



Marine Lubricants Catalogue



REPSOL

Let's invent the future



REPSOL

*Centro de
Tecnología*

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Introduction

When you choose **Repsol Lubricants**, you choose much more. Because, in addition to top-quality products, you get the Repsol guarantee. An integrated and global energy company operating in more than 90 countries, engaged in exploration, production, refining, distribution and marketing activities, providing the **most efficient, responsible and innovative energy solutions** for millions of people and businesses around the world.

And you also get **maximum innovation**. Because at Repsol we have a **Technology Centre** that is at the global forefront of the R&D&I world, where each and every product is being continuously improved by our engineers and researchers, in order to ensure their optimum **technical and environmental efficiency and quality**.

Maximum quality

Repsol Lubricants exceed the strictest standards and rules set by the sector. Our products have been tested in competition to ensure maximum efficiency.

Innovate to advance is our philosophy. Therefore, we have improved our product range to offer the best protection for the most demanding engines in the market.

At Repsol we select the best refining processes in the manufacture of our own base lubricants. This, combined with the use of top-quality additivation, offers you products with specific formulations for each manufacturer taking care of your engine, and giving you extra assurance.

At Repsol we have a **wide range of lubricants** that meet the most demanding quality standards. Only in this way can we ensure your engines and equipment will be perfectly lubricated and protected, in order to enhance their functions, improve their performance, save energy and extend their useful life.



Sector challenges

At Repsol we have developed a wide range of lubricants that cover all the lubrication needs in the marine world, both for engines and the rest of machinery on board. Through the **LUBMARINE** network, of which we have been co-founding partner for over 30 years, Repsol supplies cutting-edge marine oils in ports all over the world.

We provide our clients with marine oils for **2-stroke and 4-stroke technology** propulsion engines, as well as all the other lubricants and greases used in the vessel's diverse machinery. We also supply biodegradable oils (EALs) for equipment that may pollute its environment, as well as for vessels sailing in waters where international VGP standards must be complied with. You'll find them differentiated as follows:

Biodegradable Lubricants.

Today marine equipment faces ever-increasing challenges that are presented in different ways, partly due to the demand for the full availability of the equipment frequently used at full load, but mainly due to the extreme environments in which they operate.

In these extreme operating conditions, lubricants must provide, in addition to their standard function, **extra protection** in order to maintain or increase equipment reliability and availability, as well as facilitate maintenance management.

Repsol Lubricants, with their extensive experience in this type of applications, have demonstrated their **high performance and response capacity**, ensuring customers full equipment availability.

The Repsol Lubricants range is designed to respond to extremely demanding operating conditions: **greater resistance to oxidation** (higher working temperatures), **lower viscosity loss** (use of top-quality bases), **greater anti-wear capacity** (developments), etc., offering high resistance in this operating environment.

In addition to the cutting-edge **technology** used by Repsol to manufacture its lubricants, its extensive **experience in the field** and the data obtained from the analysis of thousands of samples provide valuable information that is taken into account in the **development** and adaptation of its range of lubricating oils, to a great extent contributing to the excellence of its products.

In line with our philosophy of ongoing innovation and improvement, we present our **Marine Lubricants Catalogue** in which we have selected the most widely-used products in the sector, of which Repsol offers you a wide range of products. In this selection you will find two categories based on their geographic availability differentiated as follows:



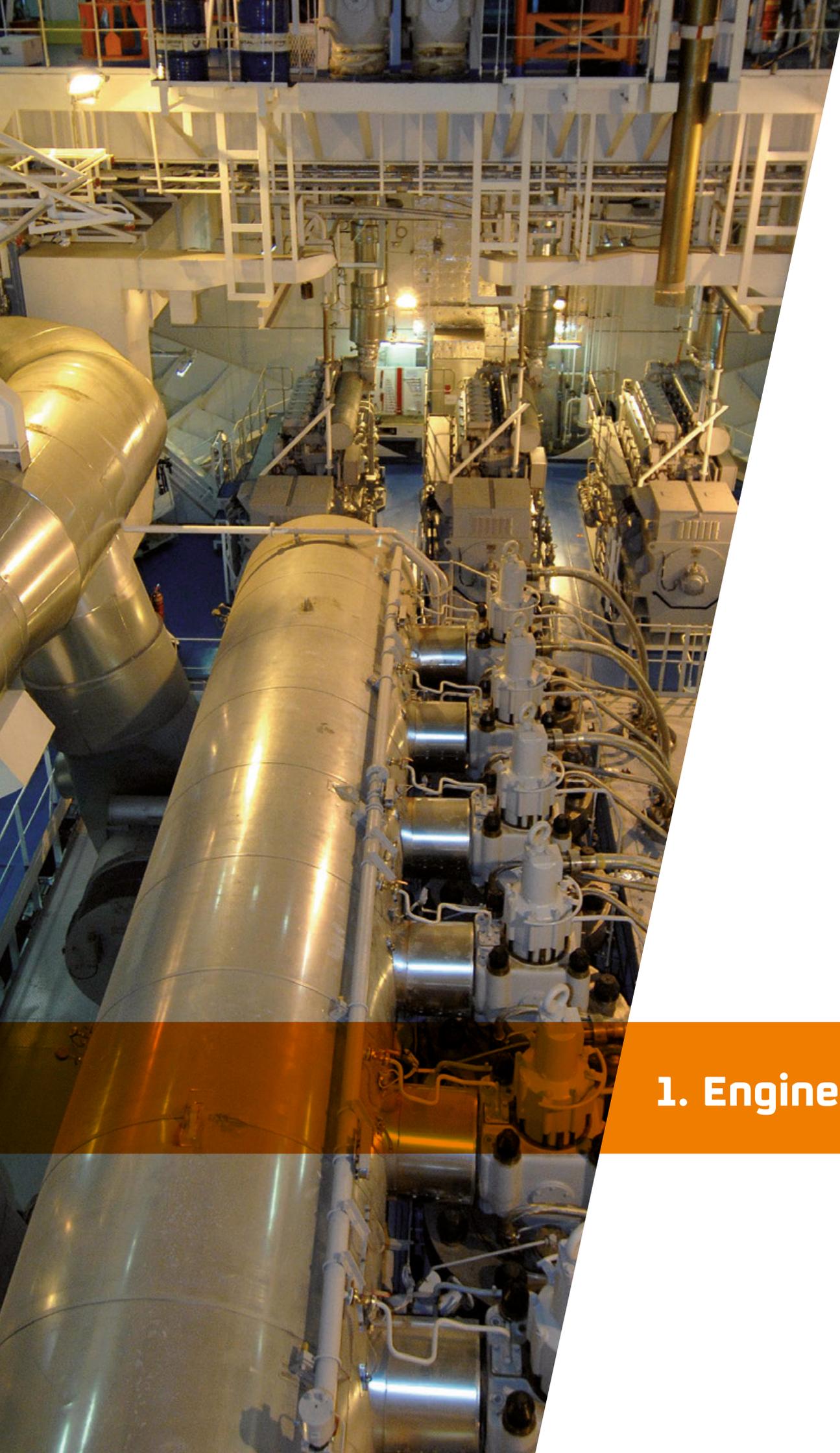
Lubricants only available for customers in Spain, Peru and Gibraltar.



