



A NEW HORIZON

MARINE LUBRICANTS

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INTRODUCTION MARINE LUBRICANTS

In continuous evolution and with more than 50 years of experience on the market, **CEPSA** manufactures **a full range of products** specially designed to cover all needs of the increasingly demand of marine lubricants.

At CEPSA, in our continuous commitment to **innovate and develop environmentally friendly products**, we offer to our customer the most advanced formulations, which allow us to provide the highest proven quality in the marine lubricants market.

Our **CEPSA Marine Lubricants** meet or exceed the performance requirements or have gained the Approvals from the key OEM's. We offer a full range of products that satisfy the new lubricating demands of the most modern equipment, ensuring maximum efficiency and protection for engines and industrial equipments.

We offer **reliable lubrication**. Due to the in-depth knowledge of our manufacturing processes and the very exhaustive controls implemented in our Plants, we supply to the market finished products of outstanding quality. Our offer is complemented by an excellent logistics service in our distribution network and by an exclusive technical support for analysis and diagnosis (OilMonitor).

Detailed, up-to-date information is available for all our products on the Cepsa web site: www.cepsa.com

You can also contact our orders centre on:

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ENGINE



ENGINE

In alignment with the latest environmental regulations, Cepsa has developed a full range of engine lubricants that have been formulated specially to fulfil the lubrication requirements anywhere in the world.

The Cepsa Petrel and Cepsa Larus ranges satisfy the requirements of the equipment manufacturers for new dual fuel engines, when they sail alternating Natural Gas with Light Fuel Oil and Natural Gas with Heavy Fuel Oil.

Cepsa's marine engine lubricants have a demonstrated high performance, ensuring an excellent protection and an engines cleanliness, thus reducing maintenance costs.

LOW SPEED ENGINES

CYLINDER OIL

CEPSA GAVIA 7050

Cepsa Gavia 7050 is a premium quality lubricant for the cylinder lubrication of low-speed two-stroke marine diesel engines using fuels from 1 to 3.5% of sulphur content.

Cepsa Gavia 7050 is formulated with high viscosity (20 cSt at 100°C) premium base oils and very high detergency (TBN 70) which allows the optimization of the oil distribution and maintains a stable and continuous lubricating film. Its additives are carefully selected to provide excellent ring and liner wear protection, piston cleanliness and superior protection against corrosive acids.

TBN: 70

SAE Grades: 50

Quality levels:

MAN DIESEL & TURBO

WIN GD

CEPSA GAVIA 2550

Cepsa Gavia 2550 is a premium quality product designed for lubricating the latest generation of low-speed two-stroke diesel engines that use marine fuel with low sulphur content (up to 0.1%), as required for continuous operation within Emissions Control Area (ECA) and for LNG operation.

Cepsa Gavia 2550 is blended with highly refined base oils and a selected detergent additive which provides excellent wear protections and piston cleanliness. The additive technology is specially developed to prevent deposits formation and wear that occurs specifically with the use of low sulphur fuels.

TBN: 25

SAE Grades: 50

Quality levels:

MAN DIESEL & TURBO

WIN GD

CRANKCASE OIL

CEPSA CICONIA 30

Cepsa Ciconia 30 is a system lubricant for large low-speed two-stroke crosshead diesel engines.

Cepsa Ciconia 30 is blended with highly refined base oils and selected additives providing excellent anticorrosion and anti-foaming properties. It is formulated with the appropriate level of detergents and antioxidants, allowing a much longer service life. Cepsa Ciconia 30 provides efficiency in bearing lubrication and very good cleanliness in the crankcase and piston back side.

TBN: 5

SAE Grades: 30

Quality levels:

MAN DIESEL & TURBO

WIN GD



MEDIUM SPEED ENGINES

CEPSA LARUS 3030, 3040, 4040 and 5040

Cepsa Larus series lubricants are a high performance engine oils specifically designed for medium-speed 4-stroke marine engines using HFO heavy fuels with a high sulphur content (up to 3.5%).

Cepsa Larus are developed with a new technology that gives an outstanding performance against thermal degradation and oxidation. The excellent detergent and dispersant additive system promotes piston cleanliness and a very good control of fuel contaminants. This results in providing an excellent oil-fuel compatibility, high base number retention, extreme reduction of deposits, better protection against the corrosion caused by acids and a much longer service life.

TBN: 30, 40, 50

SAE Grades: 30 y 40

Quality levels:

MAN DIESEL & TURBO

WÄRTSILÄ

CEPSA PETREL 30 and 40

Cepsa Petrel Marine Lubricants are high performance engine oils developed for four-stroke marine diesel engines operating in standard or severe conditions burning distillate fuels.

Cepsa Petrel are blended with highly refined base oils and selected additives. The unique combination of antioxidants provides high resistance to oxidation and thermal degradation. The powerful detergent and dispersant additive system ensures excellent base number retention, piston cleanliness, soot handling and prevents the corrosive wear. This results in a cleaner crankcase, much longer drain intervals and lower maintenance costs.

