



B I O L U B R I C A N T S

*Product Catalogue*

# CHAIN AND CUTTER BAR LUBRICANTS



Bar & Chain Oils are premium quality, rapeseed oil based lubricants offering excellent lubricity and improved anti-corrosion & anti-wear protection. Bar & Chain Oils are readily biodegradable, non toxic and have naturally superior adhesion to metal. Developed to create safer and healthier work environment and reduce environmental footprint by replacing the usual mineral oil based chain lubricants.

PARAMETER	UNIT	TEST METHOD	Bar&Chain Oil 100	Bar&Chain Oil 150	Bar&Chain Oil 220
Density at 15 °C	kg/m <sup>3</sup>	ISO 12185	935	945	945
Kinematic Viscosity at 40°C	mm <sup>2</sup> /s	ASTM D445	100	150	220
Viscosity Index (VI)			>200	>200	>200
Pour point	°C	ASTM D97	< -20	< -20	< -20
Flash point, COC	°C	ASTM D92	>250	>250	>250
Steel corrosion at 100°C/3h			negative	negative	negative
Biodegradability (within 21 days)	%	OECD 301B	>98	>99	>98

## Bar & Chain Oil 100

Designed for the lubrication of chainsaws, harvester heads, lathes, stationery power saws and other cutting equipment. Universal lubricant for use all year around.

## Bar & Chain Oil 150

Enhanced viscosity for lubrication of stationary power saws and cutting equipment on hot summer days.

## Bar & Chain Oil 220

Suitable for lubrication of stationary power saws and belt conveyors.



*Environmentally Friendly*



# WIRE ROPE BIOLUBE

WIRE ROPE BIOLUBE is a premium range of environmentally friendly synthetic lubricants based on special, highly refined vegetable synthetic esters and state-of-the-art additive technology consisting of water displacing adsorption corrosion inhibitors, penetrants, depressants and adhesion agents.

## WIRE ROPE BIOLUBE 150/460

Thanks to superior adhesion and penetration properties WIRE ROPE BIOLUBE provides improved lubrication to the rope core and reduced rubbing wear and friction between the individual strands. Furthermore

PARAMETER	UNIT	TEST METHOD	ISO VG150	ISO VG 460
Kinematic Viscosity at 40°C	mm <sup>2</sup> /s	ASTM D445	150	460
Pour point °C	ASTM	D97	-45	-40
Flash point, COC	°C	ASTM D92	>230	>230
Steel corrosion at 100°C/3h	1		negative	negative
Viscosity Index	1	ASTM D2270	140	150
Biodegradability (within 21 days)	%	OECD 301B	>70	> 70
Rust test Tap water	1	ASTM D665	Pass	Pass
Salt water	1	ASTM D665	Pass	Pass

WIRE ROPE BIOLUBE provides protection against corrosion, ambient conditions and can safely extend service life of wire ropes regardless of application. WIRE ROPE BIOLUBE is specifically designed for lubri-

cation of wire ropes used in mining, forestry, marine, construction, transport and all other industry applications where lubricant contamination is an environmental concern.

## ENVIRONMENTALLY ACCEPTABLE HYDRAULIC FLUIDS



### Hydraulic Oil PLUS (HEES)

Fully synthetic, environmentally friendly hydraulic fluid based on saturated synthetic esters offering improved lubricity, excellent thermal oxidation stability and cold exposure properties. Hydraulic Oil PLUS provides greater temperature range performance enabling prolonged oil change intervals.

Specification: ISO 15380 / HEES

Produced at viscosity classes: 15/22/32/46/68/100

### PREMIUM Hydraulic Oil (HEES)

Fully synthetic, premium quality, readily biodegradable hydraulic fluid based on saturated synthetic esters providing excellent high pressure and high temperature properties. It offers a multiple extendibility of change intervals and great cold exposure characteristics.

Specification: ISO 15380 / HEES

Produced at viscosity classes: 15/22/32/46/68/100



### BIO Hydraulic Oil (HETG)

Rapeseed oil based readily biodegradable hydraulic lubricants. Produced at three viscosity classes 32/46/68.

### HFC 46 (ISO 6743/4 – HFC)

Special hydraulic fluid based on a water-glycol principle. Recommended for applications requiring a high degree of lubricity and fire resistance. It meets the requirements of the fire resistance approval standards 7th Luxembourg Report and FM Global 6930.

