

Statoil Bio-lubricants

Some steps in the right direction



Consideration for the environment, are we the right people to talk about this?

Even in our line of business, it is possible to act responsibly and to do everything to minimise the impact on nature. Our efforts are not enough to combat climate change or to ensure a sustainable future. Nevertheless, just as for everyone else - every little counts.

Irrespective of what fuels the machines of the future, specially developed lubricants will be needed to reduce friction, which in turn increases efficiency and reduces energy consumption. For over twenty years, we have invested consciously in developing lubricant solutions that meet the demands of the future for high performance and increased harmonisation with a sustainable society. We have always seen the function of our solutions as being most important from an environmental perspective. Because, regardless of how environmentally friendly a product is, it only makes a positive contribution if it does the job it is supposed to do.

We call them Environmentally Considerate Choice or ECC, where some are biologically degradable and kinder to both people and the environment. Others reduce energy consumption and, in this way, they save both money and reduce carbon dioxide emissions. In this brochure we would like to present our range of bio-lubricants that make no compromises with efficiency and performance.



Performance with environmental consideration

Apart from legislation and regulations, most companies today have an environmental policy. Showing environmental consideration has become a matter of course for all companies and is, at times, even a competitive advantage. A change to bio-lubricants is a simple way to make a difference, since they are biodegradable and are based on renewable raw materials. This is important since only a third of all lubricants used in the world are collected. The rest remain in nature.

We have maintained a long-term focus on these products for more than two decades and our work has been characterised by a large portion of curiosity and ambition. This has meant that we have been constantly advancing these positions and, today, we are proud to present a breadth of range and development prowess that is unique in the world. Our synthetic high-performance bio-lubricants are efficient problem-solvers which, in many cases, are better than the traditional lubricants. This means that everyone is able to make a good environmental choice today without compromising performance.



Sustainable solutions

When we talk about bio-lubricants, we are referring to products based on biodegradable base fluids that are not harmful to aquatic environments.* The majority are based on high-technology synthetic esters and we strive to ensure that as great a part as possible is based on renewable raw materials.

We develop our products at the Research and Development Department in Nynäshamn, Sweden. This often take place in close cooperation with our customers, universities and other specialists around the world. This enables us to offer our customers high-tech concepts where we taken lubricants to a new level. Our ambition is to be the leading producer of lubricants which significantly improve performance and at the same time have a minimal negative impact on the environment.

* Our exact definition of bio-lubricant:
Biodegradable to at least 60% in accordance with OECD test 301 B or F (corresponding to ISO 9439 or ISO 9408)
for each of the main components (base fluids) and/or more than 50% of the product from renewable sources.

A broad range for all industries

	Power industry	Offshore	Marine	Building and construction	Forestry and agriculture	Metalworking	Manufacturing
AquaWay Bio			x				
ChainWay Bio				x	x		
ChainWay SE					x		
CutWay Bio 250						x	
CutWay Bio 610						x	
CutWay Bio 718						x	
DrawWay N 703 Bio						x	
DrawWay N 730 Bio						x	
DrawWay N 760 Bio						x	
FormWay Bio 5				x			
GreaseWay Bio CaH 82	x	x	x	x	x		x
GreaseWay Bio LiX 400	x			x	x		x
HydraWay Bio SE 22	x			x	x		x
HydraWay Bio SE 32	x	x		x	x		x
HydraWay Bio SE 32-68	x	x	x	x	x		x
HydraWay Bio SE 46				x	x		x
HydraWay Bio SE 68				x	x		x
HydraWay SE 46 HP		x	x	x	x		x
HydraWay SE XLV	x						
LoadWay Bio SE 220			x	x	x		x
Multi Dope Yellow	x	x	x	x	x		x
SawingWay Bio V					x		
SternWay Bio 100			x				
TransWay WB Bio				x	x		
TurbWay SE	x						
TurbWay SE LV	x						
UniWay Bio LiX 62			x	x	x		x
WireWay Bio	x	x	x	x	x		x

Power industry

As a result of an extensive research programme with Luleå University of Technology, we have developed unique turbine oils, of which we are especially proud of TurbWay SE and TurbWay SE LV - products that reduce power losses and friction in water turbines, which in turn increases the energy extraction in the power station. Moreover, they are biodegradable and based on renewable raw materials. By choosing the right lubricant, there are major benefits to be gained for both the environment and the wallet.