TBN: 15

SAE Grades: 40

Quality levels:

API CF

MIRRLEES BLACKSTONE (SAE 30)



MEDIUM SPEED ENGINES

CEPSA PETREL HDL 40

Cepsa Petrel HDL 40 is a lubricant developed for four-stroke marine diesel engines operating under very high effective pressures and burning distillate fuels.

Cepsa Petrel HDL 40 is blended with highly refined base oil and carefully selected additives. The new oxidation inhibitors control in a very efficient way the oil oxidation, sludge formation and undue thickening during oil drain intervals. The latest technology of detergent-dispersants achieves an effective reduction of lacquers formation on cylinder liner and contribute to eliminate deposits and sludge caused by fuel contaminants and very severe operating conditions. This results in an outstanding engine cleanliness, lower cylinder liner polishing and segment sticking, avoiding corrosive wear and reducing the oil consumption.

TBN: 15

SAE Grades: 40

Quality levels:

MIL-PRF-2104-G	MIL-PRF-9000-K	API CH-4
MTU Type 2	DEUTZ DQC I-02	MAN M 270

CEPSA PETREL 1340 NZ

Cepsa Petrel 1340 NZ is a lubricant developed for four-stroke medium- or fast-speed marine engines that require zinc-free additives in their composition.

Cepsa Petrel 1340 NZ is formulated with highly refined base oils and additives carefully selected to provide maximum protection to the engine. This oil is especially indicated for engines with silver bearings.

TBN: 13

SAE Grades: 40

Quality levels:

API CF	LMOA Gen 5	G.E. Gen 4 Long Life
EMD Gen 5	Caterpillar 3600	



HIGH SPEED-ENGINES

CEPSA ULTRAMAR SHPD 15W40

Cepsa Ultramar SHPD 15W40 is a genuine and specific lubricant developed for high-speed marine diesel engines used in merchant and fishing vessels as well as ancillary equipment working in tough severe operating conditions. Cepsa Ultramar SHPD 15W40 is especially suitable for the latest generation of engines incorporating higher rates of turbocharging, exhaust gas recirculation (EGR) and high pressure injection.

With 33% more TBN than other API CI-4 products, its upgraded technology allows it to pass, among others, the demanding Caterpillar micro-oxidation test, the Bohlin trial that evaluates the ability to disperse up to 5% soot and the HCTBT TEST, which determines the ability to control corrosion in the engine.

This new formula helps to prevent the high formation of residue in the pistons, general dirt in the engine, the oil thickening and the polishing of cylinder liner caused by the particularly severe operating conditions of modern engines.

TBN: 15

SAE Grades: 15W-40

Quality levels:

API CI-4	ACEA E7	MB- 228.3
MAN 3275	VOLVO VDS-3	MACK EO-M Plus
Cummins CES 20078	MTU Type 2	CAT ECF-1-a y ECF-2

CEPSA MAR SHPD 15W40

Cepsa Mar SHPD 15W40 is a multigrade lubricant designed for fast, turbocharged or naturally aspirated diesel engines, including those operating under severe conditions.

Cepsa Mar SHPD 15W40 is blended with highly refined base oils and selected additives which minimize the effects of high working temperatures and the presence of soot. It significantly reduces wear while achieving outstanding engine cleanliness and longer service life.

TBN: 9

SAE Grades: 15W-40

Quality levels:

API CH-4	MAN 271	VOLVO VDS
MTU Type 1	CATERPILLAR ECF-1	MACK EO-M
MB 228.1	CUMMINS CES 20071/20076	



ANCILLARY MACHINERY

Cepsa formulates and manufactures lubricants for ancillary machinery, including biodegradable oils for applications that could potentially pollute the marine environment and for shipping companies operating in areas where EAL (environmentally acceptable lubricants) must be used.

Cepsa's range of hydraulic oils, specifically formulated for the marine applications, ensures exceptional protection against wear, rust and corrosion, and provides excellent oxidation stability, water separability, and foam suppression.

Cepsa's range of gear oils are manufactured from high quality base oils and extreme-pressure additives with unbeatable resistance to wear even in equipment operating under heavy loads and very severe working conditions. They have been specially developed to meet the demanding load-carrying requirements of gear manufacturers.

Cepsa completes its range of lubricants for ancillary machinery with products that cover any application that may be needed on board, such as the different types of compressors, heat exchangers, stern tube seals or a full range of specific and top quality greases.

HYDRAULIC

CEPSA MISTRAL

Cepsa Mistral oils are formulated with highly-refined paraffinic base oils and selected additives that provide an outstanding protection against rust and oxidation and excellent filterability properties.

They are specially formulated to satisfy the needs of high pressure marine hydrostatic systems and specifically those with the latest generation pistons and vane pumps.

Cepsa Mistral Oils are recommended for hydraulic systems of all shipboard machinery where a wear-resistant HM type fluid is required. They are suitable to be used in equipment operating under extreme temperature and pressure conditions.

