



eni

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Product Guide

Lubricants and Speciality Products for Industry and Marine



Eni lubricants

Eni Benelux offers a wide assortment of premium industrial lubricants suitable for different applications. Our products are based on a careful selection of the best raw materials and additives to ensure the best performing products. In addition, our products are extensively tested to fulfill the highest quality standards and benefit from the continuous improvement and technological updates provided by Eni's Research and Development Center in San Donato Milanese.

Lubricants

Eni operates seven owned and co-owned blending plants to cover Europe, North and South America, Africa and the Far East markets. In Europe, blending facilities are located in Livorno (Italy) and Gava (Spain).

Base oils used in Eni lubricants come primarily from Livorno refinery, while the production of additives and solvents is held in the Robassomero facility. In San Donato Milanese Eni has its own Research and Development Center, investigating tomorrow's fuel, lubricants and specialties.

With a wide range of products, composed of over 650 different blends, Eni masters state-of-the-art knowledge for the formulation of products for automotive (engine and transmission oils, special fluids), industry (hydraulic oils, turbine and compressor oils, greases, metalworking fluids) and marine (cylinder, system and transmission oils) sectors. Eni lubricants are sold in more than 70 countries around the world.



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Lubricants for the industry sector

Industry

Hydraulic oils	Mineral
Oils	Mineral and fire resistant
	Synthetic
	Synthetic and biodegradable
	Synthetic and fire resistant

Eni hydraulic oils

Eni has developed a complete series of lubricants for hydraulic applications with excellent performance. The oils are available in various qualities and viscosity grades in order to satisfy all lubrication requirements. In addition to the normal hydraulic product line, Eni also developed a biodegradable line to comply with environmental regulations. The high quality lubricants possess a high viscosity index, excellent resistance to oxidation and aging and outstanding anticorrosion, antirust and antiwear properties.

Oso

VG 10 - 150

High quality hydraulic oil specially developed for use in all types of hydraulic systems and equipments.
Specifications:

Mineral	ISO 11158 HM	AFNOR NF E 48603 HM	Cincinnati P-70 level
	BS 4231 HSD, Fives	ATOS Table P002-1/E	DIN 51524-2 HLP
	Eaton Vickers I-286-S	Denison HF-0, HF-1, HF-2	Rexroth RD 90220-01/12.10
	Danieli Standard n. 0.000.001 - Rev.15	Muller Weingarten DT 55 005	ZF TE-ML 04K Denison HF-0, HF-1, HF-2
	Low zinc formula	Antiwear & Antirust	Outstanding filterability

Oso D

VG 32 - 46

Detergent-dispersant hydraulic oil for use in circuits where water is or can be present. It is obtained from highly-refined base stocks containing additives of anticorrosion, antioxidant and antiwear.
Specifications:

Mineral	ISO 11158 HM	DIN 51524-2 HLP-D	MAN N 698
	High quality bases	Antiwear & Antirust	Improves system cleanliness

Oso S

VG 46 - 68

Ashless, zinc-free high quality hydraulic oil developed for use in all types of hydraulic systems and equipment, specially where products with very high filterability are required. Formulated from selected paraffinic base stocks treated with antirust, antioxidant and antiwear additives.
Specifications:

Mineral	ISO 11158 HM, DIN 51524-2 HLP	AFNOR NF E 48603 HM, BS 4231 HSD	Denison HF-0 level
	Eaton Vickers I-286-S level + M-2950-S	+ M-2950-S level	Fives Cincinnati P-70 level
	Ashless technology	Prevents deposits formation	High lubrication intervals

Hydraulic Oils

Oso PM

VG 46

Special ashless, zinc-free high quality hydraulic oils characterized by very high antiwear properties. Formulated from selected paraffinic base stocks treated with antirust, antioxidant and antiwear additives.

Specifications:

ISO 11158 HM, DIN 51524-2 HL	AFNOR NF E 48603 HM	BS 4231 HSD
Muller Weingarten DT 55 005		
Zinc Free	Anticorrosion & Antirust	Good demulsibility

Mineral

Arnica

VG 15 - 100

Mineral lubricant, specially developed for use in hydraulic systems requiring fluids possessing an extremely high viscosity index and a very low pour point for correct operation.

Specifications:

ISO 11158 HV, DIN 51524-3 HVLP	AFNOR NF E 48603 HV	BS 4231 HSE
Rexroth RD 90220-01/12.10	Eaton Vickers I-286-S level + M-2950-S	Fives Cincinnati P-70
Denison HF-0	Commercial Hydraulics Linde	AISE 127 CETOP RP 91 H HV
Sauer Danfoss 520L0463	Danieli Standard n. 0.000.001 - Rev.15	ZF TE-ML 04R
Low zinc technology	Wide temperature range	Excellent viscosity stability

Mineral

Arnica DV

VG 46

Special hydraulic fluid with a high viscosity index and a low pour point, particularly suitable for use in ceramic industry presses.

Specifications:

DIN 51524-3 HVLP-D	ISO 11158 HV	
Ashless technology	Prevents deposits formation	High lubrication intervals

Mineral





Mineral

Arnica P

VG 46

Mineral hydraulic oil formulated expressly for use in Poclairn machinery. It can also be employed in all hydraulic systems that require fluids with high viscosity index and low pour point.

Specifications:

DIN 51524-3 HV	AFNOR NF E 48600 HV	CETOP RP 91 H HV
Low zinc formula	Antiwear & Antirust	Outstanding filterability

Mineral and fire resistant

Arnica 104/FR

VG 46

Non-flammable hydraulic fluid with high viscosity index and low pour point. It consists of a glycol/water solution additive-treated to prevent corrosion.

Specifications:

ISO 12922 HFC	ISO 15380 HE.P.G	VII Report of Luxemburg
Danieli Standard n. 0.000.001 - Rev.15		
Antifoam properties	Excellent fire resistance	Biodegradable

Synthetic

Arnica LT

VG 15

Red coloured hydraulic oil having a very high viscosity index and very good properties at low temperatures. Formulated from highly refined, paraffinic base oil and ashless additives. The special formulation ensures a high viscosity index, very low pour point, antiwear and antirust properties, good filtrability and very high thermal and oxidation stability.

Specifications

ISO 11158 HV	DIN 51524-2 HVLP	DENISON HF 0 level
EATON VICKERS M-2950-S + I-286-S		
Ashless technology	High viscosity index	Low pour point

Synthetic

Arnica PSX

VG 46

Hydraulic fluid, with very high performances, specially developed for use in ceramic industry presses. The synthetic base, treated with special additive packages, possesses detergent/dispersant, antioxidant, antirust and antiwear properties. It allows longer oil change intervals than typical with mineral oils.