Products for the power industry

TURBINE OIL

TurbWay SE

High-performance turbine fluid for turbines and control systems in hydro-electric installations. The product is based on synthetic esters specially developed for the purpose. The product has a very high resistance to oxidation and hydrolysis. The tribological properties results in reduced energy loss in bearings. The product is biodegradable. Thanks to its unique composition, the product gives the same oil film thickness as ordinary mineral oils and PAO-based products. Upon bearing lubrication TurbWay SE provides the same film thickness as ISO VG 68. At the same time the loss effects are lower.

TurbWay SE LV

High-performance turbine fluid for turbines and control systems in hydro-electric installations. The product is based on synthetic esters specially developed for the purpose. The product has a very high resistance to oxidation and hydrolysis. The tribological properties results in reduced energy loss in bearings. The product is biodegradable. Thanks to its unique composition, the product gives the same oil film thickness as ordinary mineral oils and PAO-based products. Upon bearing lubrication TurbWay SE LV provides the same film thickness as ISO VG 46. At the same time the loss effects are lower.

HYDRAULIC OIL

HydraWay Bio SE 22 / SE 32

Synthetic ester-based hydraulic fluid developed for hydraulic systems that are in operation all year round under varying conditions. The products are readily biodegradable. The oil's technical and environmental properties make it particularly suitable for forestry and heavy-duty machines. Certain basic rules regarding miscibility with other similar hydraulic fluids have to be observed. DIN 51524 part 3, SS 155434 BV environmentally adapted (ISO VG32, 46), VDMA HEES, Vickers I 286 S/V 104 C, Sauer Danfoss, Rexroth.

HydraWay Bio SE 32-68

Synthetic ester-based hydraulic fluid for hydraulic systems that are to operate over a wide temperature interval. (-30 to 85°C). More than 80 % of the oil is manufactured from renewable raw materials, is readily degradable, has low toxicity for waterborne organisms and produces, at the same time, very high mechanical performance. Extremely shear stable. Uniquely rapid air release. SS 155434 BV 32 environmentally classified, Vickers V-104C, Vickers 35VQ25A, shear test EC-L-45-A-98, 20h: 1.3%, conical roller bearings (CRB) Approved by Valmet (Partek Forest), Sauer Danfoss and Ponsse.

HydraWay SE XLV

Environmentally adapted hydraulic fluid with high performance, primarily designed for use in a cold climate. The product is particularly suitable in equipment that has to function without any loss of performance at low temperatures, for example hydraulics for hatches within the hydro power industry. Vickers V-104C.

GREASE

GreaseWay Bio CaH 82

Environmentally adapted grease primarily intended for the lubrication of heavily loaded slide bearings. Very good adhesion and water resistance. L-XBBIB2 in accordance with ISO 6743/9, KEP2G-20 in accordance with DIN 51502. Meets the requirements for environment class B in accordance with SS 155470.

GreaseWay Bio LiX 400

Environmentally adapted grease for stationary as well as vehicle-mounted central lubrication system. L-XBBIB2 in accordance with ISO 6743/9, KEPOOG-40 in accordance with DIN 51502. Environmental class B in accordance with SS 155470.

Multi Dope Yellow

Environmentally adapted, special grease paste for use as thread compound for drill pipes, casing and tubing. Also suitable for open gear wheels in many other slow speed and heavily loaded applications. Classed as Yellow Y1 in accordance with Norwegian environmental guidelines for the offshore industry, based on HOCNF-documentation, OCNS-group E in accordance with Cefas dti. Based on renewable raw materials and natural minerals. ISO-L-XDDFB0-0.5 in accordance with ISO 6743/9, KGOEPO- 0.5.5N-40 in accordance with DIN 51502, API (RP) 5A3.

WIRE LUBRICANT

WireWay Bio

WireWay Bio is a zinc-free, environmentally adapted (EAL) product, based on biodegradable and renewable esters. WireWay Bio is specially developed for the lubrication of old or new steel wire ropes within the marine sector. Foremost for steel wires on cable ferries. WireWay Bio is also very suitable for use within other areas such as lubrication of crane cables, bracing wires, steel wire ropes for forest vehicles as well as steel cables for skilift installations or elevator constructions. WireWay Bio enters right into the steel wire rope's core and protects both the inside and the outside of the steel wire. WireWay Bio possesses very good corrosion protection and lubrication properties. Easy to handle and to apply even at low outdoor temperatures. The use of WireWay Bio provides a dry surface to the steel wire rope, thus reducing the incidence of dirt and dust as well as wiping off against passers-by.