ISO Grades: 32, 46 y 68

Quality levels:

PARKER DENISON HF-0, HF-1, HF-2	EATON Brochure 03-401- 2012	ISO 11158 HM
Fives Cincinnati P-68 P-70 P-69	DIN 51524 Parte 2 HLP	BOSCH-REXROTH 90220 (ISO 46)
FILTRABILIDAD AFNOR	AFNOR NF E 48-603 HM	VOITH Variable speed drives (ISO 32)
ISO 6743-4 HM		

SYNTHETIC ▶



CEPSA BIO OIL HMS

Cepsa BIO OIL HMS are EAL (Environmentally Acceptable Lubricant) synthetic hydraulic fluids, developed specially for applications where a biodegradable product compliant with VGP (Vessel General Permit) legislation is needed. Cepsa BIO OIL HMS product range allows operation in a wide range of temperatures, providing exceptional oxidation stability, water separability, foam suppression, and protection against wear, rust and corrosion.

CEPSA BIO OIL HMS are specially recommended for hydraulic systems working in severe operating conditions, which require protection against wear and a high viscosity index that remains stable over the time.

ISO Grades: 32, 46 y 68

Quality levels:

VDMA 24568 clase HEES	ISO 15380 clase HEES	Tipo EAL para cumplimiento de VGP
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CEPSA MISTRAL HX

Cepsa Mistral HX hydraulic oils are mainly characterized by their high viscosity index. These oils are formulated from, highly-refined paraffin base oils in combination with the latest generation of additives. They have outstanding properties of thermal stability, EP or anti-wear as well as for protection against rust and oxidation.

Recommended for hydraulic systems of marine equipment installed on vessels to cater to the needs of a widely varying operating temperatures, maximum pressure demands and operation with servo valves.

ISO Grades: 32, 46, 68, 100 y 150

Quality levels:

PARKER DENISON HF-0, HF-1, HF-2	EATON Brochure 03-401- 2012	FILTRABILIDAD ISO (dry) and (wet)
Fives Cincinnati P-68 P-70 P-69	BOSCH-REXROTH 90220	DIN 51524 Parte 3 HVLP
ISO 11158 HV	FILTRABILIDAD DENISON	AFNOR NF E 48- 603-HV



GEARS

CEPSA RADA XMP

Cepsa Rada XMP is a range of premium mineral lubricant oils of very high quality and great lubricating power. Cepsa Rada XMP are manufactured starting from premium base oils and an additive combination that increases lubricity, extreme pressure and anti-wear properties. Cepsa Rada XMP range of products have a high hydrolytic, thermal and oxidation stability, very good dewatering, air release and anti-foam properties, which helps to protect against metal rust and corrosion.

Their excellent EP properties make it essential for certain heavily-loaded gearboxes, meeting the demanding load-carrying requirements of gearbox manufacturers and specifically where there is a risk of 'micropitting'.

They are specially recommended to lubricate a wide range of gears installed in industrial and marine equipment built in steel in closed crankcases, operating in high stress severe conditions, including those running at very high speeds.

Available in ISO grades: 68, 100, 150, 220, 320 y 460

Quality levels:

AIST 224	DIN 51517 Parte 3 CLP	ISO 129525-1 Type CKC
AGMA 9005-F16 Antiscuff	DAVID BROWN S1.53.101	FIVES CINCINNATI P-Specs
SIEMENS FLENDER AG Rev. 13	MÜLLER WEINGARTEN	SCHOTTEL (ISO 100 y 150)
IBERCISA (ISO 220 y 320)		

SYNTHETIC ▶

CEPSA ENGRANAJES HPX

Cepsa Engranajes HPX are a high-performance synthetic EP gear lubricant oils with excellent properties such as a high viscosity index and very low pour point. They are formulated with a combination of polyalphaolefin and selected additives that provide good anti-wear and EP performance, enhance thermal/oxidation stability and protect against rust and corrosion including copper.

They are recommended for multiple applications in severe operating conditions, working under heavy loads and low speeds. Their properties remain stable in a wide range of temperatures, including high temperatures where a conventional oil would quickly oxidize. Improved thermal and oxidation stability helps in providing much longer service life under adverse conditions than with conventional mineral oils. They are highly resistant to micropitting.

Cepsa Engranajes HPX are recommended in the lubrication of steel gears in closed crankcases, subject to high impacts, constant and intermittent stress and operating at low speeds/very high loads. The high quality of the products extends the equipment life in severe service.

Available in ISO grades: 150, 220, 320 y 460

Quality levels:

AIST 224	AGMA 9005-F16 Antiscuff	DIN 51517 Parte 3 CLP
ISO 129525-1 Tipo CKC/CKD/CKS	DAVID BROWN S1.53.106	FIVES CINCINNATI P-Specs



COMPRESSORS

AIR

CEPSA COMPRESORES AR

Cepsa Compresores AR are mineral compressor lubricants exhibiting high load-carrying capacity and excellent resistance to rust and oxidation. Cepsa Compresores AR are blended from selected high quality paraffinic base oils, supported with an additive package which provides great extreme pressure performance, outstanding oxidation resistance and rust and corrosion protection. Their properties eliminate the risk of formation of deposits in valves and hot areas, consequently reducing equipment shutdowns and thereby maintenance costs. They also ensure great protection against wear in rings and liners.

