils with extreme high pressure and anti-wear performance. Ideal in food processing, bakery machines and equipment, breweries, cosmetics-, textile- and pharmaceutical industry. Meets FDA class A requirements and specifications for use where incidental food contact in and around food processing area is possible.

VG-ET visco grease extreme temperatures (operates from -34°C to +270°C)*.

A powerful synthetic lubricant which is sprayed as a thin liquid, penetrates deeply to inaccessible parts and sets to create a thin but unbelievably strong water repellent grease film. Consists of long fibres and has excellent adhesion properties. Leaves no carbon at high temperatures.

PO penetrating oil*.

Biral PO is a combined rust remover and lubricant. PO has exceptional penetrating qualities, rapidly freeing rusted or seized parts and its thin film prevents future rust and corrosion.

FIG liquid food industry grease (operates from -30°C to +230°C)*.

Multipurpose grease for ball-, roll-, sleeve bearings, slide-ways where food contact is possible. Strong lube-film, less wear, water- and corrosion protective. No drip - longer service intervals - ideal for chains & wires. Produced by white oils according to Nordic pharmacopoeia and NSF's rules for incidental food contact (H1).

T&D aerosol (operates from -40°C to +200°C)*.

Biral T&D is a high pressure, precision lubricant which provides very long term clean lubrication. T&D provides an enormously strong, almost unbreakable lubricating film which fights corrosion and acid attack. T&D is outstanding for all steel-to-steel applications and provides excellent lubrication across a vast range of applications esp. in electronics and plastics production. Also see T&D Fluid

SG silicone grease (operates from -50°C to +200°C)*.

For the lubrication of plastic, nylon, rubber, synthetic fibres, bushing and gears. Protects against corrosion; lubricates, isolates and preserves. Non toxic, heat stable and chemically neutral. Manufactured to give best possible results for the widest range of applications.

ANCILLARY PRODUCTS supplied in spray cans.

SC surface cleaner for all types of metals and most plastics.

Biral SC is a water displacing agent for cleaning electrical motors, brush holders, bearings, armatures etc. SC is non-corrosive and rapidly removes oil and grease - evaporates quickly without leaving any oil film.

ZI-GA Cold Zinc Galvanize .

Biral Zi-Ga is a one-component corrosion-inhibiting zinc coating for individual components which provides electro-chemical contact with metal. Stops corrosion and provides galvanic protection. Biral Cold Zinc Galvanize protects almost as effectively as galvanization. For use on anchors and other equipment exposed to wear and salt water. Steel structures, radio masts, high-voltage pylons, relay towers, connection boxes and transformers, etc.

MP mould/machinery protector.

Biral MP is possibly the best anti-corrosion spray available. It provides a dry film which protects all metals for up to 18 months, even if exposed to the elements on land or sea. MP has good lubricating properties and shows no negative influence on plastics or rubbers. Use MP to protect moulding tools, components and machinery during storage or transportation.

RO resin off - 'universal' cleaner for plastics/rubber mould tools.

Biral RO's special resin stripping solvent rapidly removes virtually all thermoplastic materials including polyacetal, PUs, even flame retardant resins and rubbers. RO also removes baked/plated-on deposits of old mould release and other deposits which occur during moulding. RO's grease and grime removing properties can be utilised around the factory, garage or home.



ADDITIVES/LIQUID LUBRICANTS/OILS supplied in cans and drums

T&D fluid.

The performance of recommended mineral oils and/or hydraulic fluids can be vastly improved by adding Biral T&D. While reducing friction and temperature T&D builds up an enormously strong, almost unbreakable lubricating film. T&D fluid is excellent for high speed gears and transmissions, cylinders, crankshafts, valve-guides etc. Also see Biral T&D spray.

B II oil stabilizer.

B II added 10-20% to all recognised mineral lubricating oils improves the operation of worn engines and machines required to operate beyond their normal overhaul periods. B II increases oil pressure, quiets noisy engines, reduces excess oil consumption by forming a thicker oil film which maintains viscosity throughout the entire temperature range.

BIO 30 Biral industrial oil (operates to +300°C)

BIO 30 is an extremely high quality synthetic industrial oil for a wide number of applications. BIO 30 leaves no carbon deposits and is highly oxidation resistant. An outstanding lubricant for conveyors operating under varying conditions/temperatures. BIO 30 is also excellent for compressors, hydraulic systems, mist and central lubrication systems.

BI oil concentrate.

BI is an additive which reduces friction and strengthens load bearing power. It can be added to any approved oil recommended for the lubrication of combustion engines, compressors, central lubrication of industrial machinery eg: printing machines, stone crushers, mills, construction plant etc.. BI prevents excessive temperatures and subsequent breakdowns. Its cleaning ability helps keep machinery and equipment in good condition.