Lubricants available all over the world.



For more information, please see our catalogues at [repsol.com](https://www.repsol.com)



1. Engines

1.1. Slow-speed engines

Repsol, always striving to be at the forefront of **innovation** and **technology** in the maritime sector, offers a wide range of lubricants for large vessels with slow-speed 2-stroke engines that protect the engine and ensure its **smooth running** regardless of the fuel quality used. The innovative additivation chemical formulas along with the extensive TBN offer available, mean Repsol's 2-stroke engine lubricants ensure exceptional performance in any working condition.

The 2-stroke lubricants range ensures **minimum engine wear, maximum cleanliness, lower maintenance costs** and **long review periods**.

TALUSIA LS 25



Lubricant designed to protect 2-stroke marine engines running on fuels with less than 0.1% sulphur content in order to comply with the new ECA 2015 environmental regulation in restricted zones.

It ensures **large engine protection** offering excellent cleaning thanks to its low ash content.

Approvals

MAN Diesel & Turbo
and Wärtsilä 2-stroke

SAE Grade: 50

TBN: 25

TALUSIA UNIVERSAL



Universal lubricant designed for the lubrication of cylinders in engines (prior to 2008) running on high sulphur fuel content between 0.5% and 3.5%.

Its patented formula **allows you to protect the engine for a longer period of time** than with conventional higher TBN-content oils.

Approvals

MAN B&W Diesel 2-stroke
Wärtsilä & Sulzer Diesel
2-stroke

SAE Grade: 50

TBN: 57

TALUSIA HR 70



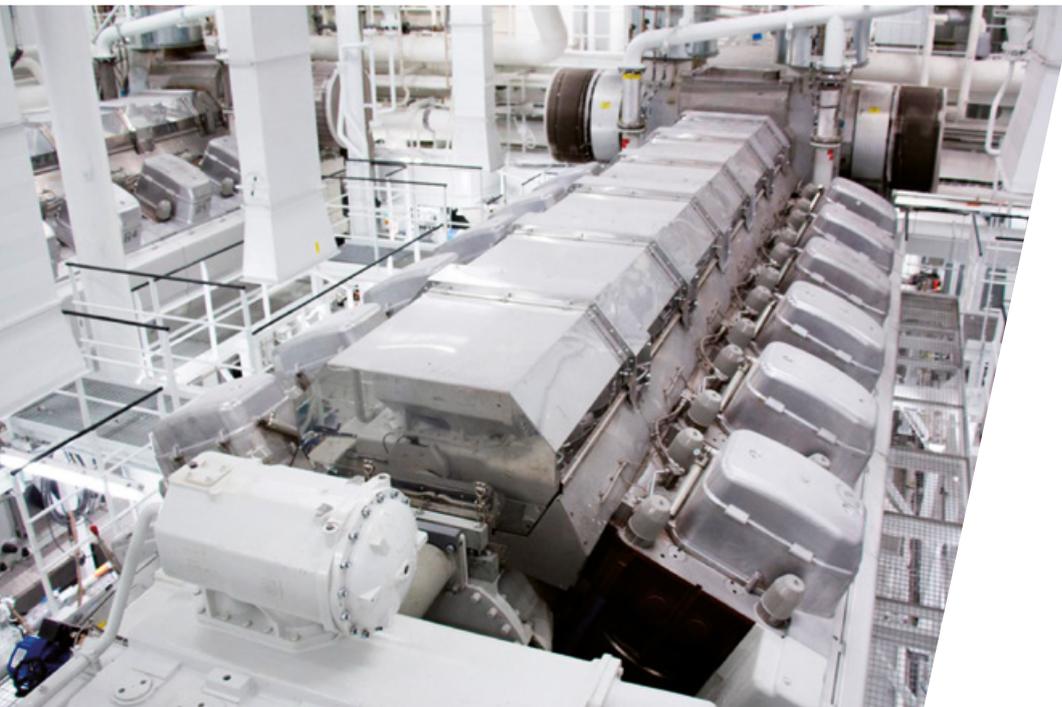
Cylinder oil formulated for the lubrication of 2-stroke slow-speed crosshead diesel engines, ensuring engine protection when running on high sulphur fuel oil, extending engine overhaul shutdowns.

Approvals

MAN Diesel 2-stroke
Wärtsilä & Sulzer Diesel
2-stroke

SAE Grade: 50

TBN: 70



TALUSIA UNIVERSAL 100



Cylinder lubricant designed for Tier II and Tier III engines using high sulphur heavy fuel oil. Developed in collaboration with major engine manufacturers to mitigate cold corrosion-related problems. It maintains engine cleanliness and lubrication during long periods of operation thanks to its high alkaline reserve.

Approvals

MAN Diesel & Turbo

MHI

Win GD (Wärtsilä engines)

SAE Grade: 50

TBN: 100

ATLANTA MARINE D 3005 & D 4005



System oil for 2-stroke crosshead diesel engine crankshafts. With excellent detergency and dispersancy properties to maintain the circuit clean and protect metallic parts against wear, corrosion and the build-up of lacquers and varnishes.

Approvals

MAN B&W

Sulzer

Mitsubishi

SAE Grade: 30 & 40

TBN: 5

1.2. Medium-speed engines

Whatever the type of engine and fuel used, the **Repsol Lubmarine range for 4-stroke engines** offers you an optimum lubrication solution approved by major engine manufacturers and the assurance provided by the millions of hours of service delivered by our oils.

AURELIA TI 3030 / 3040 / 4020 / 4030 / 4040 / 4055



Developed for 4-stroke stationary engines running on residual fuels. Good detergency and dispersant capacity in a wide range of temperatures, high oxidation resistance and excellent anti-wear protection.

Aurelia TI 4055 contains a strengthened alkaline reserve to neutralise combustion acids in all engines running on high sulphur heavy fuel oils and very low lubricant oil consumption.

Approvals

Wärtsilä	Yanmar
MAN Diesel	Daihatsu
Caterpillar M&K	HIMSEN
Rolls Royce	

SAE Grade: 30 & 40

TBN: 20, 30, 40 & 55

DISOLA M 3015 / 4015 / 3020 / 4020



New generation of lubricant oils developed for main and auxiliary engines of all types and ratings running on marine diesel or intermediate fuel oil with low sulphur content.

They are noted for their good detergency and dispersant properties in the whole engine operation temperature range, excellent anti-wear protection thanks to the correct formation of the lubricant film thickness at extreme pressures and due to their high capacity for neutralising combustion-related acidic products.

They are also suitable for the lubrication of bearings, stern tubes and reduction gears.

Approvals

MAN B&W
STM 7251A NATO O 278

SAE Grade: 30 & 40

TBN: 15 & 20

1.3. High-speed engines

As a complement to the Repsol Lubmarine range, Repsol has developed specific lubricants for all types of marine diesel engines with specific formulations for each engine manufacturer taking care of the engine and providing extra confidence.

NEPTUNO SUPER TURBO MAR 15W40



Designed for 4-stroke turbocharged and revolution diesel engines running in the most severe working conditions on fishing vessels, leisure boats, auxiliary port vessels and merchant vessels.