These lubricants are recommended for lubricating compressor cylinders and bearings, both rotary and reciprocating, for air or inert gases, with one or more stages, and operating in normal or severe conditions.

Available in multiple viscosities: ISO 46 grade is recommended in rotary compressors. Viscosities ISO 68 and 100 are generally recommended for reciprocating.

ISO Grades: 46, 68 y 100

Quality levels:

SYNTHETIC ▶ CEPSA COMPRESORES ES 100

Cepsa Compresores ES 100 is a synthetic, ester-based lubricating oil which offers excellent thermal and oxidation stability as well as protection against corrosion and wear at higher levels than conventional mineral oil. As result, it reduces wear on cylinders, rings and bearings, keeping air compressors cleaner with fewer deposits in the valves. Cepsa Compresores ES 100 also offers good performance at low temperature and energy saving properties.

These oils have been especially developed to meet the strictest specifications of reciprocating air compressor manufacturers, operating in extreme conditions with unloading temperatures up to 200°C and start-up temperatures of -20°C. They are recommended for alternative type air compressors, used in marine, industrial and stationary applications.

ISO Grades: 100

Quality levels:

DIN 51506, Tipos VD-L

ISO 6743/3

AIR ESTER



COMPRESSORS

PAO AIR

SYNTHETIC ▶ CEPSA COMPRESORES ARS

Cepsa Compresores ARS are synthetic lubricants, formulated with polyalphaolefin base fluid of the highest quality, which provides longer oil drain intervals if compared against the lubricants formulated with mineral base oils. The PAO base fluid ensures outstanding thermal and oxidation stability, low volatility, high viscosity index, low pour point and low friction coefficient. The high performance additive package enhances these characteristics, reduces the formation of carbon deposits and varnishes and protects against rust and corrosion.

They are designed to meet the most demanding manufacturer specifications for both air vane and screw compressors operating at high discharge temperatures ($>100^{\circ}\text{C}$) and high discharge pressures (>15 bar).

ISO Grades: 46 y 68

Quality levels:

DIN 51506, Tipos VC-L

ISO 6743/3 (DAC y DAJ)

REFRIGERATION COMPRESSOR OIL

CEPSA BOREAL

Cepsa Boreal is a top quality wax-free oil specifically developed for the lubrication of compressors used in refrigerating and air-conditioning systems. It is manufactured from high quality naphthenic base oils, which avoids the formation of crystal waxes at low temperatures and guarantees the maximum performance in cooling installations, extending useful life of the compressor. Cepsa Boreal specifically offers good low temperature properties and optimal chemical stability minimizing sludge and varnish formation.

The product is specifically recommended for lubricating Refrigeration Compressors that use traditional refrigerants like, ammonia, carbon dioxide, Freon-12 and R22.

ISO Grades: 68

Quality levels:

DIN 51503 KAA / KC / KE



COMPRESSORS

GAS

SYNTHETIC ▶

CEPSA COMPRESORES LPG - 9

Cepsa Compresores LPG – 9 is a synthetic lubricant especially formulated to lubricate gas compressors, in which gears and bearings operate in a gas atmosphere type: butane, propane, methane, ethylene, ammonia and vinyl chloride. Its high viscosity index allows it to operate in a wide range of temperatures.

Quality levels:

SULZER BURCKHARDT A.G.
en compresores tipo K

LINDE A.G.

POLYOL ESTER COOLANTS

SYNTHETIC ▶

CEPSA NORTHER HFC

Cepsa Norther HFC is a premium-synthetic lubricant oil blended exclusively with special selected polyolesters and an exclusive package of additives that provides great protection against rust. The product exhibits excellent thermal, chemical and hydrolytic stability in the presence of hydrofluorocarbon (HFC) refrigerants. It has a high viscosity index ensuring a good lubricity over a wide range of temperatures.

Cepsa Norther HFC improves the efficiency of the cooling equipment, reducing maintenance costs and providing good lubrication and oil separation properties. It is specifically recommended to lubricate refrigeration compressor using ozone-friendly hydrofluorocarbon refrigerants (HFC) such as R134a, R404a, R410a or R507.

Available in ISO grades: 32 y 68

Quality levels:

AERZEN	BOCK	FRASCOLD	GRAM	GRASSO
HOWDEN	MCQUAY	SABROE	SULZER	YORK
ISO 6743/3: DRD				

SYNTHETIC ▶

CEPSA NORTHER AB

Cepsa Norther AB is an alkylbenzene-based synthetic oil for lubricating compressors used in HCFC (R-22) and (CFC R-502/R-12) refrigeration systems, operating at low evaporator temperatures. Cepsa Norther AB is a very high quality product that shows better solubility with refrigerants than mineral oils. This lubricant's properties help to avoid common problems involving the separation of oil, freezing in valves and heat transfer surfaces of the refrigerating system.