Offshore

The oil and gas industry frequently works under extreme conditions.

In addition, when this is out to sea, with high pressures, high temperatures, and corrosion and so on, high demands are placed on both people and lubricants. With this demanding environment in mind, we have developed Multi Dope Yellow. A lubricating grease with unique performance and classified as Yellow, Y1, according to Norwegian Offshore environment guidelines. Multi Dope Yellow has unbeatable technical properties combined with major environmental benefits.



Products for offshore

HYDRAULIC OIL

HydraWay Bio SE 32

Synthetic ester-based hydraulic fluid developed for hydraulic systems that are in operation all year round under varying conditions. The products are readily biodegradable. The oil's technical and environmental properties make it particularly suitable for forestry and heavy-duty machines. Certain basic rules regarding miscibility with other similar hydraulic fluids have to be observed. DIN 51524 part 3, SS 155434 BV environmentally adapted (ISO VG32, 46), VDMA HEES, Vickers I 286 S/V 104 C, Sauer Danfoss, Rexroth.

HydraWay Bio SE 32-68

Synthetic ester-based hydraulic fluid for hydraulic systems that are to operate over a wide temperature interval. (-30 to 85°C). More than 80 % of the oil is manufactured from renewable raw materials, is readily degradable, has low toxicity for waterborne organisms and produces, at the same time, very high mechanical performance. Extremely shear stable. Uniquely rapid air release. SS 155434 BV 32 environmentally classified, Vickers V-104C, Vickers 35VQ25A, shear test EC-L-45-A-98, 20h: 1.3%, conical roller bearings (CRB) Approved by Valmet (Partek Forest), Sauer Danfoss and Ponsse.

HydraWay SE 46 HP

A high-performance hydraulic oil with a long lifespan, based on saturated esters. The oil is environmentally adapted and developed for demanding hydraulic systems both indoors and outdoors. The oil possesses both superior non-scaling properties and high hydrolytic stability. SIS 155434 AV 46 environmentally adapted/ 155454, ISO 15380 HEES 46. DIN 51524 part III HVLV Vickers 104 C, Hydac.

GREASE

GreaseWay Bio CaH 82

Environmentally adapted grease primarily intended for the lubrication of heavily loaded slide bearings. Very good adhesion and water resistance. L-XBBIB2 in accordance with ISO 6743/9, KEP2G-20 in accordance with DIN 51502. Meets the requirements for environment class B in accordance with SS 155470.

Multi Dope Yellow

Environmentally adapted, special grease paste for use as thread compound for drill pipes, casing and tubing. Also suitable for open gear wheels in many other slow speed and heavily loaded applications. Classed as Yellow Y1 in accordance with Norwegian environmental guidelines for the offshore industry, based on HOCNF-documentation, OCNS-group E in accordance with Cefas dti. Based on renewable raw materials and natural minerals. ISO-L-XDDFB0-0.5 in accordance with ISO 6743/9, KGOEPO- 0.5.5N-40 in accordance with DIN 51502, API (RP) 5A3.

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Marine

Environmental issues have never been higher on the shipping agenda and today's marine industry is under increasing pressure to comply with legislation and regulations. At Statoil, we have been at the cutting edge of research and development into environmentally adapted lubricants for many years, and we have worked in close collaboration with manufacturers and the shipbuilding industry. For this reason, we can offer a complete range of lubricant products, all of which meet the marine industry's demanding specifications while, at the same time, satisfying the strictest environmental requirements in the Nordic and Baltic regions.

Products for marine

2-STROKE ENGINE OIL

AquaWay Bio

Synthetic two-stroke engine oil which is readily biodegradable. AquaWay Bio provides effective lubrication and minimal oil smoke. Can be mixed with the fuel or used as a separate lubricant. Approvals: NMMA TC-W3 RL. Performance level: API TC, TC+.

STERN TUBE OIL

SternWay Bio 100

SternWay Bio 100 is an environmentally adapted stern tube oil, degradable to more than 80% in accordance with OECD 301 B, renewable to more than 70%, prevents lead corrosion and is an approved stern tube oil designed to be "harmless" in water if/when a leakage occurs. Approved by: Simplex Thyssen Krupp, Wärtsilä (Deep Sea Seals) Cedervall & Söner AB.