PARAMETER	UNIT	TEST METHOD	PREMIUM ISO VG 46	PREMIUM ISO VG 68	HO PLUS 46	BIO HO 46
Density at 15 °C	kg/m <sup>3</sup>	ISO 12185	908	911	912	917
Kinematic Viscosity at 40°C	mm <sup>2</sup> /s	ASTM D445	46	68	46	46
Kinematic Viscosity at 100°C	mm <sup>2</sup> /s	ASTM D445	9,5	13,1	9,2	9,7
Viscosity Index			196	197	190	203
Pour point	°C	ASTM D97	-57	-57	-40	-34
Flash point, COC	°C	ASTM D92	>220	>220	>300	>250
Biodegradability (within 21 days)	%	CEC-L-33-A-93	>90	>90	>90	>90



# DEMOULDING OILS & RELEASE AGENTS

Readily biodegradable release oils and agents are suitable for system casing, operations of asphalt carriers, pre-casting, concreting, road works etc.

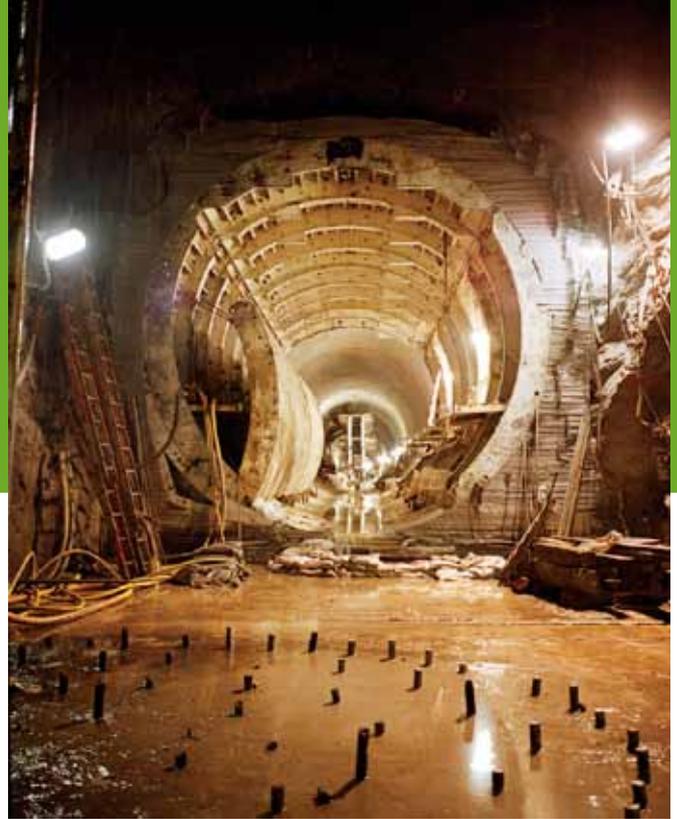
## EcoSEP

Non-stick release agent providing excellent anti-corrosion protection and improved viscosity for pressure spraying applications at 4-8 ATM or using a paint brush and roller.

EcoSep is suitable for stripping of iron, plywood and wood boarding, pressed plastic materials and for asphalt mixture separations. Furthermore is used for separating acrylic model boards from concrete i.e. reinforced cement or solidified kernels from cores. Recommended application thickness is from 12 to 15g/1m<sup>2</sup>.

## EcoSPIROL

Specifically designed for separation of forms in Spirol production. Higher viscosity and special additives create continuous protective film.



*High-Performance  
Bio Oils*



# SMALL ENGINE 2 & 4 STROKE OILS



*Environmentally  
Friendly*

Premium range of fully synthetic engine oils for small capacity 2 Stroke and 4 Stroke engines. BIO 2T and ECO 4T are designed for high-performance and ultimate engine protection. Manufactured using renewable materials to provide environmentally friendly alternative to the usual petroleum based products.



## BIO 2T Oil

Premium full synthetic, low ash & low smoke 2 Stroke formulation, for use in 2T applications involving extreme engine temperatures, and high engine speed & torque.

BIO 2T Oil is recommended engine oil for all hard working, air-cooled 2 Stroke engines (chainsaws, brush cutters, trimmers and other equipment).

### Industry performance standards:

- ISO-L-EGD (JASO FD)
- ISO-L-EGC (JASO FC)
- API TC
- Husqvarna

## ECO 4T Oil

ECO 4T SAE 30 is a premium quality, fully synthetic four-stroke engine oil for high performing engines of small gardening and agricultural equipment requiring SAE30 oil specification. ECO 4T SAE 30 contains modern enhancing agents (oxidation and corrosion inhibitors, detergent-dispersant additives) and offers excellent lubrication properties as well as

improved engine wear protection. ECO 4T SAE 30 is an environmentally friendly alternative to the usual petroleum based products.