The synthetic nature of the lubricant ensures an excellent chemical and thermal stability, avoiding the oil oxidation and degradation.

Available in ISO grades: 100

Quality levels:

APV	BITZER	BOCK
SABROE	YORK	REFCOMP
ISO 6743/3 DRE		



TURBINES AND CIRCULATING SYSTEMS

CEPSA HD TURBINAS *

Cepsa HD Turbinas * is a premium lubricant formulated with highly-refined hydrotreated paraffinic base oils and high quality additives that provides outstanding properties for use in multiple applications. The lubricant exhibits an excellent antirust and antioxidant protection in combination with very good air release, antifoam and water separating properties.

Cepsa HD Turbinas * is specifically recommended for steam, gas and hydraulic turbines where high oxidation stability and long life service are required. It also provides good performance in hydraulic machinery and circulation oil systems where a high quality lubricant without EP properties is needed.

Available in ISO grades: 32, 46 y 68

Quality levels:

ISO 6743-5 L TSA/ TGA/TGB	DIN 51515 Parte II (L-TG)	ASTM D-4304, Tipo I
British Standard 489 (CIGRE)	MIL-L-17672 D	JIS K 2213
CEGB Standard 207001	AIST 120, 126	FIVES CINCINNATI P-Specs
General Electric GEK 107395A	General Electric GEK 32568H	General Electric GEK 46506E
General Electric GEK 28143A	ALSTOM HTGD 90 117 (no EP)	MAN Turbo – TED 10000494596
Siemens MAT 812101/02	Siemens TLV 901304/901305 (no EP)	Solar ES 9-224Y Class II

CEPSA CIRCULANTE

Cepsa Circulante is a high quality, general-purpose machine lubricant formulated from selected high quality paraffinic base oils and specific additives to ensure the product has the necessary properties for using in multiple applications. The lubricant provides an excellent antirust and antioxidant protection and exhibits a good thermal and chemical stability that allows it to cover a wide range of operating temperatures. This helps in extending the service life of the lubricant. The multifunctional characteristics of Cepsa Circulante range may allow to reduce inventory and operating cost.

Available in ISO grades: 100, 150, 220, 320 y 460

Quality levels:

DIN 51524 Parte 1 (HL)	ISO 6743-2 FC
DIN 51517 (CL)	ISO 6743-4 HL

STERN TUBES

CEPSA STERNA

Cepsa Sterna is a high viscous, high-performance lubricant oil formulated from selected paraffinic base oils and specific additives that quickly emulsifies in presence of sea water, maintaining stable the emulsion. The product has excellent lubrication properties and protects critical surfaces of the stern tube from corrosion, even during long periods of time working in severe operating conditions.

Cepsa Sterna is particularly recommended for stern tube bearings/closures, where emulsifying lubricants are necessary. It is especially developed to lubricate Cedervall type stern tubes installed in vessels and for certain fin stabilizer bearings installed in passenger ships.

SYNTHETIC ▶



CEPSA STERNA BIO

Cepsa Sterna Bio is synthetic EAL (environmentally acceptable lubricant) hydraulic fluid specially developed for vessel stern tubes. It is also suitable for any application where a VGP (Vessel General Permit) 2013 legislation compliant biodegradable product is required.

Cepsa Sterna Bio has an excellent protection against rust and corrosion and good oxidation stability, water separability and foam suppression. Cepsa Sterna Bio exhibits a high viscosity index that remains stable over the time and which allows for operation over a wide temperature range.

It is particularly recommended when there is a risk of water contamination in hydraulic systems working in severe operating conditions.

The product is fully compatible with the typical elastomers used in hydraulic equipments.



OTHER APPLICATIONS

CEPSA RODAJE Y PROTECCIÓN SAE 30

Cepsa Rodaje y protección SAE 30 is a lubricant formulated from selected paraffinic base oils and a robust additive system which provides outstanding protective properties. Cepsa Rodaje y protección SAE 30 includes an excellent detergent and dispersant additive system that ensures a perfect engine cleanliness, maintaining the engine fully protected against rust and corrosion.

It is specifically recommended for bench testing of supercharged diesel engines, undergoing trial tests and run-in periods in which the engine must go through long intervals of time without operation. The lubricant is also suitable to protect engines under normal storage conditions or when intermittent service is needed for a long period of time.

TBN: 11

SAE Grade: 30

MIL-L-21260E	API CG-4	MTU Oil Type 1º
MB 228.1	VOLVO VDS	MACK EO-M
ACEA E-2 98	MAN 271	

CEPSA DIATERMO

Cepsa Diatermo is a heat transfer fluid formulated with highly refined paraffin base oils and a specific additive system that provides excellent thermal stability, minimizes the formation of coke and sludge and promotes the long life of the fluid.

Given the drop in friction losses, Cepsa Diatermo offers an energy efficient heat transfer performance and helps to keep the costs down.

It is especially recommended for heat transfer in closed circulation systems at boundary layer temperatures up to 315ºC.