TRANSMISSION OIL

LoadWay Bio SE 220

Environmentally adapted industry transmission oil based on renewable synthetic esters. The product is readily biodegradable and has low toxicity. LoadWay Bio SE 220 is characterised by high oxidation stability, good low temperature properties and small viscosity changes at temperature variations. It meets the requirements in accordance with AGMA 9005 (5 EP), US Steel 224, DIN 51517. Meets the environmental requirements in accordance with SS 155434.

HYDRAULIC OIL

HydraWay Bio SE 32-68

Synthetic ester-based hydraulic fluid for hydraulic systems that are to operate over a wide temperature interval. (-30 to 85°C). More than 80% of the oil is manufactured from renewable raw materials, is readily degradable, has low toxicity for waterborne organisms and produces, at the same time, very high mechanical performance. Extremely shear stable. Uniquely rapid air release. SS 155434 BV 32 environmentally classified, Vickers V-104C, Vickers 35VQ25A, shear test EC-L-45-A-98, 20h: 1.3%, conical roller bearings (CRB) Approved by Valmet (Partek Forest), Sauer Danfoss and Ponsse.

HydraWay SE 46 HP

A high-performance hydraulic oil with a long lifespan, based on saturated esters. The oil is environmentally adapted and developed for demanding hydraulic systems both indoors and outdoors. The oil possesses both superior non-scaling properties and high hydrolytic stability. SIS 155434 AV 46 environmentally adapted/ 155454, ISO 15380 HEES 46. DIN 51524 part III HVLP Vickers 104 C, Hydac.

GREASE

GreaseWay Bio CaH 82

Water-resistant environmentally adapted grease with high adhesion for slow-moving, heavily loaded bearings. Deck machineries, rudder stocks and grease lubricated stern tubes. L-XBBIB2 in accordance with ISO 6743/9, KEP2G-20 in accordance with DIN 51502. Meets the requirements for environment class B in accordance with SS 155470.

UniWay Bio LiX 62

Environmentally adapted universal grease for vehicles and industry. L-XCDIB2 in accordance with ISO 6743/9, KEP2N-30 in accordance with DIN 51502. Environment class in accordance with SS 155470.

Multi Dope Yellow

Environmentally adapted, special grease paste for use as thread compound for drill pipes, casing and tubing. Also suitable for open gear wheels in many other slow speed and heavily loaded applications. Classed as Yellow Y1 in accordance with Norwegian environmental guidelines for the offshore industry, based on HOCNF-documentation, OCNS-group E in accordance with Cefas dti. Based on renewable raw materials and natural minerals. ISO-L-XDDFB0-0.5 in accordance with ISO 6743/9, KGOEPO-0.5.5N-40 in accordance with DIN 51502, API (RP) 5A3.

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Building and construction

For machine intensive operations, good lubrication is a business critical issue. Idle machinery cost money, time and patience.

Today, several of our absolutely best lubricants are also the most environmentally adapted. Our series of environmentally adapted hydraulic oils do not compromise performance. They are based on fully synthetic esters, they are biodegradable while, at the same time, they withstand high temperatures, have a long lifetime and long drain intervals. Music to the ears of contractor businesses.



Products for building and construction

HYDRAULIC OIL

HydraWay Bio SE 22 / SE 32 / SE 46

Synthetic ester-based hydraulic fluid developed for hydraulic systems that are in operation all year round under varying conditions. The products are readily biodegradable. The oil's technical and environmental properties make it particularly suitable for forestry and heavy-duty machines. Certain basic rules regarding miscibility with other similar hydraulic fluids have to be observed. DIN 51524 part 3, SS 155434 BV environmentally adapted (ISO VG32, 46), VDMA HEES, Vickers I 286 S/V 104 C, Sauer Danfoss, Rexroth.

HydraWay Bio SE 32-68

Synthetic ester-based hydraulic fluid for hydraulic systems that are to operate over a wide temperature interval. (-30 to 85°C). More than 80 % of the oil is manufactured from renewable raw materials, is readily degradable, has low toxicity for waterborne organisms and produces, at the same time, very high mechanical performance. Extremely shear stable. Uniquely rapid air release. SS 155434 BV 32 environmentally classified, Vickers V-104C, Vickers 35VQ25A, shear test EC-L-45-A-98, 20h: 1.3%, conical roller bearings (CRB) Approved by Valmet (Partek Forest), Sauer Danfoss and Ponsse.