Specifications:

ISO 11158 HV	DIN 51524-3 HVLP-D	
High viscosity index	Long term performance	Prevents filters clogging

Synthetic and biodegradable

Arnica ABX

VG 15

Biodegradable hydraulic fluid, containing antioxidants, antirust, antiwear and friction modifier additives. It has excellent features at low temperature and it is characterized by a very high viscosity index.

Specifications:

ISO-L-HEPR	ISO 15380 - HEPR	WGK 1
Reduces environmental impact	Prevents stick-slip	Antiwear additives

Synthetic and biodegradable

Arnica V

VG 32, 46, 68 

Biodegradable hydraulic fluid, synthesized from selected natural esters. Intended for those applications where the problem of environmental pollution is prevalent.

Specifications

ISO 15380 HETG	WGK 1	
High viscosity index	Antiwear & anticorrosion	Anfi-foam characteristics





Synthetic and biodegradable

Arnica EAL

VG 46

"Eco-friendly" high performance hydraulic oil developed for applications operating in environmentally sensitive areas: agriculture and forestry, navigation and off-shore. It is recommended for hydraulic systems operating in a wide temperature range. Eni Arnica EAL 46 is formulated with selected base oils treated with additives ensuring excellent antiwear and anticorrosive properties.

Specifications:

DIN ISO 15380 HEES	EU Ecolabel IT/027/004	
Antiwear & anticorrosion	Wide temperature range	CO2 emission reduction

Synthetic and biodegradable

Arnica Bio BX

VG 46 

Biodegradable hydraulic fluid, synthesized from selected natural esters. Intended for those applications where the problem of environmental pollution is prevalent.

Specifications:

ISO 15380 HEES	SS 15 54 34	
Non corrosive behaviour against metals	Good antifoam properties	Excellent fire resistance

Synthetic and fire resistant

Arnica S

VG 46 - 68 

Biodegradable synthetic fluid for use in applications particularly exposed to fire hazards or involving soil-contamination risks. Formulated from synthetic bases composed of organic esters treated with special additive packages.

Specifications:

ISO 12922 HFDU	ISO 15380 HEES	Inline Hydraulik GmbH
Rexroth RD 90221-01/03	Hoerbiger Micro fluid	VII Report of Luxemburg
Danieli Standard n. 0.000.001 - Rev.15		
High viscosity index	Antiwear & anticorrosion	Anfi-foam characteristics

Hydraulic Oils

Synthetic and fire resistant

Arnica S FR

VG 46 - 68



Biodegradable synthetic lubricant, Factory Mutual approved as fire resistant hydraulic fluid, suitable for use where it is exposed to the risk of fire hazards and environmental pollutions. Formulated with organic ester and specific additives.

Specifications:

ISO 15380 HEES	ISO 12922 HFDU	Danieli Standard n. 0.000.001 - Rev.15
FM Approval Class 6930		

High viscosity index

Antiwear & anticorrosion

Anfi-foam characteristics



Industry

- Gear Oils Mineral
- Synthetic
- Synthetic gear oils for wind turbine
- Synthetic and biodegradable



Eni gear oils

Eni gear oils have been developed to meet the widest range of requirements for (E.P.)* lubrication. The Blasia range is characterized by the high quality of used components, which provide excellent performance in terms of lubrication, protection and long-service life. Both mineral and synthetic based products contain additives, that ensure the capability of the oil to withstand the high loads it can be exposed to

Blasia

VG 32 - 680

Developed to meet the widest range of requirements of E.P. lubrication, such as gears operating under severe duty. Specifications:

ISO 12925-1 CKD	DIN 51517-3 CLP	AIST No.224
ANSI/AGMA 9005-E02	David Brown S1.53 101 level	Fives Cincinnati P-76 level
Muller Weingarten DT 55 005 CLP		

Mineral

Antioxidant properties

Non-corrosive

Outstanding demulsive capacity

Blasia P

VG 1000, 2200, 3200

Very viscous oil treated with E.P. additive to ensure proper lubrication of heavily loaded, slow-moving parts. The two ISO VG grades 1000 and 2200 are mineral based, whereas the 3200 is partially synthetic. Specifications:

ISO 12925-1 CKC	DIN 51517-3 CLP	ANSI/AGMA 9005-E02
David Brown S1.53 101 level		

Mineral

Good adhesivity

Water washout resistance

Robust protection from wear

Blasia BM

VG 220

Developed to meet the widest range of requirements where E.P. properties are requested (gears operating under severe duty). Manufactured from paraffinic base stocks and additives (sulphur and phosphorus compounds), to ensure good high-speed and shock-load performance. The presence of molybdenum compound ensures reliable wear protection under shock loads and unfavorable operating conditions cushioning vibrations and muffle noise. Specifications:

ISO 12925-1 CKD	DIN 51517-3 CLP	ANSI/AGMA 9005-E02
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Mineral

Resistance to high operative temperatures

Outstanding demulsive capacity

Reduction of vibrations and noise

Blasia FMP

VG 100 - 460

Very high performance gear oil for lubricating in E.P.* of the latest generation industrial gear reducers, in particular, those extremely compact and of high specific power that could have problems of micropitting damages.

Specifications:

ISO 12925-1 CKD, DIN 51517-3 CLP	AIST No.224, ANSI/AGMA 9005-E02	Fives Cincinnati P-74 level
David Brown S1.53 101 level	Muller Weingarten DT 55 005 CLP - level	Danieli Standard n. 0.000.001 - Rev.15
Siemens MD (Flender) Rev. 15	Loesche	

Flender approved

Thermo-oxidative resistance

High operative temperatures

Mineral

Fin 332/F

Very adhesive black-coloured mineral-based lubricant suitable for lubrication of machinery exposed to the atmosphere.

Specifications:

ISO 6743/6 CKH-DIL	DIN 51513 BC-V*	
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Applicability in cold conditions

Good adhesiveness

Resistance to water washout

Mineral

Fin 360/EP/F

Suitable for lubrication and protection of machinery exposed to the atmosphere, open gears, wire ropes, springs, guides, racks and open machinery parts in general, subjected to severe mechanical loads and thermal stresses.

Specifications:

ISO L CKJ-DIL	DIN 51513 BC-V	
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Applicability in cold conditions

Good adhesiveness

Resistance to water washout

Mineral

Blasia S

VG 150 - 460

High pressure gear oil based on synthetic base oils of Polyglycol type for the lubrication of high loaded spur and worm gears as well as rolling and sliding bearings under extreme operational conditions.

Specifications:

ISO 12925-1 CKE	SO 12925-1 CKT	DIN 51502 CLP-PG
ANSI/AGMA 9005-E02	Sacmi 200.02.A01	

Thermo-oxidative resistance

High temperatures allowed

Robust protection from wear

Synthetic

Blasia SX

VG 100 - 320

Developed for the lubrication of gears and bearings operating at high temperatures. It is formulated from a synthetic base (polyalphaolefin) and additive-treated to provide appropriate antirust, antiwear properties and exceptional oxidation and thermal stability.