It prevents the sticking of segments and protects the engine against corrosion, oxidation, rust and foam formation. It is noted for its shear resistance that allows it to maintain proper viscosity during the oil's useful life in the engine.

SAE Grade: 15W40

TBN: 10

Approvals and Quality Levels

API CI-4/CH-4/SL

ACEA E7/E5

MTU Type 2

Complies with Caterpillar ECF-1-a and ECF-2 requirements

MARINO 3 SAE 30 & SAE 40



Range indicated for modern high-speed and medium-speed engines using distillate and semi-distillate fuels up to contents of 1% sulphur or MDO. These oils have a high detergent capacity, neutralise combustion acids thanks to their alkaline reserve and offer excellent thermal stability.

SAE Grade: 30 & 40

TBN: 12

Approvals and Quality Levels

API CF/CD

MTU Type 1

MAN 270

MB 228.0

ACEA E2

SERIE 3 DIESEL MT SAE 40



Lubricant for turbocharged or naturally aspirated diesel engines operating under severe conditions. Its special additivation gives it high detergency that prevents the formation of deposits and sludge and a high level of protection against different engine part corrosion, also in saline environments.

SAE Grade: 40

TBN: 12.7

Approvals and Quality Levels

API CF

MTU Type 2

MAN 270

MB 228.0

Caterpillar
Micro-Oxidation
Test

1.4. Special applications

SERIE 3 ESPECIAL FC 40 N



Modern, fifth-generation technology oil, especially designed for use in diesel engines with silver bearings with all types of oils. Its additivation ensures thorough cleaning of internal engine parts, particularly the piston segment area, thus preventing abrasive wear and extending engine life.

Approvals and Quality Levels

EMD SD-60

GE B30-7A

API CF-2/CF

SAE Grade: 40

TBN: 13

SERIE 3 DD 40



Specifically designed for 2-stroke engines running on distillate fuels (in compliance with Detroit Diesel specifications). Monograde lubricant with high resistance to oxidation, anti-wear properties, high detergent-dispersant power and low-ash additivation to prevent inlet port and exhaust blockages. It can also be used in transmissions and torque converters.

Approvals and Quality Levels

API CF-2/CF/SJ

Special Detroit Diesel Series 149

SAE Grade: 40

TBN: 7.8





2. Auxiliary machinery

Not only engine protection is important. On board there is a lot of equipment that needs to be lubricated by oil or grease to run properly. That is why Repsol completes the marine product range with **lubricants for all auxiliary machinery**:

- Hydraulic
- Gears
- Compressors
- Stern Tubes
- Turbines
- Heat Transfer
- Refrigeration compressors
- Greases

In addition to conventional products, Repsol is committed to providing environmentally-acceptable lubricants for those applications which might pollute the marine environment.

2.1. Hydraulic

Repsol hydraulic fluids for marine applications ensure the **lubrication, robustness and reliability of equipment**. Their anti-wear, resistance to oxidation, corrosion protection, excellent water separation and high viscosity index properties make all our products exceed in many cases the requirements set forth in DIN 51524 and ISO 6743/4 standards.

TELEX HVLP



Mineral lubricant oil formulated with bases put through a careful refining process at our facilities to **enhance their antioxidant capacity**, thus ensuring a longer lifespan at the facilities without degrading.

Additivated oil with viscosity index improvers to ensure correct operation in applications where sudden changes of temperature may occur in working conditions. Lubricant **suitable for hydraulic circuits exposed to the elements or with low working temperatures**, as well as **hydraulic systems used at sea** (watertight doors, capstans and windlasses, stabilisers, etc.).

Its special additives give it an excellent demulsifying property in the event of sea water pollution, in addition to reinforcing anti-wear and anti-corrosion properties.

Approvals and Quality Levels

DIN-51524, Part 3 (HVLP)	AFNOR NF E 48-603 HV
ISO 6743/4 HV	Filterability AFNOR [NF E 48-690 & 48-691]
ISO 11158	Eaton Vickers I-286-S & M-2950-S
	MAG IAS P-68, P-69, P-70 (ex Cincinnati)

BIOTELEX



Synthetic and biodegradable hydraulic fluid with **ECOLABEL**. Its careful formulation with an ester base and additives gives it **excellent lubricant properties** equivalent to conventional lubricants with the added value of being usable in environmentally-sensitive areas.

It is a fluid intended to replace mineral hydraulic oils in systems where **a biodegradable fluid is needed or of interest** to minimise environmental impact risks in the event of accidental spillage. EAL lubricant suitable for all deck machinery which might pollute the marine environment (watertight doors, capstans, deck cranes, etc.).

Approvals and Quality Levels

ISO 6743/4 (HEES)	Biodegradability OECD 301-B
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ISO 15380 (HEES)	Biotelex Ecolabel 46 & 68
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DIN 51524/3 (HV)*	
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*No ageing test.

BIOHYDRAN TMP



Biodegradable synthetic hydraulic oil for **Repsol Group LUBMARINE** hydraulic circuits. Suitable for any hydraulic system requiring a lubricant with good anti-wear properties, high viscosity index and good long-term stability.

It is particularly recommended when there is a danger of **polluting water, forests or special environments**: off-shore operations, dredging, fishing, etc.

Approvals and Quality Levels

ISO 15380 (HEES)	Meets Swedish Standard SS155434
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EAL according to VGP	VDMA 24568: HEES
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2.2. Gears

Maximum resistance, anti-wear protection and safety of all machines on board which **need extreme pressure additivation** to withstand high loads in severe services. Repsol gear oils are formulated to maximise your machinery technical performance.

SUPER TAURO



Mineral lubricant with a balanced additivation on a sulphur/phosphorus base to comply with gear manufacturers load requirements (FZG). **Oil especially designed for use in very severe environments.** Its good antioxidant capacity, its ability to lubricate elements subjected to boundary lubrication (metal/metal contact) and its excellent water separation capacity in the event of pollution, make this lubricant ideal for working in all marine gear subjected to extreme lubrication conditions.

Approvals and Quality Levels

DIN 51517 / Part 3 CLP	AGMA 9005-E02-EP
AIST 224	ISO 12925-1 CKD
ISO-L-CKD	MAG IAS
David Brown S 1.53.101	

SUPER TAURO SINTÉTICO



PAO and ester-based synthetic lubricant for gears running under very severe load and temperature conditions. Its excellent resistance to oxidation and its high resistance to work load mean it provides **excellent protection in the most severe lubrication environments.** Its protection against micropitting failure is particularly noteworthy. It allows a longer oil change interval, with the resulting maintenance cost savings.

Approvals and Quality Levels

DIN 51517 Part 3 CLP	Siemens MD Flender Gear Units
AGMA 9005-E02 EP	U.S. Steel 224
ISO 6743/6 CKT	Cincinnati Lamb, P-35, P-59, P-76, P-77, P-74

CARTER BIO



Next-generation EAL synthetic lubricant complying with European eco-label criteria for Biodegradability, Renewable carbon content and Ecotoxicity. Developed for lubricating gears and bearings subjected to harsh lubrication conditions in applications which might pollute the marine environment. Excellent extreme pressure properties and high load capacity ensuring excellent protection of lubricated gears.