ISO Grade: 32

CEPSA DESENGRASANTE MARINO

Cepsa Desengrasante Marino is a product formulated with high purity aliphatic solvents and selected surfactants, designed for tank and deck cleaning operations. It is also suitable to be used for the degreasing of bilges and general machinery.

The product has a high detergent concentration which ensures of has an excellent emulsifying-dispersant performance and a maximum cleaning efficiency.

CEPSA BROCA 3

Cepsa Broca 3 is a lubricant formulated with highly refined paraffinic base oil and carefully selected additives which provides excellent anti-wear properties. Its outstanding low temperature fluidity allows a wide operating temperature window.

Cepsa Broca 3 is recommended for lubricating compressed air engines and moving parts of pneumatic tools.

ISO Grade: 100



GREASES

CEPSA ARGA LITIO

Cepsa Arga Litio is an efficient performance lithium multipurpose grease formulated with highly refined mineral oil in combination with oxidation and corrosion inhibitors. The product is recommended for the lubrication of all type of gears and plain bearings.

NLGI 3 grade is the most suitable product for alternators and electric engines bearings.

Range temperature: -25 a 120º C

Consistency grades: NLGI 2 y 3

CEPSA ARGA WR EP

Cepsa Arga WR EP is a calcium-lithium grease that exhibits a high tenacity film, reinforced lubricity, reliable water resistance and EP (extreme pressure) properties.

Cepsa Arga WR EP is specifically recommended for the lubrication of ball and roller bearings, subjected to heavy loads and slow speeds. It is also suitable to lubricate open gears and wire ropes. It is especially indicated for on-deck applications in fishing vessels and dredgers that require a grease that is particularly good under heavy water-washing operating conditions.

Range temperature: -20 a 150º C

Consistency grades: NGLI 2

CEPSA ARGA LITIO EP

Cepsa Arga Litio EP is an universal EP (extreme pressure) grease. The product is formulated with highly refined mineral base oils, lithium soap thickener, EP additives and rust and oxidation inhibitors. It has high load-carrying capacity and therefore provides good protection against the wear. It is practically insoluble in water and provides good lubrication in wet operating conditions.

Cepsa Arga Litio EP is particularly recommended for lubricating plain, ball and roller bearings, and in general for deck equipments subject to heavy loads, where protection against wear and high lubricating performance are needed.

Range temperature: -20 a 130º C

Consistency grades: NLGI 0, 1 y 2

CEPSA ARGA COMPLEX LITIO EP

Cepsa Arga Complex Litio EP is a premium multipurpose lithium complex grease formulated with highly refined mineral base oils, a lithium complex thickener, high performance EP additives and rust and oxidation inhibitors

Cepsa Arga Complex Litio EP has a very high dropping point, which ensures perfect lubrication at temperatures beyond those offered by the conventional lithium greases. The natural water resistance of lithium complex soap prevents efficiently the water washout.

Cepsa Arga Complex Litio EP is specifically recommended for marine applications to lubricate small and medium size bearings, operating under high temperature conditions, subjected to heavy loads and extreme operating conditions.

Range temperature: -30 a 150º C

Consistency grades: NGLI 2,5



GREASES

SYNTHETIC ▶

CEPSA ARGA FORCE OGW

Cepsa Arga Force OGW is a premium aluminum complex grease formulated with semi-synthetic base oils, high quality EP additives and a combination of selected solid lubricants with a specific particle size. The product has a great sticking, oiliness and EP properties which ensures high load-carrying capacity and promotes long-term wear resistance. It is free from heavy metals, chlorine and solvents and therefore can be considered as an environmentally friendly lubricant. Due to its outstanding tackiness (adhesive oil film), Cepsa Arga Force OGW is specially recommended to lubricate open gears, haulage rope of vessels, fishing boats and tugboats working in very severe operating conditions.

Range temperature: -25 a 120º C

Consistency grades: 00

SYNTHETIC ▶

CEPSA ARGA BIOGREASE



Cepsa Arga Biogrease is a calcium-lithium complex grease especially developed for applications where biodegradability is required. The product is formulated from a synthetic ester, calcium-lithium complex thickener with integrated EP properties and a very good selection of rust and oxidation inhibitors with very limited environmental impact.

Cepsa Arga Biogrease is suitable for the lubrication of heavily loaded applications. The lubricating grease has an excellent adhesion to the metal surfaces and superb water washout resistance properties. It is suitable for on-deck applications including open gears, cranes and davits making it the perfect product for most of the marine equipment.

The product can be used over a wide temperature range in high pressure centralized lubrication systems.

Range temperature: -30 a 130ºC

Consistency grades: NLGI 2

SYNTHETIC ▶

CEPSA ARGA SYNT

Cepsa Arga Synt is a synthetic marine grease that combines the exclusive characteristics of synthetic PAO base oils with a lithium complex thickener. It contains antioxidants, corrosion inhibitors and EP/AW additives, offering excellent protection against wear at either high or low temperatures. The grease exhibits a superior resistance to the water washout and an effective protection against rust and corrosion of metal surface in wet conditions.