BGC 7 gear concentrate (operates to +90°C)

BGC-7 added to the recommended oil (approx.10%) produces a long-fibred lubricating oil with remarkable adhesive qualities. It is especially suitable for heavily loaded, low-speed gearing and power transmissions. Also ideal for all types of gears, transmissions, worm gears and gears operating in unusual positions/attitudes, eg: lathe beds and eccentric presses.

FIO food industrial oil (operates from -25°C to +150°C).

FIO is a pure non-toxic, harmless, colorless, odourless and tasteless transparent oil liquid, manufactured by medical white oils with extreme high pressure and anti-wear performance. Ideal in food processing, bakery machines and equipment, breweries, cosmetics-, textile- and pharmaceutical industry. Meets FDA class A requirements and specifications for use where incidental food contact in and around food processing area is possible.

BIOCLEANER supplied in cans and drums

BTO fuel additive.

BTO added 0.25% to the fuel (petroleum or diesel) lubricates the "upper cylinder" regions. BTO reduces carbon, keeps jets clean and valves free. Wear on starting is reduced as is condensation and exhaust emissions.

BC Biocleaner (Waterbased degreaser and cleaner).

Biral BC is a unique water based cleaner. Alkaline Neutral, Solvent and Acid Free. Is a highly concentrated water based degreaser: Use it undiluted or diluted in water up to 1:100 - depending on the degree of dirt in the affected area. BC can be applied via normal aerosol bottle if desired. Allow BIRAL BC to work for at least 2 minutes, then thoroughly wash & rinse away with water.



SPECIAL PERFORMANCE GREASES supplied in cartridges, tubs and drums

BASC anti seize & lubricating compound (operates from -54°C to +1000°C)

BASC is an extreme temperature resistant lubricant and anti-seizing grease comprising micro-fined colloidal copper flakes homogenised into a non-volatile, non-melting carrier lube (contains no metallic lead or graphite). BASC prevents stainless steel and dissimilar metals, threads, fasteners etc. from galling, seizure and heat-freeze. permits re-use of components and saves stud and bolt replacement. Enormously wide range of applications. Also see Biral Anti-Seize.

NMG no melt grease NLGI 2 (operates from -20°C to +270°C)

NMG is a long fibred, highly adhesive grease which does not melt or drip at high temperatures - even if ignited. Designed to withstand extremely heavy loadings at high temperatures. NMG also protects against corrosion, even salt water and aggressive chemical attack. Can be used at up to 300°C for short periods with frequent lubricating intervals.

FIG food industrial grease NLGI 2 (operates from -25°C to +230°C).

NSF (USDA) H1 approved high-temp food industry grease where exposure to food may occur. High pressure resistance and anti-wear performance. Anti-rust and oxidation resistance combined with water proofing qualities and good water washout resistance. Area of use: Food and dairy processing, sugar industry, packaging machinery, brewing & bottling industries, fish processing factories. neutral odour, Non-toxic.

MPG multi purpose grease NLGI 2(operates from -30°C to +150°C)

Biral MPG is an excellent grease designed for general applications. Reliable dependable MPG is ideally suited for industrial, agricultural, mining and chemical engineering plants eg: plain/ball/roller bearings. MPG features a strong friction reducing lubricating film which prevents rust and corrosion whilst giving excellent protection against salt water and chemical attack.

N-720 long fibred adhesive grease NLGI 1.

Long fibred adhesive grease which does not drip at high temperatures. Should be used where-ever conventional greases drip or totally disappear over time because of heat, wear or wash-out. Excellent results for slow-running gears under heavy load and extreme environments. Protects against corrosion, salt water and most aggressive chemicals.

LTG low temperature grease NLGI 2 (operates from -50°C to +80°C)

LTG is special lithium based grease designed to operate at severe sub-zero temperatures and freezing conditions: The low pour point of the base oil makes LTG easy to apply or pump at very low temperatures. LTG is recommended for moderately loaded roller bearings, worm gears etc.; instruments and apparatus used in arctic conditions outdoors or in cold storage facilities.

MPG SOFT - multi purpose grease - soft NLGI 00 (operates from -30°C to +150°C)

MPG Soft is a lithium grease of excellent capabilities - containing anti-corrosion and EP additives. Its consistency is semi-fluid equivalent to NLGI 00 and ideal for lubrication of plain/ball/roller bearings through central lubrication systems where good pumpability is required. MPG Soft can even be recommended for lubrication of closed reduction gears and worm gears where leaking of ordinary oils is a problem.

N1-720 long fibred adhesive grease NLGI 2.

Biral N1-720 is a long-fibred adhesive grease similar to Biral N-720, but with a thicker consistency. Also Biral N1-720 is excellently used for slow-running gears, and protects against corrosion, salt water and most aggressive chemicals.