Specifications:

ISO 12925-1 CKS	DIN 51517-3 CLP	Alfa Laval
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High viscosity index

Non-corrosive behaviour

Outstanding demulsive capacity

Synthetic

Blasia FSX

VG 220, 320, 460

Very high performance synthetic PAO* gear oil for lubricating in E.P. of the latest generation industrial gear reducers, in particular, those extremely compact and of high specific power that could have problems of micropitting damages.

Specifications:

ISO 12925-1 CKD	DIN 51517-3 CLP	ANSI/AGMA 9005-E02
AIST No.224	Fives Cincinnati P-74 level	David Brown S1.53 101 level
Siemens Flender BA 7300 Table A		

Thermo-oxidative resistance

Flender approved

Extended oil draining intervals

Synthetic



Mineral

Telium VSF

VG 220, 320

Synthetic lubricant formulated with selected water-soluble polyglycols, suitable for lubrication of bearings, gears and other couplings operating at very high temperatures with particular regard to worm gears.

Specifications:

ISO 12925-1 CKT	ISO 12925-1 CKE	DIN 51502 CLP-PG
ANSI/AGMA 9005-E02		

Significant friction reduction

Resistance to high temp. & oxidation

Robust antiwear protection

Synthetic gear oil for wind turbine

Blasia WT

VG 320

Recommended for lubrication of the main gearbox and bearings in wind turbine systems produced by most important manufacturers.

Specifications:

ISO 12925-1 CKD	DIN 51517-3 CLP	Hansen
Siemens MD (Flender) Rev.16.		

Outstanding oxidation resistance

Thermal stability

Robust protection from wear

Synthetic and biodegradable

Blasia ESB

VG 220 - 460

Formulated from biodegradable synthetic bases composed of esters treated with special additive packages.

Specifications:

ISO 12925-1 CKC	DIN 51502 CLP-E	
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High viscosity index

Antirust protection

Robust antioxidant additive protection



Industry

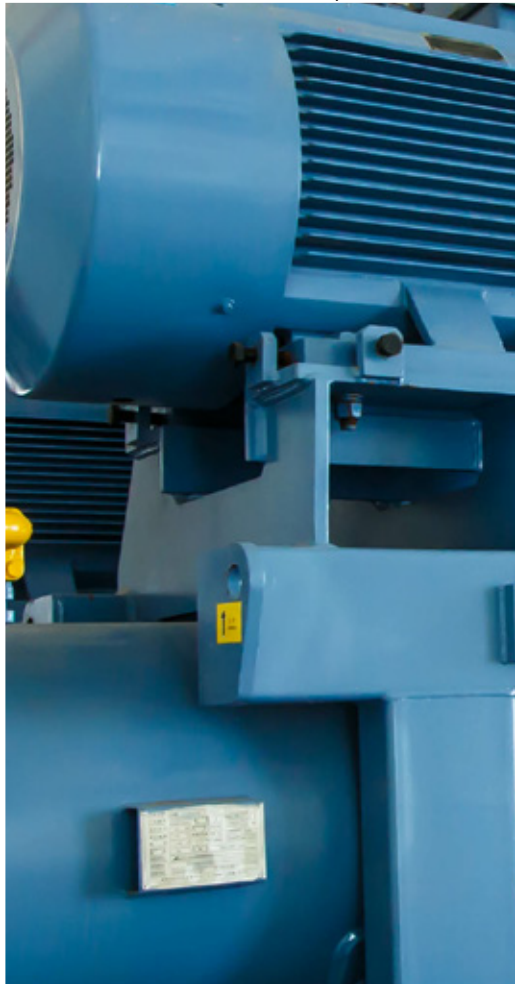
Compressor Oils Mineral air compressors oil

Synthetic air compressor oil

Mineral refrigeration compressor oils

Synthetic refrigeration compressor oils

Gas compressors oil



Eni compressor oils

The Eni product line for compressors comprises of products for high and low temperature applications. When compressing a gas, the lubricant is exposed to high temperatures and, especially in case of air compression, high oxidative stress. The Eni Dicrea product line is a complete series of lubricants for air and industrial gas compressors. The lubricants are very stable at high temperatures, limiting the formation of deposits in the hot areas. The Eni Betula product line is a range of lubricants for refrigeration compressors. Even at very low temperatures, the lubricant is still sufficiently fluid to be able to ensure lubrication. Moreover, the lubricant is tolerant with respect to the cooling medium.

Mineral refrigeration compressor oils

Betula

VG 32, 46, 68

Formulated with special naphthenic base oils appropriately refined, for all types of refrigerants (ammonia, freon 12, freon 22, etc.).
Specifications:

ISO-L-DRA	ISO-L-DRC	DIN 51503 KAA
DIN 51503 KC	Bitzer KT-500-5	

Very good oxidation resistance

Low flocculation and pour points

Compressor efficiency

Synthetic refrigeration compressor oils

Betula S

VG 32-100

Formulated with special synthetic base (PAO). Intended for lubrication of refrigeration compressors (reciprocating, rotary-screw and vane) of the closed domestic type, open and semi-sealed industrial units for refrigeration, or heat pump systems using all types of refrigerant (ammonia, Freon 12, Freon 22 etc.).

They may also be used in other equipment and machinery operating at very low temperatures.

Specifications:

ISO 6743/3 DRA	ISO 6743/3 DRC	ISO 6743/3 DRE
DIN 51503 KAA	DIN 51503 KC	

Very long draining intervals

Low flocculation and pour points

Compressor efficiency

Synthetic refrigeration compressor oils

Betula ESX

VG 32-150

Formulated with special synthetic base (polyolesters), used in refrigerators where HFC refrigerants are used (R134a, R 404a, R407c, R507).

Specifications:

ISO 12925-1 CKD	DIN 51517-3 CLP	ANSI/AGMA 9005-E02
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Very long draining intervals

Low flocculation and pour points

Compressor efficiency

Compressor Oils

Gas Compressor Oils

Betula PG 90

VG 150

Fully synthetic lubricant with a polyglycol base developed specifically to guarantee outstanding lubrication for compressors handling natural gas, LPG, ammonia and chlorine-fluorine derivatives.