Cepsa Arga Synt is recommended for the most marine applications where a high performance is required. The grease is especially indicated to lubricate heavy loaded bearings working at moderate speeds, where high protection against wear, rust and corrosion is needed.

Range temperature: -40 a 200º C

Consistency grades: NLGI 1,5

CEPSA ARGA CASUX

Cepsa Arga Casux is the latest-generation of high performance greases. The product is formulated with highly refined base oils and a calcium sulphonate complex thickener with integrated anti-wear and EP properties. The grease contains antioxidants and corrosion inhibitors. It has a superb load-carrying capacity, good corrosion protection, mechanical stability and excellent water resistance, which are important in wet and corrosive environments.

The outstanding EP properties and the excellent water resistance, make Cepsa Arga Casux the perfect choice for heavily loaded marine applications.

Range temperature: -20 a 140ºC

Consistency grades: NLGI 1,5



OilMonitor

OilMonitor is an advanced fluid analysis program to control the characteristics of the marine lubricants in service that enables to make decisions to optimize the maintenance and condition of all lubricated equipment on board of the vessels.

It offers quick accurate test results, fully reviewed reports, reliable diagnoses and practical recommendations in order to maximize the efficiency of the equipments of the vessels.

For all these reasons, the **OilMonitor** program is a reliable tool that provides an excellent support for the predictive and preventive maintenance. The advantages of using this program to monitor the status of the lubricated equipments are numerous.

Samples are tested in our state-of-the-art laboratories of the **Cepsa Research Center** with the most up-to-date equipments and methods of analysis:

- Cost-effective analysis and diagnosis carried out by specialists in marine lubricants.

- Quickly detection of oil degradation, wear, contaminants and potential failures that can reduce the service life of the lubricant and the availability of equipment.
- Optimize oil change intervals and the equipment life through the assessments of the trends of the different characteristics.
- Regularly asses the performance and efficiency of lubricants and equipment.

To access the OilMonitor programme:

You can submit a request via the online form available from www.cepsa.com. Or contact us at st.lubes@cepsa.com or call our Technical Assistance Department for Marine Lubricants, via the switchboard, on **+34 913 376 000**.

TABLE SUMMARIZING TECHNICAL CHARACTERISTICS

		Grade ISO/SAE	Density 15°C (KG/L)	Viscosity at 40°C (cSt)	Viscosity at 100°C (cSt)	Viscosity Index	Freezing (°C)	Flammability (mgKOH/g)	TBN (mgKOH/g)	Sulfated ash (%)	
ENGINE	LOW SPEED ENGINES	CEPSA GAVIA 7050	50	0,939	222	20,0	95	-18	>220	70	NA
		CEPSA GAVIA 2550	50	0,901	220	20,0	95	-9	>220	25	NA
		CEPSA CICONIA 30	30	0,894	110	12,0	95	-6	>220	5,8	NA
	MEDIUM SPEED ENGINES	CEPSA LARUS 3030	30	0,907	100	11,5	102	-6	>220	30	3,70%
		CEPSA LARUS 3040	40	0,911	144	14,5	100	-6	>220	30	3,80%
		CEPSA LARUS 4040	40	0,915	140	14,5	102	-6	>220	40	4,80%
		CEPSA LARUS 5040	40	0,921	137	14,5	102	-6	>220	50	5,8%
		CEPSA PETREL 1530	30	0,897	94	11,0	100	-15	>220	15	1,73%
		CEPSA PETREL 1540	40	0,903	139	14,5	100	-15	>220	15	1,73%
		CEPSA PETREL 1340 NZ	40	0,899	137,4	14,33	102	-9	>220	13	0,68
		CEPSA PETREL HDL 40	40	0,902	138	14,5	100	-15	>220	15	1,30%
		CEPSA ULTRAMAR SHPD 15W40	15W-40	0,883	105	14,5	140	-27	>220	15	1,30%
	HIGH SPEED ENGINES	CEPSA MAR SHPD 15W40	15W-40	0,888	108	14,5	136	-27	>220	9	1,18%
ANCILLARY MACHINERY	HYDRAULIC	CEPSA MISTRAL 32	32	0,874	32	5,5	100	-24	>200	NA	NA
		CEPSA MISTRAL 46	46	0,878	46	6,8	100	-21	>200	NA	NA
		CEPSA MISTRAL 68	68	0,883	68	8,7	98	-18	>200	NA	NA
		CEPSA MISTRAL HX 32	32	0,871	32	6,3	150	-36	>200	NA	NA
		CEPSA MISTRAL HX 46	46	0,877	46	8,4	150	-36	>200	NA	NA
		CEPSA MISTRAL HX 68	68	0,885	68	10,9	150	-30	>200	NA	NA
		CEPSA MISTRAL HX 100	100	0,887	100	13,6	140	-30	>200	NA	NA
		CEPSA MISTRAL HX 150	150	0,897	150	16,5	120	-30	>200	NA	NA
		CEPSA BIO OIL HM-S 32	32	0,913	32	7,3	195	-39	>260	NA	NA
	ENGRANAJES	CEPSA BIO OIL HM-S 46	46	0,920	46	9,5	183	-39	>260	NA	NA
		CEPSA BIO OIL HM-S 68	68	0,935	68	12,7	180	-42	>260	NA	NA
		CEPSA RADA XMP 68	68	0,886	68	8,6	100	-18	>200	NA	NA
		CEPSA RADA XMP 100	100	0,890	100	11,2	100	-18	>200	NA	NA
		CEPSA RADA XMP 150	150	0,895	150	14,9	98	-18	>215	NA	NA
ANCILLARY MACHINERY	ANCILLARY MACHINERY	CEPSA RADA XMP 220	220	0,899	220	18,5	96	-15	>220	NA	NA
		CEPSA RADA XMP 320	320	0,904	320	23,9	96	-18	>220	NA	NA
		CEPSA RADA XMP 460	460	0,908	460	30,2	95	-12	>225	NA	NA
		CEPSA ENGRANAJES HPX 150	150	0,849	150	20,8	150	-30	>220	NA	NA
		CEPSA ENGRANAJES HPX 220	220	0,857	220	25,3	150	-30	>220	NA	NA
		CEPSA ENGRANAJES HPX 320	320	0,858	320	34,3	150	-20	>220	NA	NA
		CEPSA ENGRANAJES HPX 460	460	0,853	460	46,1	150	-18	>225	NA	NA