CARTER BIO guarantees **high protection against corrosion**, also with sea water pollution, providing lubrication advantages at high and low temperatures compared to mineral oils. It is suitable for propulsion systems (although it is not an emulsifying oil), provided equipment manufacturer requirements are met.

Approvals and Quality Levels

DIN 51517 Part 3 CLP	ISO 12925-1 CKC/ CKD
EA for 2013 VGP	ZF Propulsion
Wärtsilä	HHI Thrusters, Scania

2.3. Stern tubes

Very specific marine environment application for which Repsol has developed its own lubricating oils, incorporating a **unique additivation capable of emulsifying water entering the system** in the event of leakage, maintaining adequate equipment lubrication.

TRITÓN 70



The presence of water in lubrication circuits in this equipment is almost inevitable. That is why **TRITON 70** oil has been **strengthened with emulsifying additivation**, thanks to which the water and oil are maintained in a single phase, so the circuit always has oil, thus preventing the pump from delivering only water to the lubricant circuit. Oil that is strengthened to form a protective film that **maintains lubrication, protecting the equipment against rust in the presence of humidity**. It stands out for its excellent adherence, high emulsifying capacity, resistance to being washed with water and high anti-wear power for preventing metal-to-metal contact.

BIONEPTAN



Synthetic biodegradable lubricant for stern tubes. Particularly recommended for stern tube sliding rolling bearings, minimising environmental impact in the event of spillage. Wide range of working temperatures. **Excellent anti-wear and anti-corrosion properties.** Compatible with main seals: Viton, Nitrile NBR and Bioseal.

Approvals and Quality Levels

Ecolabel	Blohm & Voss [Simplex]
EAL for VGP	Wärtsilä Propulsion

BIONEPTAN HT 100



Biodegradable ester-based oil specifically developed to comply with KEMEL manufacturer quality standards. BIONEPTAN HT 100 features **excellent anti-wear properties and good performance at low temperatures, offering a very wide range of working temperatures.** Excellent anti-corrosive properties and compatible with most seals.

Approvals and Quality Levels

ISO 15380: HEES	KEMEL all types and sizes of seals
EAL for VGP	Kamome Propeller

2.4. Turbines / Compressors

For equipment requiring enhanced lubricant antioxidant properties due to the high temperatures reached in lubrication circuits, Repsol has a wide **range of oils made with hydrogenated bases for turbines and next-generation turbochargers**. Designed to protect equipment from corrosion and wear and minimise the build-up of deposits and the formation of varnishes, guaranteeing a long oil and lubricated equipment lifespan.

2.4.1. Products for Turbines

ARIES



This is a range of oils obtained from selected paraffinic bases, improved with oxidation, rust and foam inhibitor additives, offering excellent properties and outstanding operational performance.

Multifunctional lubricant oil **for circulatory systems that include highly revolutionary mechanisms**, in their lower viscosities, hydraulic or steam **turbines** in grades between ISO 32 and ISO 100 and for lubrication of various types of mechanical equipment in casing or by circulation in higher viscosities.



TURBO ARIES



Mineral oil especially **recommended for applications requiring enhanced oil antioxidant capacity**. Lubricant oil for steam turbines requiring high resistance to oxidation, and corrosion and an extended service life in equipment running at over 100°C.

Lubricant that complies with the high oxidation tests of most manufacturers of this type of equipment. The quality of the refined bases used for its formulation and the selected additives mean this mineral oil can exceed 4,000 working hours in accelerated oxidation tests.

Approvals and Quality Levels

DIN 51515 Part 1 L-TD	DIN 51506 VBL & VCL
DIN 8659 Part 2	ISO 6743 Part 3 DAA
DIN 51517 Part 2, CL ISO 3498 [1986] CKB	Complies with quality level: ABB, Siemens, AEG, Westinghouse, Alstom, Sulzer, GE, KKK

ARIES TURBO GAS CC



Oil formulated with hydrogenated base oils, especially **designed for applications requiring extreme pressure properties**. It is especially characterised by its exceptional resistance to oxidation, which extends its service life.

Lubricant suitable for turbines and turbochargers running at high temperatures and requiring high lubricant performance.

Approvals and Quality Levels

L-TGP according to DIN 51515 Part 2	Alstom HTGD 90 117 V0001T
TGE according to ISO 6743/5	VDL according to ISO 51506
HM according to ISO 6743/4	Siemens TLV 901304
CKB according to ISO 6743/6	The ISO VG-32 grade complies with GEK 101941A, GEK 107395A and GEK 32568G requirements
ISO 6743 Part 3 DAB, DAH	

2.4.2. Products for Compressors

MERAK VDL



Lubricant oil especially designed for cylinders and rotary or reciprocating compressor mechanisms, whether air or inert gas, with high discharge temperatures of up to 220°C. Its excellent antioxidant power **enhances its performance against sludge and varnish formation**, helping to lubricate the equipment better, preventing valve blockages and sticking. As a result of the additivation and quality of the mineral bases selected for its formulation, it is a lubricant suitable for use in screw compressors not running at high temperatures and for lubrication of large reciprocating compressor cylinders.

Approvals and Quality Levels

DIN 51506-VDL
& VCL

ISO 6743 DAA DAG

DACNIS



Mineral oil with specific high-performance additives, antioxidant and anti-wear, designed to lubricate screw (DACNIS 68) and reciprocating air (DACNIS 68, 100, 150) compressors with high discharge temperatures.

It prevents carbon build-up and the formation of varnishes and allows good air/oil separation.

Approvals and Quality Levels

DIN 51506-VDL
& VCL

ISO 6743 DAB DAG

Complies with quality levels:
Dresser-Rand, Neuenhauser, Sauer & Sohn,
Sulzer, Tabane, etc.

BARELF SM



PAO synthetic oil for screw compressors with or without oil injection, rotary vane compressors with oil injection and turbochargers requiring a premium lubricant **with high antioxidant capacity to withstand applications at high working temperatures** to ensure proper lubrication.

It has high chemical stability and resistance to oxidation, high viscosity index, excellent anti-corrosion properties and compatibility with elastomers, plastics and usual paints.

Approvals and Quality Levels

ISO 6743 DAH DAJ

Turbochargers: ABB

Screw Compressors: Sauer & Sohn,
Tamrotor

PRIMERIA LPG 150



Synthetic polyglycol-type (PAG) lubricant with high natural viscosity index, excellent chemical stability, **anti-wear and high resistance to oxidation properties.**

Indicated for liquefied petroleum gas (LPG) and liquefied natural gas (LNG) compressors running on: **ethane-ethylene, butane-butylene-butadiene, methane-propane and propylene.** Its chemical nature prevents lubricant gas solubilisation thus maintaining a correct viscosity to ensure equipment protection at all times.

Approvals and Quality Levels

Grasso

Sulzer-Burckhardt

BARELF CH



Synthetic ester-based lubricant for reciprocating air compressors and vacuum pumps.

It stands out for its exceptional **resistance to oxidation, low volatility and high chemical stability** in very high temperature conditions.