Specifications:

ISO 6743/3 DRB	ISO 6743/3 DGC	Sulzer Burckhardt
Thermo-oxidative stability	Excellent anti-wear properties	Excellent resistance to oxidation

Gas Compressor Oils

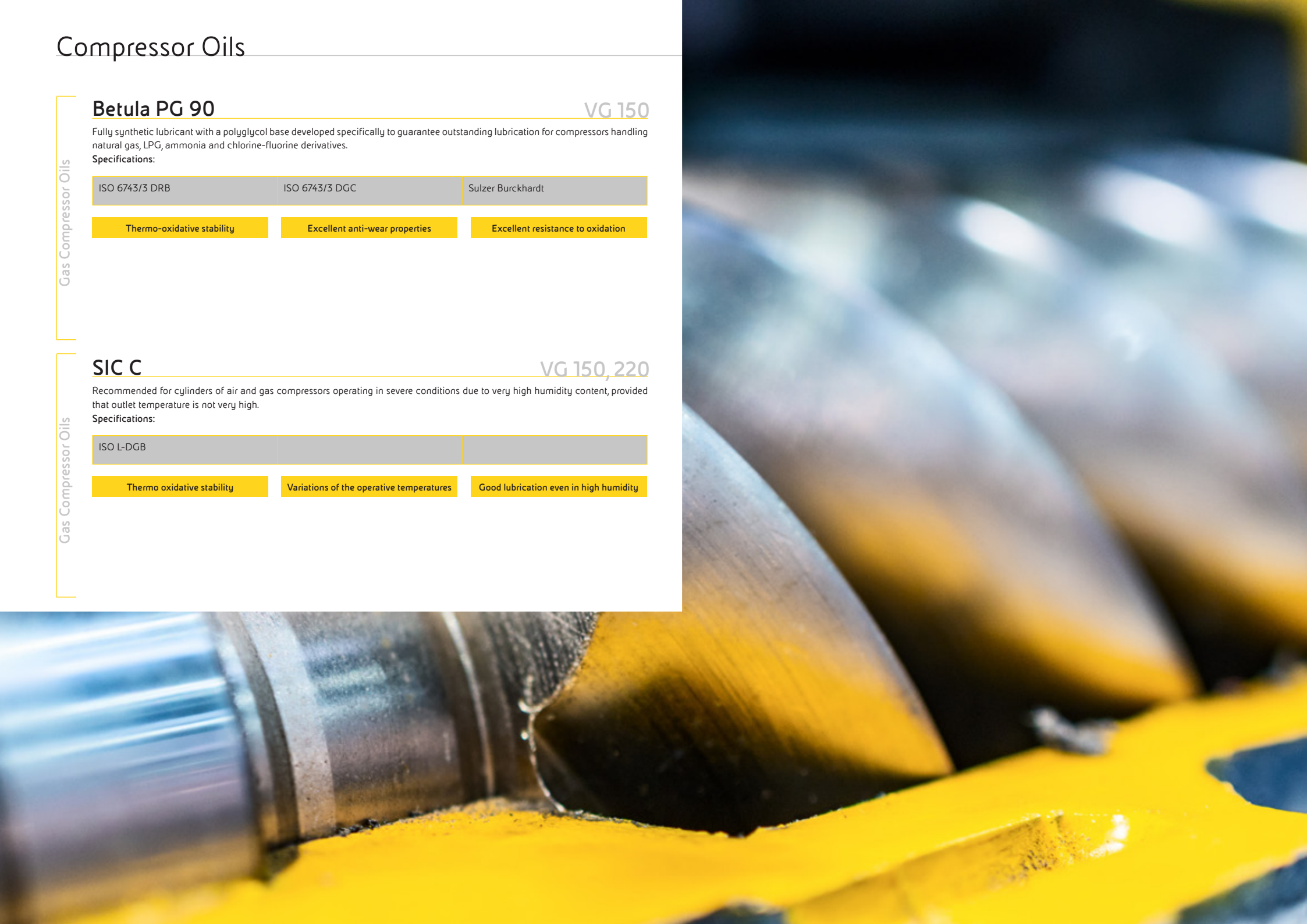
SIC C

VG 150, 220

Recommended for cylinders of air and gas compressors operating in severe conditions due to very high humidity content, provided that outlet temperature is not very high.

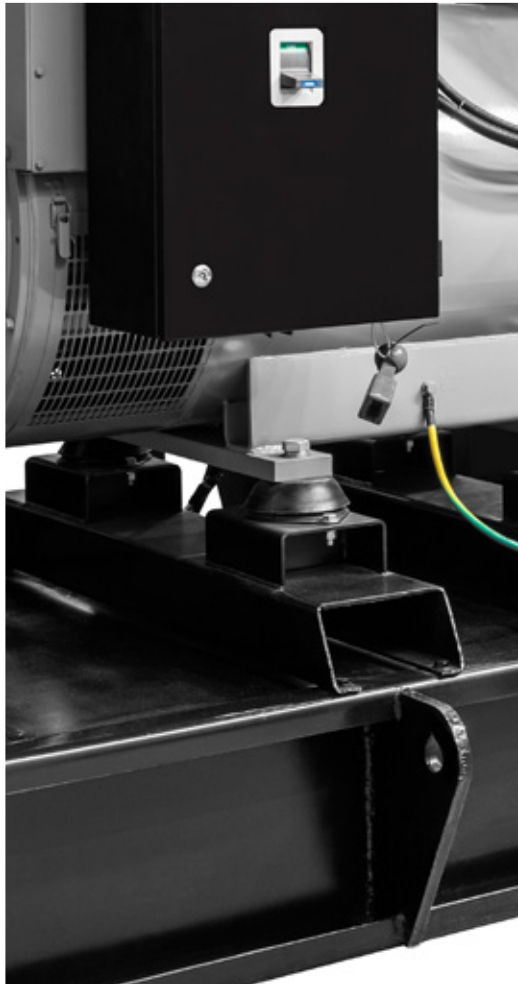
Specifications:

ISO L-DGB		
Thermo oxidative stability	Variations of the operative temperatures	Good lubrication even in high humidity



Industry

Stationary Engine Oils Mineral
 Semi Synthetic



Eni stationary engine oils

These are products intended for all those applications where internal combustion engines are used for generating electric power. This category of lubricants comprises oils for application in engines running on diesel fuel or fuelled by natural gas or landfill gas (biogas). Considering the delicacy of the application, it is fundamental to receive, besides the high quality of Eni Geum, also Eni's technical support

Mineral

Geum

SAE 40

Eni Geum 40 is a lubricant for stationary engines, spark-ignition type, burning natural or methane gas where a low ash oil is required. It is formulated with high viscosity index basestocks and selected additives that deliver detergent-dispersant, antioxidant, antiwear and antifoam properties.

Specifications:

Caterpillar	Rolls-Royce	MDE
MTU	Dresser-Rand	

Prevention of deposits formation

Prolonged oil drain intervals

Antiwear properties

Mineral

Geum C

SAE 40

Eni Geum C 40 is a lubricant for stationary engines, spark-ignition type, burning natural or methane gas where a low ash oil is required. Eni Geum C 40 is formulated with high viscosity index basestocks and selected additives that deliver detergent-dispersant, antioxidant, antiwear and antifoam properties. The product has a low content of phosphorus.