HydraWay Bio SE 68

Synthetic ester-based hydraulic fluid with very good performance. Recommended for hydraulic systems in hot operating environments, such as in asphalt machinery. Manufactured more than 80% from renewable raw materials. Extremely shear stable by means of its high base oil viscosity. SS 15 54 34 BV 68 environmentally adapted, Vickers I 286 S, V 104 C, Sauer Danfoss, Rexroth.

HydraWay SE 46 HP

A high-performance hydraulic oil with a long lifespan, based on saturated esters. The oil is environmentally adapted and developed for demanding hydraulic systems both indoors and outdoors. The oil possesses both superior non-scaling properties and high hydrolytic stability. SIS 155434 AV 46 environmentally adapted/ 155454, ISO 15380 HEES 46. DIN 51524 part III HVLV Vickers 104 C, Hydac.

TRANSMISSION OIL

LoadWay Bio SE 220

Environmentally adapted industry transmission oil based on renewable synthetic esters. The product is readily biodegradable and has low toxicity. LoadWay Bio SE 220 is characterised by high oxidation stability, good low temperature properties and small viscosity changes at temperature variations. It meets the requirements in accordance with AGMA 9005 (5 EP), US Steel 224, DIN 51517. Meets the environmental requirements in accordance with SS 155434.

TRANSMISSION AND HYDRAULIC OIL

TransWay WB Bio

Biodegradable transmission and hydraulic oil based on renewable raw materials (rape and synthetic ester). The oil is recommended for machinery and tractors with hydraulic/ transmission assembled with wet running brakes. Certain machine manufacturers recommend shorter oil-change intervals when lubricants based on vegetable oils are used - check in the user manual. ISO VG-46, API GL-4. Performance level: Case MS 1207/1209, Case New Holland CNH MAT 3525/3505, Ford ESN M2C-134D, FNHA-2-C-201.00, John D J20C, MF CMS M1143/1145, ZF TE-ML 03E/05F/06K/17E, Allison C-4.

GREASE

GreaseWay Bio CaH 82

Environmentally adapted grease primarily intended for the lubrication of heavily loaded slide bearings. Very good adhesion and water resistance. L-XBBIB2 in accordance with ISO 6743/9, KEP2G-20 in accordance with DIN 51502. Meets the requirements for environment class B in accordance with SS 155470.

GreaseWay Bio LiX 400

Environmentally adapted grease for stationary as well as vehicle-mounted central lubrication system. L-XBBIB2 in accordance with ISO 6743/9, KEPOOG-40 in accordance with DIN 51502. Environmental class B in accordance with SS 155470.

UniWay Bio LiX 62

Environmentally adapted universal grease for vehicles and industry. L-XCDIB2 in accordance with ISO 6743/9, KEP2N-30 in accordance with DIN 51502. Environment class in accordance with SS 155470.

Multi Dope Yellow

Environmentally adapted, special grease paste for use as thread compound for drill pipes, casing and tubing. Also suitable for open gear wheels in many other slow speed and heavily loaded applications. Classed as Yellow Y1 in accordance with Norwegian environmental guidelines for the offshore industry, based on HOCNF-documentation, OCNS-group E in accordance with Cefas dti. Based on renewable raw materials and natural minerals. ISO-L-XDDFBO-0.5 in accordance with ISO 6743/9, KGOEPO-0.5.5N-40 in accordance with DIN 51502, API (RP) 5A3.

CHAIN OIL

ChainWay Bio

Rapeseed oil-based chainsaw oil with extremely high adhesion and good temperature properties. The oil degrades rapidly in nature and thus is kind to forest and fields while, at the same time, providing a better working environment. ChainWay Bio is recommended for year round use in felling saws and bucksaws for logging machines, and in power saws. Compatible with all kinds of chainsaw oils, both mineral oil-based and vegetable. The oil has good storage stability. Lowest storage temperature is -20°C.

FORMING OIL

FormWay Bio 5

Environmentally adapted form mould release that is based on biodegradable and renewable rapeseed raw materials. The oil can be used in all types of moulds and has very good release properties.

WIRE LUBRICANT

WireWay Bio

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Forestry and agriculture

The problem with many machines in sawmills, forestry or agriculture is the risk that the lubricant will leak out directly into nature. For this reason, it is crucial to have products with a minimal negative impact on the environment, while at the same time they pass the high requirements for performance. Today, several of our absolutely best lubricants are also the most environmentally adapted, such as our series of environmentally adapted hydraulic oils, for example. They are based on fully synthetic esters and they are biodegradable, while at the same time they withstand high temperatures, have a long lifetime and long drain intervals.