Approvals and Quality Levels

ISO 6743 DAC, DAJ

DIN 51506 XXX

Reciprocating:
Hatlapa, Tanae

Turbochargers:
ABB



2.5. Refrigeration compressors

We have a wide range of Repsol products to lubricate all types of refrigeration compressors, **whichever type of refrigerant gas and equipment working conditions**. Many refrigerant gases are used for cold generation. The key for selecting the correct lubricant is to know the interactions between the gas and the lubricant chemistry used, so that they may be compatible but immiscible to **always maintain correct lubricant viscosity that ensures the machine protection**.

ICE OIL



Naphthenic oil for **refrigeration equipment** compressors that **use freon, ammonia or carbon dioxide**. It is characterised by a low flocculation point, minimal soot formation, high resistance to oxidation thanks to its natural inhibitors and low pour point.

Approvals and Quality Levels

DIN 51503 KAA

ISO 6743-3B-DRA

LUNARIA FR



Naphthenic mineral oil especially **recommended** for the **following refrigerant gases: freon - R12 - R22 - R11 - R113 - R13B1 - R502 - NH3 and CO²**.

Thanks to its naphthenic nature, this oil has a low pour point, ensuring very good lubricant performance in a wide range of temperatures. Enhanced oil in terms of anti-wear and anti-rust to ensure not only the correct cold gas interactions, but also the proper functioning in equipment.

Approvals and Quality Levels

ISO L-DRA-DRB

Bitzer

Bock

Grasso

ICE OIL S



Synthetic POE-based oil for **refrigeration compressors, air conditioning or industrial cooling** that mainly use **HFC type refrigerant gases**.

Its special formulation enhances its magnificent lubricant performance, thermal stability and anti-corrosion protection. They can be used as heat transfer fluids for open-air thermal circuits.

Approvals and Quality Levels

DIN 51503 KD

ISO 6743-3B-DRD

PLANETELF ACD



POE-based oil for refrigeration compressors that use HFC refrigerants. **Compatible with all types of HFC type refrigerants: R134a, R404A, R407C, R410A, R507, R23...** ASHRAE thermal stability test confirms the excellent performance of the lubricant at high temperatures in presence of refrigerant, water and metallic components.

PLANETELF ACD 32, 46 and 68 are suitable for piston compressors.

PLANETELF ACD 68, 100FY, 150FY and 220FY are suitable for rotary compressors (screw or centrifugal).

Approvals and Quality Levels

Bock

Grasso

Howden

York

2.6. Heat transfer

Within its heat transfer oil range, Repsol has **mineral and synthetic oils to cover the whole working temperature range**. They have a good heat transfer coefficient, low discharge loss and can lengthen the service life preventing the formation of deposits and the increase of viscosity.

MULTIGRADO TÉRMICO



Fluid especially formulated for use as heat transfer agent. It is formulated with highly refined mineral bases, with specific additivation that gives it extraordinary resistance to oxidation, minimises the formation of varnishes and prevents oil cracking at working temperatures.

It is an oil for specific use in **closed circuit forced circulation heat transfer systems**, in which maximum working temperatures are around 300°C.

Approvals and Quality Levels

ISO 6743/12-Q

ISO 51502-Q

MULTIGRADO TÉRMICO SINTÉTICO



Synthetic fluid especially formulated for use in **closed-circuit forced-circulation heat transfer systems**, where the working temperature is around 315°C. Its specific additivation gives it extraordinary resistance to oxidation.

Its main features are **great thermal stability, low vapour pressure and long service life with regard to mineral lubricant oils**, giving it great temperature control in these processes.

Approvals and Quality Levels

ISO 6743/12-QC

2.7. Greases

Aimed at completing our lubrication portfolio to cover all on-board machinery requirements. The highest quality standards applied by Repsol **guarantee the most suitable lubrication in all types of applications and working conditions, not only in the lubricant but also in the grease.** The wide range of thickeners used by Repsol and its knowledge of all the formulation variables to adapt the grease benefits to the working environments ensure the proper performance of all our greases in marine environments.

CALCIUM SULFONATE



Thanks to its formulation with complex calcium sulfonate soap and its careful addition, this grease is **specific for all those applications that, in addition to working in damp environments,** are applied in highly corrosive environments where they have to support heavy loads, winches and open gears. Grease able to provide benefits in machinery equivalent to lithium grease from enhancing its performance against the damp.

Grease **suitable for virtually all marine deck machinery** requiring grade 2 consistency.

Approvals and Quality Levels

DIN 51825 KP 2N-20



LÍTICA EP



Grease made from highly refined paraffinic oils, thickened with lithium soap (hydroxystearate). It contains antioxidant, anticorrosive and extreme pressure additives. All this means it works very well **supporting loads and offers good resistance in humid environments**, acting as a seal to prevent water from entering the lubricated area.

CERAN AD PLUS



High-pressure water-resistant calcium sulfonate complex grease **especially designed for use in guides, metallic and wire ropes, winches, open gears and chains working** in severe conditions. CERAN AD PLUS is used in marine applications.

Excellent thermal and mechanical stability. Adapted for a wide range of temperatures. Remarkable load resistance thanks to its natural high-pressure and anti-wear properties. Excellent adherence on wire ropes, open gears and metallic surfaces in general. Outstanding water resistance, no significant loss of consistency is observed even with large amounts of water. Excellent antioxidant and anti-corrosive properties thanks to the very nature of the calcium sulphonates, also in the presence of sea water.

BIOGRASA CÁLCICA EP 2



Grease formulated from biodegradable oils for **applications where lubrication is required in marine environments where there is a probability of leakage or spillage**, such as dams, open gears, winches or any other deck element that does not require extreme pressure high performance.

In addition, the calcium thickener provides **good surface adherence qualities**, which makes this grease a great choice in environments where there is a probability of leakage and good adherence is essential. Grease with high sealant power that isolates humidity in the lubrication area to prevent water entering the lubricated system and causing corrosion.

BIOADHESIVE PLUS



Biodegradable calcium grease **especially formulated to lubricate metallic wires, cables and winches**. Developed for loss lubrication in environmental sensitive areas. Excellent adherence on cables, water resistance and anticorrosive properties.

It is easily applied by hand with a brush or another adapted tool. BIO ADHESIVE PLUS is biodegradable (OECD 301B > 60%).

BIOMULTIS EP 2



High-performance extreme pressure biodegradable lithium grease **developed for loss lubrication with very highly environmental constraints**.

Multi-purpose grease for deck equipment, propeller and rudder bearings. Thanks to its multi-purpose character, BIOMULTIS EP 2 can replace a wide range of greases, permitting stock rationalization and maintenance simplification. BIOMULTIS EP 2 is a grease **with low toxicity to aquatic organisms** and contains more than 50% renewable raw materials.

MULTIS EP



Lithium and calcium soap grease with extreme pressure properties. It has a high load and anti-wear capacity ensuring a low friction coefficient and good water resistance.