Specifications:

Wartsilla	Guascor	
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Prevention of deposits formation

Prolonged oil drain intervals

Antiwear properties

Mineral

Geum E

SAE 40

Eni Geum E 40 is a lubricant for modern stationary engines, spark-ignition type, burning landfill gas, biogas or other gasses with a high rate of acidity. Eni Geum E 40 is formulated with high viscosity index basestocks and selected additives that deliver detergent-dispersant, antiwear and antifoam properties. The product has a high content of sulphated ashes and a low content of phosphorus.

Specifications:

MAN 3271-4 level		
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Prevention of deposits formation

Prolonged oil drain intervals

Antiwear properties

Mineral

Geum NG

SAE 40

Eni Geum NG 40 is a lubricant for modern stationary engines, spark-ignition type, burning natural gas, methane or biogas where a low ash oil is required. Eni Geum NG 40 is formulated with high viscosity index basestocks and selected additives that deliver detergent-dispersant, antiwear and antifoam properties. The product retains a particularly high resistance to oxidation processes.

Specifications:

GE Jenbacher engines type 2/3/4/6 on gas class A and B	Wartsilla MWM	
Prevention of deposits formation	Prolonged oil drain intervals	OEM officially approved

Mineral

Geum LFG

SAE 40

Eni Geum LFG 40 is a lubricant for modern stationary engines, spark-ignition type, burning landfill gas, biogas or other fermentation gases (digestors). Eni Geum LFG 40 is formulated with high viscosity index basestocks and selected additives that deliver detergent-dispersant, antiwear and antifoam properties. The product retains a particularly high resistance to oxidation processes and low content of phosphorus.

Specifications:

GE Jenbacher engines type 2/3/4/6 on gas class B and C	MAN M 3271-4	
Prevention of deposits formation	Prolonged oil drain intervals	OEM officially approved

Semi Synthetic

Geum SX

SAE 40

Eni Geum SX 40 is a synthetic technology lubricant for stationary engines, spark-ignition type, burning natural or methane gas where a low ash oil is required. Eni Geum SX 40 is formulated with very high viscosity index basestocks and selected additives that deliver detergent-dispersant, antioxidant, antiwear and antifoam properties.

Specifications:

Rolls-Royce		
Prevention of deposits formation	Prolonged oil drain intervals	Antiwear properties

Industry

Circulation Oils



Eni circulation oils

Eni circulation oils are developed for use in circulation systems, intended for the lubrication of bearings, crankshafts, oil-filled couplings and gears, where no E.P.* properties are required. The oils can also be used in hydraulic systems, where resistance against aging and antirust properties are required. The different viscosity classes of the Eni product line make it possible to select the right oil for all operating conditions.

Circulation Oils

Radula

VG 32 - 46

Radula oil is recommended for most machinery lubricated by a circulation system.
Specifications:

ISO 11158 HH BS 4231 HSB		
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Circulation Oils

Acer

VG 15 - 800

High quality (R&O) lubricant for use in circulation systems and hydraulic circuits. This oil is based on selected paraffinic base oils with antioxidation and anticorrosion additives.

Specifications:

ISO 11158 HL	AFNOR NF E 48603	HL CETOP RP 91 H HL BS 4231 HSC
DIN 51524-1 HL	AGMA 9005-E02	ISO 12925-1 CK
DIN 51517-2 CL ANSI	ISO 6743/3 DAB DIN 51506 VCL	Morgoil rev. 3.0 - 1999

Antirust and antioxidant properties

Optimal demulsive capacity

Compatibility with rubber types seals

Circulation Oils

Acer MPK

VG 150 - 220

Special lubricant specifically intended for simultaneous lubrication of bearings and gears under high temperatures. Mainly used in the paper industry.

Specifications:

Carcano (A4-415-5 1986)		
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High termo-ossidative stability

Excellent demulsibility

Excellent antiwear properties

Acer LD 100

ISO 100

Lubricant specifically designed for the lubrication of No-Twist Rod mills' bearings

Specifications:

Danieli Standard n. 0.000.001 - Rev.15

High termo-oxidative stability

Excellent demulsibility

Excellent antiwear properties

Circulation Oils

Industry

Heat Transfer
Oils

Mineral



Eni heat transfer oils

Eni's product line for filling heat transfer units can be used in all open or closed systems. The different viscosity grades enable selection of the most suitable oil for operating conditions. The oils have excellent oxidation stability and withstand thermal decomposition. They also have high demulsibility property and air release performance, thus ensuring proper operation of the heat transfer unit.

Alaria 2

High performance fluid for transfer of thermal energy to diathermic systems. Can be used in any type of plant, either open or closed system and under forced circulation. The maximum operating temperatures are: Maximum bulk oil temperature: 270°C. Maximum oil film temperature: 290°C.

Specifications:

ISO 6743/12 QB

High thermal exchange properties

High thermo-oxidative stability

Excellent demulsibility

Mineral

Alaria 3

High performance fluid for transfer of thermal energy to diathermic systems. Can be used in any type of plant, either open or closed system and under forced circulation. The maximum operating temperatures are: Maximum bulk oil temperature: 300°C. Maximum oil film temperature: 320°C

Specifications:

ISO 6743/12 QB

High thermal exchange properties

High thermo-oxidative stability

Excellent demulsibility

Mineral

Alaria 3 HT

High performance fluid for transfer of thermal energy to diathermic systems. Can be used in any type of plant, either open or closed system and under forced circulation. The maximum operating temperatures are: Maximum bulk oil temperature: 320°C. Maximum oil film temperature: 340°C.

Specifications:

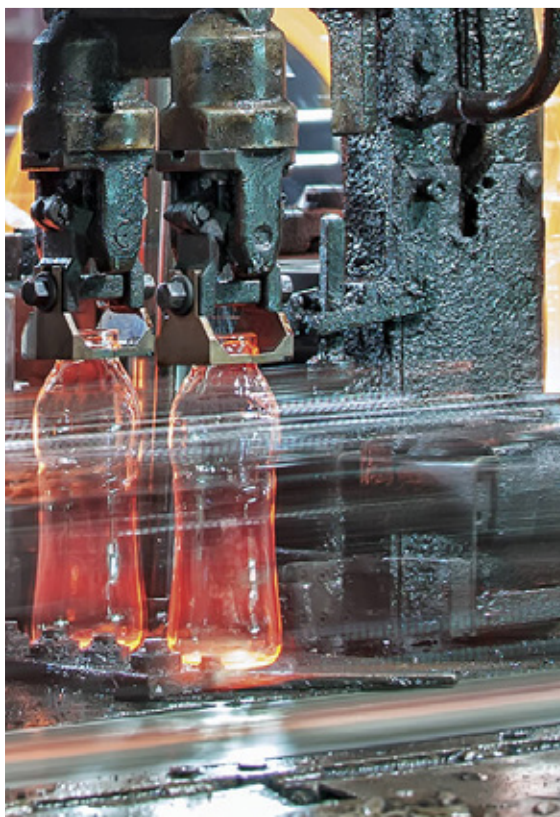
ISO L-QC

High thermal exchange properties

High thermo-oxidative stability

Excellent demulsibility

Mineral



Circulation Oils

Alaria 7

High performance fluid for transfer of thermal energy to diathermic systems to be used in any type of plant, either open or closed system and under forced circulation. The maximum operating temperatures are: Maximum bulk oil temperature: 270°C. Maximum oil film temperature: 290°C

Specifications:

ISO 6743/12 QB

High termo-oxidative stability

Excellent demulsibility

Excellent antiwear properties

Industry

Textile Oils

Mineral

Synthetic



Eni textile oils

The Eni Codium series are special oils for the textile industry, formulated using colourless oils that. A particular additive treatment provides these products with certain features that distinguish them as high quality textile oils with excellent antirust properties for the protection of lubricated components, optimum adhesiveness and antidrip properties, good wash-ability for removal of any traces of oil from the fabric and they are free of colouration to minimize any effects of residual contamination after washing.