Products for forestry and agriculture

HYDRAULIC OIL

HydraWay Bio SE 22 / SE 32 / SE 46

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HydraWay Bio SE 32-68

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HydraWay Bio SE 68

Synthetic ester-based hydraulic fluid with very good performance. Recommended for hydraulic systems in hot operating environments, such as in asphalt machinery. Manufactured more than 80% from renewable raw materials. Extremely shear stable by means of its high base oil viscosity. SS 15 54 34 BV 68 environmentally adapted, Vickers I 286 S, V 104 C, Sauer Danfoss, Rexroth.

HydraWay SE 46 HP

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GREASE

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UniWay Bio LiX 62

Environmentally adapted universal grease for vehicles and industry. L-XCDIB2 in accordance with ISO 6743/9, KEP2N-30 in accordance with DIN 51502. Environmental class in accordance with SS 155470.

Multi Dope Yellow

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ChainWay SE

ChainWay SE is an environmentally adapted chainsaw oil built on synthetic esters. ChainWay SE is primarily designed for the lubrication of transport and drive chains in the forestry industry, but works very well on chainsaws etc. The oil's high adhesion, together with the extreme temperature properties, affords a safe access to links and guides under all weather conditions.

SAW BAND OIL

SawingWay Bio V

Low viscosity, non-water miscible, environmentally adapted fluid based on vegetable, renewable raw materials. SawingWay Bio V is recommended for lubricating, cooling and keeping clean saw blades, planing benches etc. when processing wood. It does not discolour the wood and contains additives that provide good protection against corrosion.

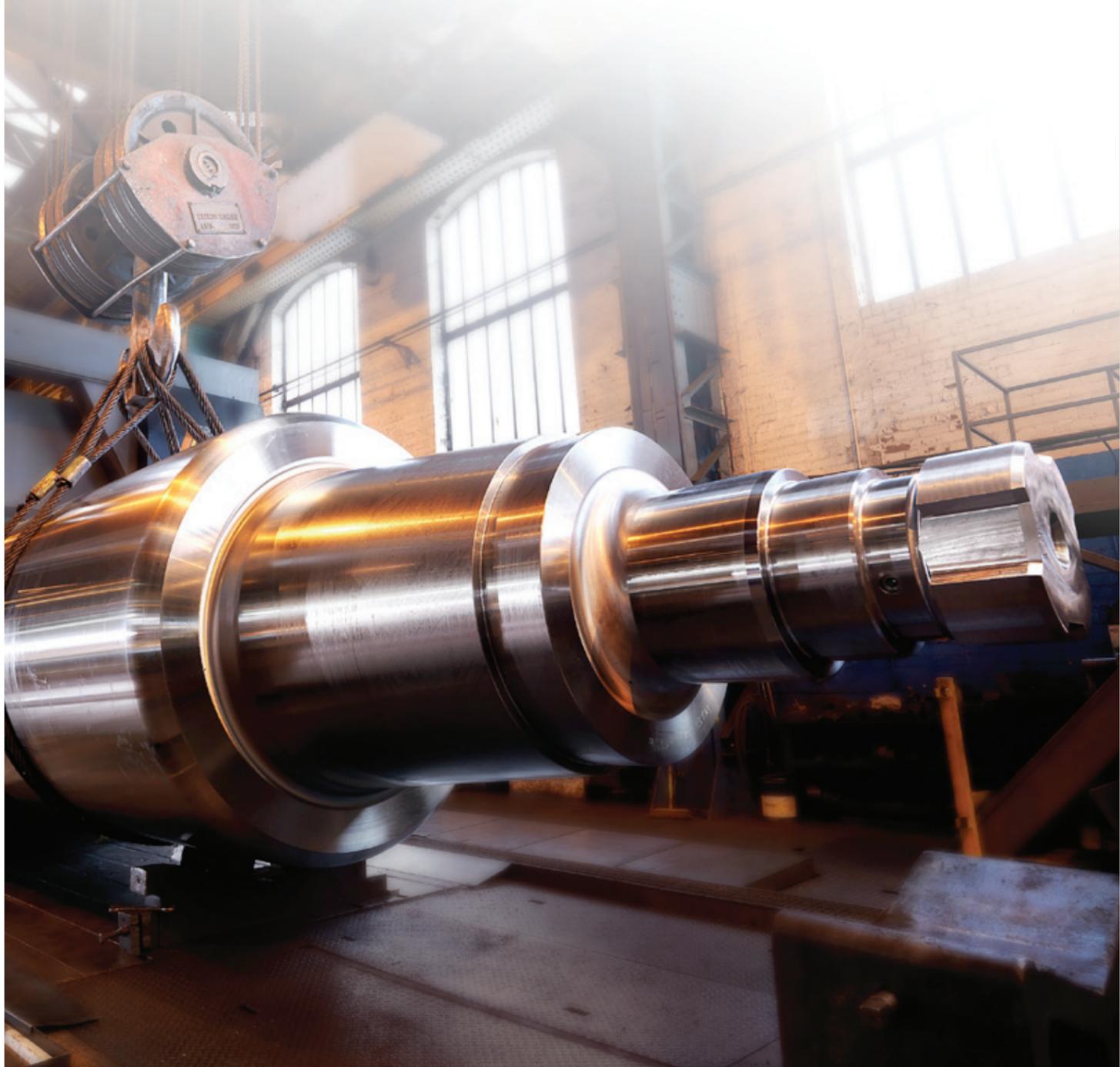
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Metalworking