3. Lubricant and grease applications by equipment

FISHING VESSEL

FISH HOLD & HAULING MACHINERY

- Telex HVLP
- Super Tauro
- Calcium Sulfonate
- Biohydran TMP
- Carter Bio
- Bioadhesive plus

TAIL SHAFT & STERN TUBE

- Bioneptan
- Bioneptan HT
- Tritón 70
- Repsol Calcium Sulfonate
- Bioadhesive Plus

REFRIGERATION COMPRESSORS

- Lunaria FR
- Planetelf ACD
- Ice Oil
- Ice Oil S



DECK CABLES

- Ceran AD Plus
- Calcium Sulfonate



DECK CRANES

- Telex HVLP
- Super Tauro
- Calcium Sulfonate
- Biohydran TMP
- Carter Bio
- Bioadhesive plus



MOORING MACHINERY

- Telex HVLP
- Super Tauro
- Calcium Sulfonate
- Biohydran TMP
- Carter Bio
- Bioadhesive plus



PROPELLERS

- Telex HVLP
- Biohydran TMP



ENGINES

- Disola M
- Aurelia T1
- Marino 3
- Neptuno Super Turbo Mar 15W40

WASTEWATER TREATMENT SYSTEMS

- Telex HVLP
- Super Tauro Sintético
- Turbo Aries

MERCHANT VESSEL

LIFEBOATS

- Ceran AD Plus
- Calcium Sulfonate
- Telex HVLP
- Super Tauro
- Biohydran TMP
- Carter Bio
- Bioadhesive plus
- Neptuno Super Turbo Mar 15W40



THERMAL BOILERS

- Multigrado Térmico
- Multigrado Térmico Sintético



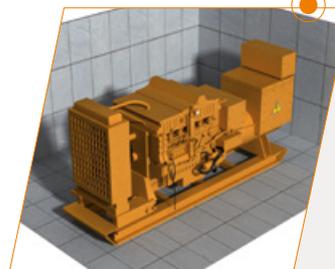
STERN TUBE AND TAIL SHAFT

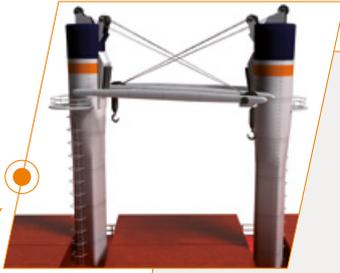
- Bioneptan
- Bioneptan HT
- Tritón 70



AUXILIARY ENGINE

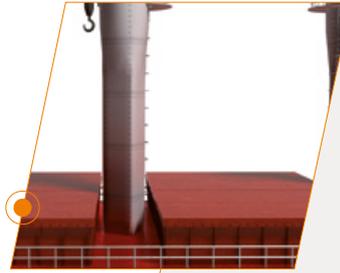
- Neptuno Super Turbo Mar 15W40





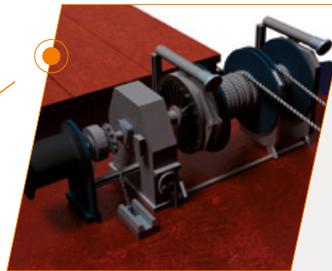
DECK CRANES

- Telex HVLP
- Super Tauro
- Calcium Sulfonate
- Biohydran TMP
- Carter Bio
- Bioadhesive plus



HATCHES

- Telex HVLP
- Super Tauro
- Calcium Sulfonate
- Biohydran TMP
- Carter Bio
- Bioadhesive plus



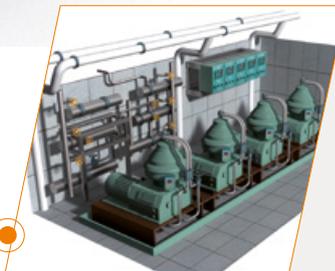
MOORING MACHINERY

- Ceran AD Plus
- Calcium Sulfonate
- Telex HVLP
- Super Tauro
- Biohydran TMP
- Carter Bio
- Bioadhesive plus



PROPELLERS

- Telex HVLP
- Biohydran TMP



ENGINE ROOM

Air Compressors

- Barelf CH
- Dacnis

Pumps/turbopumps

- Aries
- Turbo Aries
- Aries Turbo Gas CC

Turbochargers

- Aries Turbo Gas CC
- Barelf SM

Wastewater Treatment Systems

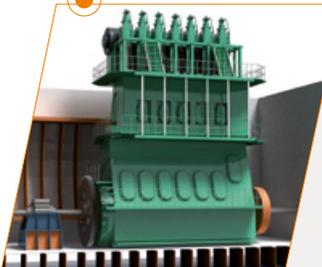
- Telex HVLP
- Super Tauro
- Turbo Aries
- Aries Turbo Gas CC

Refrigeration Compressors

- Lunaria FR
- Planetelf ACD
- Ice Oil
- Ice Oil S

MAIN ENGINE

- Talusia
- Atlanta Marine



4. Technical Characteristics

Engines

		SAE Grade	Density @ 15°C g/cm ³ ASTM D 4052	Viscosity @ 100°C cSt ASTM D 445	Flash Point [COC] °C ASTM D 92	Pour Point °C ASTM D 97	TBN mg KOH/g ASTM D 2896
SLOW-SPEED ENGINES	TALUSIA UNIVERSAL	50	0.930	19	230 min	-9	57
	TALUSIA UNIVERSAL 100	50	0.954	19	230 min	-9	100
	TALUSIA HR 70	50	0.940	20	220 min	-9	70
	TALUSIA LS 25	50	0.910	19	230 min	-10	25
	ATLANTA MARINE D 3005	30	0.895	11.5	220 min	-9	5
	ATLANTA MARINE D 4005	40	0.900	14.7	230 min	-9	5
MEDIUM-SPEED ENGINES	AURELIA TI 4020	40	0.910	14	230 min	-12	20
	AURELIA TI 3030	30	0.908	12	230 min	-12	30
	AURELIA TI 4030	40	0.910	14	230 min	-12	30
	AURELIA TI 3040	30	0.910	12	230 min	-9	40
	AURELIA TI 4040	40	0.912	14	230 min	-9	40
	AURELIA TI 4055	40	0.924	14	230 min	-9	55
	DISOLA M 3015	30	0.900	12	220 min	-15	14
	DISOLA M 4015	40	0.905	14.2	230 min	-12	14
	DISOLA M 3020	30	0.902	12	220 min	-9	20
	DISOLA M 4020	40	0.904	14	230 min	-9	20
HIGH-SPEED ENGINES	NEPTUNO SUPER TURBO MAR 15W40	15W40	0.879	14.5	215 min	-30	10
	MARINO 3	30	0.892	11.9	215 min	-24	12
	MARINO 3	40	0.897	14.9	225 min	-21	12
	SERIE 3 DIESEL MT	40	0.899	14.9	225 min	-27 max.	12.7
SPECIAL APPLICATIONS	SERIE 3 ESPECIAL FC 40 N	40	0.898	14.6	220 min	-18	13
	SERIE 3 DD 40	40	0.893	14.9	230 min	-21	7.8