Codium L

VG 46,100

Specially for the textile industry developed colourless, good washable and free of hydrocarbons that are difficult to remove.

Mineral

Codium LS 32

VG 32

Specifically for the textile industry developed colourless, washable and free of hydrocarbons that are difficult to remove. Contains a synthetic component that combined with additives, provides a product that is more resistant to harsh conditions than traditional textile oils.

Synthetic

Industry

White Oils

Mineral

Eni white oils

Eni's OBI line of white mineral oils are highly refined, colourless, tasteless and odourless and mainly used for pharmaceutical, cosmetic and phytopharmaceutical applications. The OBI T line is a technical white vaseline with a slight petroleum odour, which is suitable for the lubrication of precision mechanisms.

OBI 10

VG 68

Eni OBI 10 is a highly refined white mineral oil suitable for pharmaceutical use, cosmetic and phytopharmaceutical applications. The particular properties of the oil, make it suitable as a lubricant in specialised industrial applications such as: CO2 compressors for dry ice production, SO2 refrigerator compressors and ethylene compressors for polyethylene production.

Specifications:

Mineral

Farmacopea Italiana	Farmacopea Europea	US FDA, 21 CFR 172.878
US FDA, 21 CFR 178.3620 (a)		

Colourless, tasteless and odourless.

Suitable for medicinal purposes and for production of cosmetics

Suitable for specialised industrial applications

OBI 12

VG 15

Eni OBI 12 is a highly refined white mineral oil suitable for medicinal use, preparation of perfumery and cosmetics products.

Specifications:

Mineral

Farmacopea Italiana	Farmacopea Europea	US FDA, 21 CFR 172.878
US FDA, 21 CFR 178.3620 (a)		

Colourless, tasteless and odourless.

Suitable for medicinal purposes and for production of cosmetics

OBI T 13

VG 15

Eni OBI T 13 is a technical white vaseline oil with a slight petroleum odour. It is suitable for lubrication of precision mechanisms, watches, firearms and textile machinery. It is also used as a fungicide and as a plasticizer in rubber.

Mineral

Suitable for lubrication of precision mechanisms

May be used as a fungicide

May be used as a plasticizer in rubber

Ribes White Oil

VG 15, 22, 70

Highly refined colourless, odourless and tasteless white medicinal oils
Specifications:

Farmacopea Europea	Farmacopea Italiana	US FDA, 21 CFR 172.878
US FDA, 21 CFR 178.3620 (a)	NSF H1, H3, 3H - n° 155030	Kosher Halal

Colourless, tasteless and odourless.

Suitable for medicinal purposes and for production of cosmetics

Suitable for specialised industrial applications

Mineral



Industry

Turbine Oils Mineral
 Synthetic

Eni turbine oils

Eni product line satisfies the needs of lubrication of all types of gas, steam and hydraulic turbines, also in combined cycle plants.

The partnership with top class manufacturers made it possible to improve formulations over the years, guaranteeing higher levels of performance.

Nowadays OTE and OTE GT are a quality reference in a market oriented to very high levels of applied technology.

Ote

VG 32, 46, 68, 100

Top quality mineral oil designed to satisfy even the most severe lubrication requirements of steam, gas and water turbines, having especially high oxidation and aging resistance as well as very high demulsibility.

Specifications:

ISO 8068 TSA/TGA	DIN 51515-1 TD, BS 489:1999	Ansaldo Energia 606W807 Rev.C (2012)
GE GEK 28143B	Siemens TLV 9013 04	ASTM D 4304 Type I
JIS K 2213 -1983 Type II	Doosan Skoda Power	Nuovo Pignone SOM 17366
Mitsubishi Spec. NO. E00-001 Rev.2	CEI 10-8 (1994)	

Prolongs re-lubrication intervals

Excellent thermal-oxidative properties

Outstanding demulsibility

Ote GT

VG 15, 32, 46

Superior quality lubricant specifically designed for use in gas turbine applications, formulated with selected base stocks and specially chosen additives to ensure an exceptional resistance to oxidation and antirust. Its "mild E.P." properties makes it suitable for lubrication of turbine reduction gear units.

Specifications:

SO 8068 TSA/TSE/TGA/TGB/TGE/TGSB/TGSE	Ansaldo Energia TGO2-0171-E00001/B (2016)	Ansaldo Energia 606W807 Rev.C (2012)
ASTM D 4304 Type II	GM Lubricant Standard LS2	GE GEK 28143B
GE THERMODYN ISPSH902SDI	MAN GHH BORSIG SP 079984 E 0000 E 99	Siemens MAT812109 MAT812107
SOLAR ES 9-224U - Class II	ALSTOM HTDG 90117 V0001 X	DIN 51515-1 TD
DIN 51515-2 TG	Siemens TLV 9013 04	Siemens TVL 9013 05

Alisma 32 PV

VG 32

Specifically designed for initial filling during acceptance testing. It provides also protection during storage, shipping and long stop of gas and steam turbines and turbocharges.