The trends in the industry are towards higher speeds and increasing demands for efficient cooling. With our latest technology, we have succeeded in combining health and environmental aspects with technical performance in a very effective way. Our new generation of high-performance products is based on renewable raw materials and is gentle to people as well as the environment, without compromising cooling capacity, corrosion protection and lubrication. In other words - the best of both worlds.



Products for metalworking

CUTTING OIL

CutWay Bio 250

Light cutting oil built on esters without chlorine, sulphur or phosphorous. This provides very high lubrication performance and, at the same time, it has very low odor. It is recommended for demanding cutting operations of all steel qualities as well as titanium, copper and aluminium alloys. Also recommended for metal forming operations where high film strength and low friction are required.

CutWay Bio 610

CutWay Bio 610 is based on synthetic esters and special additives which improve the lubrication properties. This affords very high lubrication ability and, at the same time, renders the product low odor. It is recommended for demanding cutting operations of all steel qualities as well as aluminium alloys, brass and copper. Also recommended for mini mist lubrication systems.

CutWay Bio 718

Powerful cutting oil based on a mixture of natural and synthetic esters. The cutting oil possesses a very high lubrication ability, giving rise to reduced tool wear, high surface smoothness and a low tendency towards loose edge formation. Designed for heavy chip removing processing in all steel qualities as well as titanium. Can also be used for certain plastic processing where high film strength and low friction are required. Can discolour copper and its alloys.

DRAWING OIL

DrawWay N 703 Bio

Calcium-free press oil based on renewable raw materials in the form of biodegradable rapeseed oil and synthetic ester. Recommended for medium-difficult drawing operations as well as pressing, stamping etc. of carbon steel and stainless steel. The product can also be used for cutting processing. Can discolour copper and its alloys.

DrawWay N 730 Bio

DrawWay N 730 Bio is a stamping oil primarily intended for demanding hole stamping in stainless steel. The product can also be used for demanding drawing and press forming of carbon steel and stainless steel, where an oil with high viscosity and good lubrication properties is required. DrawWay N 703 Bio also works excellently with thread cutting in acid-proof stainless steel. Can discolour copper and its alloys.

DrawWay N 760 Bio

DrawWay N 760 is a stamping oil primarily designed for demanding hole stamping in stainless steel. The product can also be used for demanding drawing and press forming of carbonised steel and stainless steel, where an oil with high viscosity and good lubrication properties is required. DrawWay N 760 also works excellently with thread cutting in acid-proof stainless steel. Can discolour copper and its alloys.

Manufacturing

One of mankind's greatest achievements is that we have succeeded in creating tools to do our work for us. In the manufacturing industry, obtaining friction-free operation is vital, in every sense of the word. At the same time, environmental consideration is a factor that concerns everybody, either voluntarily or through demands from the world around us. This is where our bio-lubricants come into the picture. Now, you don't need to choose between performance and environmentally adapted solutions, you get all in one.



Products for manufacturing

HYDRAULIC OIL

HydraWay Bio SE 22 / SE 32 / SE 46

Synthetic ester-based hydraulic fluid developed for hydraulic systems that are in operation all year round under varying conditions. The products are readily biodegradable. The oil's technical and environmental properties make it particularly suitable for forestry and heavy-duty machines. Certain basic rules regarding miscibility with other similar hydraulic fluids have to be observed. DIN 51524 part 3, SS 155434 BV environmentally adapted (ISO VG32, 46), VDMA HEES, Vickers I 286 S/V 104 C, Sauer Danfoss, Rexroth.