### Industry performance standards:

- SAE 30
- API SJ/CF

BIO 2T Oil - PARAMETER	UNIT	TEST METHOD	Typical Value
Density at 15°C	kg/m <sup>3</sup>	ISO 12185	886
Kinematic Viscosity at 40°C	mm <sup>2</sup> /s	ASTM D445	45
Kinematic Viscosity at 100°C	mm <sup>2</sup> /s	ASTM D445	Min. 7,5
Viscosity Index			140
Pour point	°C	ASTM D97	-47
Flash point, COC	°C	ASTM D92	>90
Acid Value	mg KOH/g	AOCS Cd 3d-63	Max. 1
Biodegradability (within 21 days)	%	CEC-L-33-A-93	>90

ECO 4T Oil - PARAMETER	UNIT	TEST METHOD	Typical Value
Kinematic Viscosity at 100°C	mm <sup>2</sup> /s	EN ISO 3104	11,2
Viscosity Index	1	ISO 2909	150
Evaporation Test, Noack	% vol.	DIN 51 581	7
Pour point	°C	ISO 3016	-35
Flash point, COC	°C	EN ISO 2592	220
TBN	mg KOH/g	ISO 3771	8

# 2 STROKE OUTBOARD OIL



*Biodegradable Full Synthetic 2-Cycle Engine Oil. Superior performance NMMA TC-W3® lubricant for outboard, jet-ski and other water-cooled 2-cycle engines.*

## LUBECO 2T OUTBOARD OIL

Provides outstanding detergency in outboard water-cooled 2-cycle engines. This smoke & ash-free formula delivers exceptional protection to the engine's internal components and offers anti-rust & anti-corrosion properties. It also prevents clogging of ports, piston ring sticking and spark plug fouling. Furthermore it is designed to deliver excellent low-temperature performance and rust protection during extended storage periods. LUBECO 2T OUTBOARD OIL meets the new more severe lubricity requirements (AF27 Lubricity test) in NMMA TC-W3® specification and is readily biodegradable in the natural environment.

### Application

- Meets the warranty requirements for water-cooled

2-cycle engines manufactured by Chrysler, Evinrude, Force, Johnson, Mariner, Mercury, OMC, Suzuki, Yamaha ...

- Suitable for both pre-mix and direct oil injection systems
- Mixing with the fuel should be in accordance with the manufacturer's recommendations

### Specifications

- JASO, API
- OEM APPROVALS: NMMA TC-W3® Registration Number RL-33301R



# GEAR OILS

Fully synthetic, environmentally friendly, high-performance gear lubricants suitable for use in agricultural, forestry and earth-moving machinery and other industrial operations. Developed to replace the usual mineral oil based lubricants to reduce the environmental impact.



## ECOGEAR SYNTH

Fully synthetic, readily biodegradable and high performance gear oil. Designed to meet the most demanding requirements through enhanced wear protection properties and system efficiency.

PARAMETER	UNIT	TEST METHOD	ISO VG 150	ISO VG 220	ISO VG 320	ISO VG 460
Density at 15 °C	kg/m <sup>3</sup>	ISO 12185	925	932	940	947
Kinematic Viscosity at 40°C	mm <sup>2</sup> /s	ASTM D445	150	220	320	460
Kinematic Viscosity at 100°C	mm <sup>2</sup> /s	ASTM D445	16	28	37	50
Pour point	°C	ASTM D97	-30	-30	-30	-30
Flash point, COC	°C	ASTM D92	>270	>270	>270	>270
Biodegradability (within 21 days)	%	CEC-L-33-A-93	>80	>80	>80	>80

# CONSERVATION OILS



High-quality, readily biodegradable conservation oils containing very effective adsorption corrosion inhibitors. LUBECO Conservation Oils are used for protection of metal materials against atmospheric corrosion and are recommended to replace the usual mineral oil based conservation oils.



## BK 70

Premium quality conservation oil offering ultimate anti-corrosion properties.

## BK 70S

Premium quality conservation oil containing very effective adsorption corrosion inhibitors. Specifically developed for use in sea transport operations.

PARAMETER	UNIT	TEST METHOD	BK 70	BK 70S
Density at 15 °C	kg/m <sup>3</sup>	ISO 12185	905	880
Kinematic Viscosity at 40°C	mm <sup>2</sup> /s	ASTM D445	70	70
Pour point	°C	ASTM D97	-35	-35
Flash point, COC	°C	ASTM D92	>200	>200
Oil film weight at 20°C	Kg/100m <sup>2</sup>		2.3	2.3
Biodegradability (within 21 days)	%	CEC-L-33-A-93	>90	>90





## FOOD GRADE

Readily biodegradable oils and plastic lubricants with special additives and improved lubrication properties. Specifically developed for food industry applications and safe for consumption. Suitable for dough separation, greasing of forms & food processing machines and general lubrication. LUBEKO Food Grade lubricants create safer & healthier work environment.