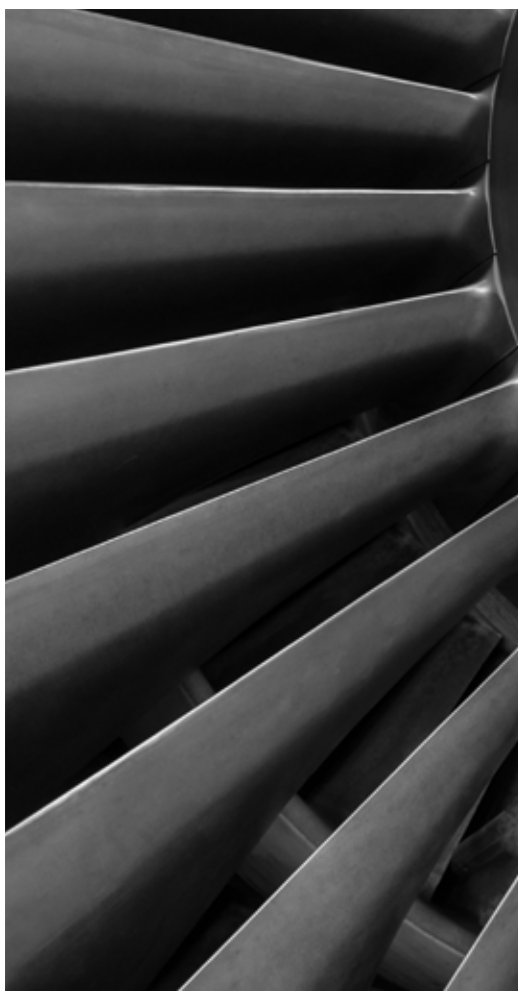
Specifications:

ISO 8068 TSA		
Corrosion protection	Excellent demulsibility	Very good oxidation resistance

Mineral

Mineral

Mineral



Turbo 23699

VG 22

High performance lubricant for aircraft gas turbine engines used in industrial and marine applications requiring MIL-PRF-23699-STD level performance.

Specifications:

NATO O-156	DEF-STAN 91-101/1	MIL-PRF-23699 Class STD
ISO 6743/5 TGCE	Pratt & Whitney PWA 521-B	

Synthetic base stock

OEM approved

Meeting MILPRF 23699

Synthetic

Industry

- Chain Oils
- Mineral
- Synthetic
- Biodegradable



Eni chain oils

Eni product line for the lubrication of chains ensures easy penetration into pins/bushes and provides a good grip without any dripping.

Eni Forest

VG 100

A mineral oil specifically formulated for the manual or automatic lubrication of chains and guide bars of the chainsaw.

Mineral

Arum HT 220

VG 220

High quality lubricant, formulated with special ester synthetic bases that do not leave deposits at high temperatures. It is also reinforced with specific additive that ensure antiwear properties and exceptional resistance to oxidation. applied by hand with a brush.

Specifications:

ISO 12925-1 CKS	DIN 51502 CLP-E	
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High viscosity index

Antirust protection

Excellent antiwear properties

Synthetic

Arum ESX

VG 220

A chains lubricant formulated with high quality synthetic esters that do not leave deposits even at very high temperatures (peaks up to 250°C) and special additives to impart excellent antiwear properties and resistance to oxidation.

Specifications:

ISO 12925-1 CKS	DIN 51502 CLP-E	
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Special ester base oil

High oxidation resistance

Excellent antiwear properties

Synthetic

Eni Eco lube MS

VG 46

A special biodegradable lubricant formulated with natural quality esters and antiwear additives that make it particularly suitable for manual or automatic lubrication of the chain saw.

Specifications:

Excellent adhesive properties

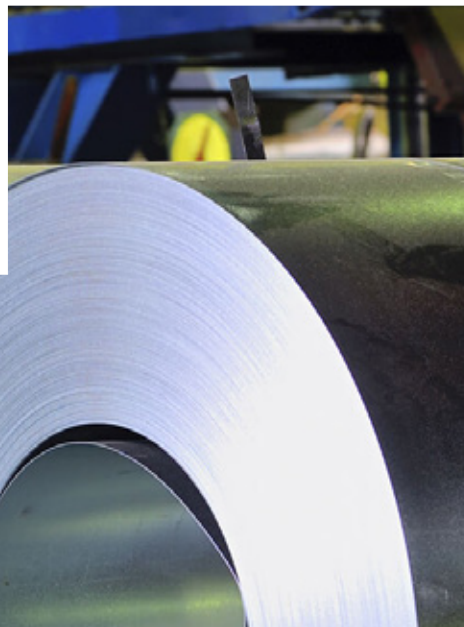
Long life and excellent lubrication

Anti-corrosive properties

Biodegradable

Industry

Rust Prevention Oils
Rust Prevention Oils Without solvents



Eni preventive oils

Rust preventive oils are formulated for lubrication and protection of metal surfaces from atmospheric corrosion. They contain polar substances that allow them to adhere and to film the metal surfaces preventing corrosion. When temporary protection is needed, for example in case of short storage time of the workpieces before the final process, the washability is an important requirement in order to avoid formation of deposits.

Rustia NT

Eni Rustia NT is a new formulated oily film antirust protective fluid especially developed for coating low-carbon steel sheets and zinc sheets used to make automobiles and domestic electrical appliances.

Specifications:

Low viscosity

Low consumption

Protection of intricately-shaped components.

Rust prevention

Rustia 27

Eni Rustia 27 provides an oily film antirust coating especially for protection of finished components and machinery. This product complies with Military Specification JAN-C-372 for antirust gun oils.

Specifications:

JAN-C-372

Protective Coating

Antirust

Antioxidant

Rust prevention

Rustia C 10W-20

Preservative oil designed for the lubrication and protection of gasoline or Diesel engines. It is formulated from a high quality base stock of high Viscosity Index and low pour point, and with suitable additives which ensure very good detergency as well as high antirust, anticorrosion, dispersant, antioxidant, antiwear and antifoam properties.

Specifications:

MIL-L-21260 C

Prevents the formation of air bubbles

High detergent and dispersant properties

Good antirust and anticorrosion properties

Rust prevention

Rust Prevention with oil solvents

Rustia C 30

Preservative oil designed for the lubrication and protection of gasoline or Diesel engines. It is formulated from a high quality base stock of high Viscosity Index and low pour point, and with suitable additives which ensure very good detergency as well as high antirust, anticorrosion, dispersant, antioxidant, antiwear and antifoam properties.

Specifications:

MIL-L-21260 C

Antirust and anticorrosion properties

High detergent and dispersant properties

Prevents the formation of air bubbles

Rust Prevention with oil solvents

Rustia 68 F/N

Eni Rustia 68 F/N is a dewatering and corrosion inhibitor, formulated with isoparaffinic hydrocarbon solvent and specific anticorrosion additives. After the solvent evaporation, it leaves a light oily film on the metallic surfaces.

Specifications:

Dewatering and corrosion inhibitor

Formulated with isoparaffinic hydrocarbon solvent

Easily removable with alkaline solutions or with hydrocarbon solvents

Rust Prevention with oil solvents

Rustia 100 F/N

Eni Rustia 100 F/N is a special corrosion inhibitor product formulated with isoparaffinic hydrocarbon solvent and specific anticorrosion additives. After the solvent evaporation, it leaves an oily film on the treated surfaces which ensures effective long-term rust protection in wet and marine environment.