Auxiliary machinery

		ISO Grade	Density @ 15°C g/cm ³ ASTM D 4052	Viscosity @ 40°C	Viscosity @ 100°C cSt ASTM D 445	Viscosity Index ASTM D 2270	Flash Point [COC] °C ASTM D 92	Pour Point °C ASTM D 97	TAN mg KOH/g ASTM D 664	RPVOT min ASTM D 943	FZG DIN 51354	
HYDRAULIC	TELEX HVLP	15	0.859	15	4	145	195	-45	0.5		11	
	TELEX HVLP	22	0.864	22	4.9	150	205	-39	0.5		11	
	TELEX HVLP	32	0.868	32	6.2	150	205	-33	0.38		12	
	TELEX HVLP	46	0.871	46	8.2	150	210	-33	0.38		12	
	TELEX HVLP	68	0.879	68	11.3	150	230	-33	0.38		12	
	BIOTELEX	46	0.912	46	9.8	180	310	-45				>10
	BIOTELEX	68	0.924	68.5	12.4	182	318	-39				12
	BIOHYDRAN TMP	32	0.913	32	7.5	195	268	-39				
	BIOHYDRAN TMP	46	0.920	46	9.5	183	285	-39				
	BIOHYDRAN TMP	68	0.935	68	12.7	180	300	-42				
	BIOHYDRAN TMP	100	0.937	100	18.1	202	>300	-42				
	GEARS	SUPER TAURO	68	0.885	68	8.5	98	230	-12	0.2		12
SUPER TAURO		100	0.887	100	11	97	245	-12	0.2		12	
SUPER TAURO		150	0.857	150	14.5	97	260	-9	0.2		12	
SUPER TAURO		220	0.900	220	19	95	260	-9	0.2		12	
SUPER TAURO		320	0.882	320	23	93	260	-9	0.2		12	
SUPER TAURO		460	0.907	460	30	92	260	-9	0.2		12	
SUPER TAURO		680	0.909	680	40	95	260	-9	0.2		12	
SUPER TAURO		1000	0.909	1000	50	95	260	-6	0.2		12	
SUPER TAURO SINTÉTICO		100	0.853	100	14.5	150	205	-54				12
SUPER TAURO SINTÉTICO		150	0.857	150	19.4	153	205	-51				12
SUPER TAURO SINTÉTICO		220	0.855	220	25.7	156	205	-42				12
SUPER TAURO SINTÉTICO		320	0.867	320	34.9	158	210	-42				12
SUPER TAURO SINTÉTICO		460	0.875	460	47.2	160	215	-39				12
CARTER BIO		68	0.951	68	10	147	240	-42				12
CARTER BIO		100	0.968	100	14	142	240	-42				12
CARTER BIO		150	0.960	150	22	144	240	-30				12
CARTER BIO		220	0.960	220	29	150	240	-27				12
CARTER BIO		320	0.964	320	38	139	250	-24				12

Auxiliary machinery

		ISO Grade	Density @ 15°C g/cm ³ ASTM D 4052	Viscosity @ 40°C	Viscosity @ 100°C cSt ASTM D 445	Viscosity Index ASTM D 2270	Flash Point [COC] °C ASTM D 92	Pour Point °C ASTM D 97	TAN mg KOH/g ASTM D 664	RPVOT min ASTM D 943	FZG DIN 51354
STERN TUBES	TRITÓN 70	150	0.892	150	14.5	95 min	230 min	-12			
	BIONEPTAN	100	0.939	100	18.1	170 min	250 min	-40			
	BIONEPTAN	220	0.961	220	29	170 min	250 min	-28			
	BIONEPTAN HT 100	100	0.920	100	13.7	140	278	-30			12
TURBINES	ARIES	7	0.846	7	2.1	97	150	-27			
	ARIES	15	0.860	13.8	3.4	95	180	-18			
	ARIES	22	0.865	24	4.3	100	200	-15			
	ARIES	32	0.870	32	5.4	100	215	-15			
	ARIES	46	0.880	46	6.8	98	220	-12			
	ARIES	68	0.880	68	8.5	98	230	-12			
	ARIES	100	0.885	100	11	97	245	-12			
	ARIES	150	0.890	150	14.5	97	260	-12			
	ARIES	220	0.895	220	19	95	260	-12			
	TURBO ARIES	32	0.870	32	5.4	100	215	-15	0.14	750	
	TURBO ARIES	46	0.880	46	6.8	98	220	-12	0.14	600	
	TURBO ARIES	68	0.880	68	8.5	98	230	-12	0.14	600	
	TURBO ARIES	EP	0.886	80	9.6	95	230	-12	0.15	-	
	ARIES TURBO GAS CC	32	0.838	32		120	230	-15		1300	8
	ARIES TURBO GAS CC	46	0.843	46		130	250	-15		1300	8

Auxiliary machinery

		ISO Grade	Density @ 15°C g/cm ³ ASTM D 4052	Viscosity @ 40°C	Viscosity @ 100°C cSt ASTM D 445	Viscosity Index ASTM D 2270	Flash Point [COC] °C ASTM D 92	Pour Point °C ASTM D 97	TAN mg KOH/g ASTM D 664	RPVOT min ASTM D 943	FZG DIN 51354
COMPRESSORS	MERAK VDL	32	0.870	32	5.4	100	215	-15			
	MERAK VDL	46	0.880	46	6.8	98	220	-12			
	MERAK VDL	68	0.880	68	8.5	98	230	-12			
	MERAK VDL	100	0.885	100	11	97	245	-12			
	DACNIS	100	0.889	100			276	-6			
	DACNIS	150	0.892	150			284	-6			
	BARELF SM	46	0.841	46	7.6	139	255	-42			
	BARELF SM	68	0.845	68	10.7	147	262	-42			
	PRIMERIA LPG 150	150	1.050	141	26.4	220	220	-45			
	BARELF CH	68	0.962	68	8.9		260	-36			
	BARELF CH	100	0.960	110	11.3		260	-30			
REFRIGERATION COMPRESSORS	ICE OIL	32	0.890	32	4.7		185	-45	0.1		
	ICE OIL	46	0.893	46	5.7		195	-43	0.1		
	ICE OIL	68	0.896	68	7		205	-33	0.1		
	LUNARIA FR	46	0.910	46	5.3		171	-35			
	LUNARIA FR	68	0.890	68	7		175 min	-34			
	ICE OIL S	32	0.950	32	5.8	120	258	-46	0.04		
	ICE OIL S	68	0.970	66	9.4	120	270	-39	0.04		
	PLANETELF ACD	32	0.984	34.6	6		250	-54	0.1 max.		
	PLANETELF ACD	46	0.975	48.6	7.5		250	-45	0.1 max.		
	PLANETELF ACD	68	0.962	69.5	9.1		250	-39	0.1 max.		
	PLANETELF ACD	100	0.960	101	11		268	-36	0.1 max.		
	PLANETELF ACD	150	0.995	150	15.5		264	-33	0.1 max.		
	PLANETELF ACD	220	1.018	220	20.8		264	-30	0.1 max.		