		Grade ISO/SAE	Density 15°C (KG/L)	Viscosity at 40°C (cSt)	Viscosity at 100°C (cSt)	Viscosity Index	Freezing (°C)	Flammability (mgKOH/g)	TBN (mgKOH/g)	Sulfated ash (%)	
ANCILLARY MACHINERY	COMPRESSORS	CEPSA COMPRESORES AR 46	46	0,862	46	6,8	95	-9	>220	NA	NA
		CEPSA COMPRESORES AR 68	68	0,864	68	8,9	95	-9	>220	NA	NA
		CEPSA COMPRESORES AR 100	100	0,864	100	11,6	95	-9	>220	NA	NA
		CEPSA COMPRESORES ES 100	100	0,960	100	11,4	90	-30	>260	NA	NA
		CEPSA COMPRESORES ARS 46	46	0,842	46	7,75	145	-42	>220	NA	NA
		CEPSA COMPRESORES ARS 68	68	0,836	68	10,6	145	-42	>220	NA	NA
		CEPSA BOREAL 68	68	0,916	55	5,9	100	-36	179	NA	NA
		CEPSA NORther AB 100	100	0,874	104	8,1	NA	-24	>200	NA	NA
		CEPSA COMPRESORES LPG-9	NA	1,050	185	35	210	-36	280	NA	NA
ANCILLARY MACHINERY	TURBINES AND CIRCULATING SYSTEMS	CEPSA NORther HFC 32	32	0,981	32	6,0	135	-45	250	NA	NA
		CEPSA NORther HFC 68	68	0,971	68	9,1	110	-33	250	NA	NA
		CEPSA HD TURBINAS* 32	32	0,859	32	5,4	98	-9	>200	NA	NA
		CEPSA HD TURBINAS* 46	46	0,863	46	6,9	98	-9	>200	NA	NA
		CEPSA HD TURBINAS* 68	68	0,864	68	8,4	98	-6	>200	NA	NA
		CEPSA CIRCULANTE 100	100	0,887	100	10,8	98	-12	>210	NA	NA
		CEPSA CIRCULANTE 150	150	0,895	150	14,7	98	-9	>210	NA	NA
		CEPSA CIRCULANTE 220	220	0,898	220	18,9	98	-6	>210	NA	NA
		CEPSA CIRCULANTE 320	320	0,902	320	23,4	98	-6	>210	NA	NA
ANCILLARY MACHINERY	STERN TUBES	CEPSA CIRCULANTE 460	460	0,907	460	29,0	95	-6	>210	NA	NA
		CEPSA STERNA	NA	0,908	370	24,0	96	10	246	NA	NA
		CEPSA STERNA BIO	100	0,937	100	18,1	202	-30	>300	NA	NA
		CEPSA RODAJE Y PROTEC. SAE 30	30	0,893	NA	11,8	95	-18	220	NA	NA
		CEPSA DIATERMO 32	32	0,874	32,5	5,3	105	-12	>200	NA	NA
		CEPSA DESENGRASANTE MARINO	NA	0,782	2,2	0,97	NA	-15	100	NA	NA
		CEPSA BROCA 3	100	0,878	96,6	11,1	95	-21	200	NA	NA
		CEPSA ARGA LITIO	-25°C/120°C	2 y 3	>180	Lithium soap multipurpose grease.					
		CEPSA ARGA WR EP	-20°C/120°C	2	>180	Grease with calcium and lithium soap, resistant to water. Recommended for the machinery on deck.					
ANCILLARY MACHINERY	GREASES	CEPSA ARGA LITIO EP	-25°C/120°C	0,1 Y 2	>180	Multipurpose grease with EP characteristics formulated with lithium thickener.					



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