HydraWay Bio SE 32-68

Synthetic ester-based hydraulic fluid for hydraulic systems that are to operate over a wide temperature interval. (-30 to 85°C). More than 80% of the oil is manufactured from renewable raw materials, is readily degradable, has low toxicity for waterborne organisms and produces, at the same time, very high mechanical performance. Extremely shear stable. Uniquely rapid air release. SS 155434 BV 32 environmentally classified, Vickers V-104C, Vickers 35VQ25A, shear test EC-L-45-A-98, 20h: 1.3%, conical roller bearings (CRB) Approved by Valmet (Partek Forest), Sauer Danfoss and Ponsse.

HydraWay Bio SE 68

Synthetic ester-based hydraulic fluid with very good performance. Recommended for hydraulic systems in hot operating environments, such as in asphalt machinery. Manufactured more than 80% from renewable raw materials. Extremely shear stable by means of its high base oil viscosity. SS 15 54 34 BV 68 environmentally adapted, Vickers I 286 S, V 104 C, Sauer Danfoss, Rexroth.

HydraWay SE 46 HP

A high-performance hydraulic oil with a long lifespan, based on saturated esters. The oil is environmentally adapted and developed for demanding hydraulic systems both indoors and outdoors. The oil possesses both superior non-scaling properties and high hydrolytic stability. SIS 155434 AV 46 environmentally adapted/ 155454, ISO 15380 HEES 46. DIN 51524 part III HVLP Vickers 104 C, Hydac.

TRANSMISSION OIL

LoadWay Bio SE 220

Environmentally adapted industry transmission oil based on renewable synthetic esters. The product is readily biodegradable and has low toxicity. LoadWay Bio SE 220 is characterised by high oxidation stability, good low temperature properties and small viscosity changes at temperature variations. It meets the requirements in accordance with AGMA 9005 (5 EP), US Steel 224, DIN 51517. Meets the environmental requirements in accordance with SS 155434.

GREASE

GreaseWay Bio CaH 82

Environmentally adapted grease primarily intended for the lubrication of heavily loaded slide bearings. Very good adhesion and water resistance. L-XBBIB2 in accordance with ISO 6743/9, KEP2G-20 in accordance with DIN 51502. Meets the requirements for environment class B in accordance with SS 155470.

GreaseWay Bio LiX 400

Environmentally adapted grease for stationary as well as vehicle-mounted central lubrication system. L-XBBIB2 in accordance with ISO 6743/9, KEPOOG-40 in accordance with DIN 51502. Environmental class B in accordance with SS 155470.

UniWay Bio LiX 62

Environmentally adapted universal grease for vehicles and industry. L-XCDIB2 in accordance with ISO 6743/9, KEP2N-30 in accordance with DIN 51502. Environment class in accordance with SS 155470.

Multi Dope Yellow

Environmentally adapted, special grease paste for use as thread compound for drill pipes, casing and tubing. Also suitable for open gear wheels in many other slow speed and heavily loaded applications. Classed as Yellow Y1 in accordance with Norwegian environmental guidelines for the offshore industry, based on HOCNF-documentation, OCNS-group E in accordance with Cefas dti. Based on renewable raw materials and natural minerals. ISO-L-XDDFBO-0.5 in accordance with ISO 6743/9, KGOEPO-0.5.5N-40 in accordance with DIN 51502, API (RP) 5A3.

WIRE LUBRICANT

WireWay Bio

WireWay Bio is a zinc-free, environmentally adapted (EAL) product, based on biodegradable and renewable esters. WireWay Bio is specially developed for the lubrication of old or new steel wire ropes within the marine sector. Foremost for steel wires on cable ferries. WireWay Bio is also very suitable for use within other areas such as lubrication of crane cables, bracing wires, steel wire ropes for forest vehicles as well as steel cables for skilift installations or elevator constructions. WireWay Bio enters right into the steel wire rope's core and protects both the inside and the outside of the steel wire. WireWay Bio possesses very good corrosion protection and lubrication properties. Easy to handle and to apply even at low outdoor temperatures. The use of WireWay Bio provides a dry surface to the steel wire rope, thus reducing the incidence of dirt and dust as well as wiping off against passers-by.

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