Auxiliary machinery

		ISO Grade	Density @ 15°C g/cm ³ ASTM D 4052	Viscosity @ 40°C cSt ASTM D 445	Viscosity @ 100°C cSt ASTM D 445	Viscosity Index ASTM D 2270	Flash Point [COC] °C ASTM D 92	Pour Point °C ASTM D 97	TAN mg KOH/g ASTM D 664	RPVOT min ASTM D 943	FZG DIN 51354
HEAT TRANSFER	MULTIGRADO TÉRMICO		0.875	37	58	102	220	-12	0.4		
	MULTIGRADO TÉRMICO SINTÉTICO		0.873	16	3.5		190		0.01		

		Consistency NLGI	Thickener	Viscosity @ 40°C ACEITE BASE cST ASTM D 445	Penetration @60 1/10 mm ASMT D 217	Dropping Point °C METTLER FP-83HT	Operating temperature range °C
GREASES	CALCIUM SULFONATE	2	Calcium sulfonate complex	220	280	280	
	LÍTICA EP	0	Lithium	150	370	185	
	LÍTICA EP	1	Lithium	150	325	190	
	LÍTICA EP	2	Lithium	150	275	195	
	LÍTICA EP	3	Lithium	150	235	200	
	CERAN AD PLUS	0/1	Calcium sulfonate complex	1700	330	250	-25 to 150
	BIOGRASA CÁLCICA EP 2	2	Anhydrous Calcium	200	273	150	
	BIOADHESIVE PLUS	1	Calcium	320	310	145	-20 to 90
	BIOMULTIS EP 2	2	Lithium	158	265	180	-30 to 140
	MULTIS EP	0	Lithium/Calcium		355	170	25 to 120

The characteristics above represent typical values and cannot be considered as product specifications.

5. Packaging

PRODUCTS	Bulk	Container 1000 L	Drum 208 L	Drum 20 L	Geographic Availability
SLOW-SPEED ENGINES					
TALUSIA UNIVERSAL	✓	✓	✓		
TALUSIA UNIVERSAL 100	✓	✓	✓		
TALUSIA HR 70	✓	✓	✓		
TALUSIA LS 25	✓	✓	✓		
ATLANTA MARINE D 3005	✓	✓	✓		
ATLANTA MARINE D 4005	✓		✓		
MEDIUM-SPEED ENGINES					
AURELIA TI 4020	✓		✓		
AURELIA TI 3030	✓	✓	✓		
AURELIA TI 4030	✓	✓	✓		
AURELIA TI 3040	✓				
AURELIA TI 4040	✓	✓	✓		
AURELIA TI 4055	✓				
DISOLA M 3015	✓	✓	✓		
DISOLA M 4015	✓	✓	✓		
DISOLA M 3020	✓		✓		
DISOLA M 4020	✓	✓	✓		
HIGH-SPEED ENGINES					
NEPTUNO SUPER TURBO MAR 15W40	✓	✓	✓	✓	
MARINO 3 30	✓		✓	✓	
MARINO 3 40	✓	✓	✓	✓	
SERIE 3 DIESEL MT	✓	✓			
SPECIAL APPLICATIONS					
SERIE 3 ESPECIAL FC 40 N	✓		✓	✓	
SERIE 3 DD 40			✓		

 Lubricants only available for customers in Spain, Peru and Gibraltar.

 Lubricants available all over the world.

PRODUCTS	Bulk	Container 1000 L	Drum 208 L	Drum 20 L	Container 5 L	Geographic Availability
HYDRAULIC						
TELEX HVLP 15			✓			
TELEX HVLP 22			✓	✓		
TELEX HVLP 32	✓	✓	✓	✓		
TELEX HVLP 46	✓	✓	✓	✓	✓	
TELEX HVLP 68	✓	✓	✓	✓	✓	
BIOTELEX 46		✓	✓			
BIOTELEX 68			✓			
BIOHYDRAN TMP 32			✓			
BIOHYDRAN TMP 46			✓			
BIOHYDRAN TMP 68			✓			
BIOHYDRAN TMP 100			✓			
GEARS						
SUPER TAURO 68			✓			
SUPER TAURO 100			✓			
SUPER TAURO 150	✓	✓	✓	✓		
SUPER TAURO 220	✓	✓	✓	✓		
SUPER TAURO 320	✓	✓	✓	✓		
SUPER TAURO 460	✓		✓	✓		
SUPER TAURO 680	✓		✓			
SUPER TAURO 1000			✓			
SUPER TAURO SINTÉTICO 100				✓		
SUPER TAURO SINTÉTICO 150				✓		
SUPER TAURO SINTÉTICO 220	✓	✓	✓	✓		
SUPER TAURO SINTÉTICO 320	✓		✓	✓		
SUPER TAURO SINTÉTICO 460			✓	✓		
CARTER BIO 68			✓			
CARTER BIO 100			✓			
CARTER BIO 150			✓			
CARTER BIO 220			✓			
CARTER BIO 320			✓			
STERN TUBES						
TRITÓN 70			✓			
BIONEPTAN 100			✓			
BIONEPTAN 220			✓			
BIONEPTAN HT 100			✓			
TURBINES/COMPRESSORS						
ARIES 7			✓			
ARIES 15			✓			
ARIES 22			✓			
ARIES 32	✓	✓	✓			
ARIES 46		✓	✓			

PRODUCTS	Bulk	Container 1000 L	Drum 208 L	Drum 20 L	Container 5 L	Geographic Availability
TURBINES/COMPRESSORS						
ARIES 68	✓	✓	✓	✓		
ARIES 100	✓	✓	✓			
ARIES 150	✓	✓	✓			
ARIES 220	✓	✓	✓			
TURBO ARIES 32	✓	✓	✓		✓	
TURBO ARIES 46	✓	✓	✓			
TURBO ARIES 68	✓	✓	✓			
TURBO ARIES EP	✓	✓	✓			
ARIES TURBO GAS CC 32	✓	✓	✓			
ARIES TURBO GAS CC 46	✓	✓	✓			
MERAK VDL 32			✓			
MERAK VDL 46	✓	✓	✓	✓		
MERAK VDL 68			✓	✓		
MERAK VDL 100					✓	
DACNIS 100	✓			✓		
DACNIS 150				✓		
BARELF SM 46				✓		
BARELF SM 68				✓		
PRIMERIA LPG 150			✓			
BARELF CH 68				✓		
BARELF CH 100			✓	✓		
REFRIGERATION COMPRESSORS						
ICE OIL 32		✓	✓			
ICE OIL 46			✓			
ICE OIL 68			✓	✓	✓	
LUNARIA FR 46				✓		
LUNARIA FR 68			✓	✓		
ICE OIL S 32					✓	
ICE OIL S 68					✓	
PLANETELF ACD 32				✓		
PLANETELF ACD 46				✓		
PLANETELF ACD 68				✓		
PLANETELF ACD 100				✓		
PLANETELF ACD 150				✓		
PLANETELF ACD 220				✓		
HEAT TRANSFER						
MULTIGRADO TÉRMICO	✓	✓	✓			
MULTIGRADO TÉRMICO SINTÉTICO	✓	✓	✓			

PRODUCTS	Drum 180 kg	Drum 45 kg	Drum 18 kg	Bulk	Cartridge 400 gr	Geographic Availability
GREASES						
CALCIUM SULFONATE 2	✓	✓	✓			
LÍTICA EP 0	✓	✓	✓	✓		
LÍTICA EP 1	✓	✓	✓	✓		
LÍTICA EP 2	✓	✓	✓	✓	✓	
LÍTICA EP 3			✓			
CERAN AD PLUS		✓	✓			
BIOGRASA CÁLCICA EP 2		✓				
BIOADHESIVE PLUS			✓			
BIOMULTIS EP 2			✓			
MULTIS EP			✓			



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Let's invent the future

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