### PROBECO Oil

Premium lubricant based on a mixture of saturated and unsaturated fatty acids and special modern food grade additives. PROBECO Oil provides excellent lubrication properties for use in dough separation, form greasing and other food processing applications.

### PROBECO Oil MULTI

Sunflower oil based multifunctional lubricant for lubrication of food processing machines. Providing ultimate lubrication and stability.

PARAMETER	UNIT	TEST METHOD	Probeco Oil	Probeco Oil MULTI
Density at 15 °C	kg/m <sup>3</sup>	ISO 12185	912	915
Kinematic Viscosity at 40°C	mm <sup>2</sup> /s	ASTM D445	35	40
Pour point	°C	ASTM D97	-33	-11
Flash point, COC	°C	ASTM D92	>220	>300
Biodegradability (within 21 days)	%	CEC-L-33-A-93	>90	>99

## GREASE

*Premium  
Bio Lubricants*

### BIOGEL

Multifunctional synthetic complex grease blended with modern additives. BIOGEL is specifically designed for use in the food processing industry.

### BIOGEL SE

Premium synthetic complex grease offering improved stability and universal applicability. Suitable for a wide range of automotive, marine, agricultural, forestry and other industrial applications.

### BIOGEL AP2

Premium grade vegetable oil based grease for wide range of industrial applications. Recommended for general use, particularly in environmentally sensitive areas.

PARAMETER	BIOGEL	BIOGEL SE	BIOGEL AP2
Penetration class NLGI	2	2	2
Kinematic Viscosity at 40°C (mm <sup>2</sup> /s)	32	38	32
Base oil	Refined rapeseed oil	Synthetic oil	Refined rapeseed oil
Thickening phase	Al/Ca + inorganic hardener	Al/Ca + special hardener	Al/Ca + hardener
Dropping point	180	190	180
Water-proof	0	0	0
Copper corrosiveness	1a	1a	1a
Steel corrosiveness	negative	negative	negative



# UNIVERSAL LUBRICANTS

Readily biodegradable multi-functional lubricants with improved lubricating and protective characteristics. Designed for general lubrication, greasing and protection of all mechanical equipment.

## EcoUNI

Universal tractor oil, thermally manufactured from synthetic saturated esters and blended with a well-balanced formulation of additives. EcoUNI offers increased lubrication capacity and abrasion protection. Exceptional anti-friction properties and texture, provide effective anti-corrosion protection, even at broad range of humidity and temperature. EcoUNI surpasses other oils in terms of functional characteristics and stability. Recommended product for gear-type transmissions, hydraulic systems and wet brakes, particularly when working in envi-



PARAMETER	UNIT	TEST METHOD	Value
Density at 15 °C	kg/m <sup>3</sup>	ISO 12185	931
Kinematic Viscosity at 40°C	mm <sup>2</sup> /s	ASTM D445	68
Kinematic Viscosity at 100°C	mm <sup>2</sup> /s	ASTM D445	11
Viscosity index	-	ASTM D2270	160
Dynamic viscosity Brookfield at -20 °C	mPa.s	ASTM D 2983	6,5
Dynamic viscosity Brookfield at -30 °C	mPa.s	ASTM D 2983	23
Corrosion at Cu, 100 °C / 3 hours		ISO 2160	1a
Pour point	°C	ASTM D97	-48
Flash point, COC	°C	ASTM D92	>200
Biodegradability (within 21 days)	%	CEC-L-33-A-93	>80

ronmentally sensitive areas. EcoUNI is completely degradable in the soil (with the aid of microorganisms), therefore meets the most demanding requirements of tractor and mobile machinery manufacturers as well as environmental protection standards.



## BIOSYNT 40V

Superior, fully synthetic multifunctional lubricant and rust & corrosion inhibitor. Ideal for use on all mechanical equipment, specific industrial applications as well as domestic use around workshop or garden. In industrial sector is BIOSYNT 40V used by many railway maintenance services for lubrication of switch points and switch plates. BIOSYNT 40V forms a long lasting extremely thin protective film to prevent friction, wear, rust & corrosion, and displace moisture. BIOSYNT 40V is environmentally non-toxic and readily biodegradable. Specifically developed to outperform and replace the usual petroleum-based products. BIOSYNT 40V is available in liquid and aerosol application.

### Lubricates

Hinges, rollers, wheels, springs and anything else that sticks, squeaks and creaks.

### Cleans and Protects

Removes mechanical impurities, carbon deposits, tar, adhesives. Creates strong oil film to prevent rust and corrosion.

### Penetrates

Rusted and sticking parts, bolts, nuts and other parts of fasteners, door locks, bicycles, fishing equipment, etc.

### Displaces Moisture

From electrical contacts and spark plugs of motorcycles, mowers, chainsaws, hedge trimmers, etc.