Specifications:

Special corrosion inhibitor

Formulated with isoparaffinic hydrocarbon solvent

Easily removable with alkaline solutions or with hydrocarbon solvents

Rust Prevention with oil solvents

Rustia 250 F/N

Eni Rustia 250 F/N is a special corrosion inhibitor formulated with isoparaffinic hydrocarbon solvent and specific anticorrosion additives that forms on the metallic surfaces a semitransparent waxy film

Specifications:

MIL-PFR-16173 E : Class I - Grade 2

Waxy protective oil

Formulated with isoparaffinic hydrocarbon solvent

Easily removable with alkaline solutions or with hydrocarbon solvents

Industry

Metalworking fluids Neat cutting oils
Water miscible cutting oils
Metalforming oils



Eni metalworking fluids

Eni has developed various lines of metal working lubricants to satisfy the needs that come with continuous technological advancements, relevant regulations and respect for the environment. Eni metal working lines include:

- near cutting oils
 - 🐾 Aster line - mineral based oil
- water miscible cutting oils:
 - 🐾 Aquamet line
- stamping oils:
 - 🐾 Alnus line

OPL 5

Eni OPL 5 is a mineral cutting oil specially developed for lapping and honing of ferrous metals and aluminium alloys. The product can be used mixed with micronized abrasive powder based on carbides.

Specifications:

ISO 6743/7 L-MHA

Low tendency to form fumes and mists

Low tendency to form foam

It does not stain the worked metals

Grinding, lapping & honing oils

Eni Aster L

Eni Aster L is a special mineral fluid recommended for honing, lapping and grinding of ferrous and non-ferrous metals. It is also used for machining of small components of steel, aluminium, copper and their alloys

Specifications:

ISO 6743/7 MHB

Low tendency to form fumes and mists

Good detergent power on the grinding tools

High corrosion protection

Grinding, lapping & honing oils

Eni Aster MM/E

Eni Aster MM/E is formulated with high quality mineral oil and selected additives that deliver high anti-wear, anti-corrosive and anti-mist properties. It is free of chlorine. Eni Aster MM/E is suitable for grinding operations, even severe and light cutting operations like turning, milling, drilling and for machining of small metal parts of ferrous and non-ferrous metals. Recommended for machining of copper and yellow alloys.

Specifications:

ISO 6743/7 MHB

Low tendency to foam

Good detergent power on the grinding tools

Fast dust decanting

Grinding, lapping & honing oils

Neat cutting oils

Eni Aster RF

Eni Aster RF is a cutting oil formulated with high quality mineral base oil and with additives that deliver anti-wear, anti-rust, anti-mist and anti-foam properties. It is free of chlorine and sulfur additives. Eni Aster RF is recommended for grinding operations, even severe (roughing) and for grinding threads and teeth gears. Suitable for light cutting machining, on ferrous and non-ferrous metals.

Specifications:

ISO 6743/7 MHB

Low tendency to form mist and foam

Good detergent power on the grinding tools

Fast dust decanting

Neat cutting oils

FSM 22

It is formulated with high quality base oil and selected additives that deliver antiwear, anticorrosive and antimist properties. Suitable for different operations, even severe and light cutting operations.

Good antiwear properties

Low tendency to form mist

Anticorrosive properties

Multifunctional oil

Eni Aster MP

Eni Aster MP is an E.P.*, multifunctional oil without chlorine suitable for metal cutting machinings and for the lubrication of the machine tools. Recommended for automatic machining (milling, turning, drilling, threading) of ferrous and non-ferrous metals.

Specifications:

ISO 6743/7 MHE

Low tendency to form mist

Low tendency to foam

High corrosion protection

Cutting oils for medium-severe ops

Eni Aster TA/E

Eni Aster TA/E is a mineral cutting oil free of chlorine. It is recommended for grinding operations even severe (roughing grinding) and for metal cutting machinings of medium severity such as: milling, turning, drilling, threading, on cast iron, medium alloyed steels, stainless steels, aluminum and yellow alloys. Eni Aster TA/E can be used for hobbing gear cutting on high machinability steels.

Specifications:

ISO 6743/7 MHB

Low tendency to form mist

Corrosion protection

Low tendency to form foam even in presence of high delivery pressure

Cutting oils for medium-severe ops

Eni Aster LO

Eni Aster LO is a mineral cutting oil, free of chlorine, suitable for light and medium severe cutting operations like: automatic turning of small metallic pieces, milling, drilling and threading on steel, cast iron and aluminum. Particularly recommended for machining copper and brass and for taps industries.

Specifications:

ISO 6743/7 MHE

Low tendency to form mist

Antirust protection

No tendencit to foam

EP cutting oils for severe operations

Eni Aster DE

Eni Aster DE is a neat cutting oil with E.P.* properties. It is free of chlorine. Recommended for severe cutting operations, gear cutting, threading, tapping and punching. Eni Aster DE is suitable for machining stainless steel, steel alloys, titanium, aluminium and yellow metals.

Specifications:

ISO 6743/7 MHE

Very low tendency to form mist or bad smells

High corrosion protection

Very low tendency to form foam even at high delivery pressure

EP cutting oils for severe operations

Eni Aster TA/S

Eni Aster TA/S is an EP cutting oil recommended for medium and severe operations of turning, milling, boring, gear cutting, shaving, threading and slotting on stainless steel, steel alloys, titanium and aluminium. It is suitable for machining of yellow metals.
Specifications:

ISO 6743/7 MHE

Low tendency to form mist and foam

Friction reduction

High corrosion protection

EP active cutting oils for severe ops

Eni Aster FP

Eni Aster FP is an EP cutting oil, chlorine free, particularly recommended for deep drilling operations on various types of steel, aluminum and titanium and their alloys. Eni Aster FP is not suitable for machining of copper and yellow metals.
Specifications:

ISO 6743/7 L-MHF

Low tendency to form fumes and mists

Balanced action of anti-wear and EP additives

High cooling power and rapid chip removal

EP active cutting oils for severe ops

Eni Aster TG

Eni Aster TG is an EP (active) mineral cutting oil, chlorine free, suitable for severe machining like gear cutting on Fellows, Gleason and Pfauter machines. It is also suitable for gear shaving, slotting, tapping and threading on high-alloy steel, stainless steel, aluminium, titanium and its alloys. Eni Aster TG is not suitable for machining of yellow metals.
Specifications:

ISO 6743/7 L-MH

Low tendency to form mist and foam

Friction reduction

High corrosion protection

EP active cutting oils for severe ops

Eni Aster S

Eni Aster S is an EP cutting oil free of chlorine, suitable for severe machining like gear cutting and shaving, slotting, tapping, threading and vertical broaching of high-alloy and stainless steels, aluminium and titanium and alloys. Not for machining of yellow metals.
Specifications:

ISO 6743/7 L-MHF

Low tendency to form mist and foam

Excellent finishing quality of the gear teeth

High corrosion protection

Water miscible cutting oils

Eni Aquamet MY BF FAD

It is water miscible, mineral oil containing cooling lubricant, universally applicable up to severe machining processes of steel, aluminium and suitable for the processing of non-ferrous metals.
Specifications:

Universally applicable

Long service life

stable emulsion

Water miscible cutting oils

Eni Aquamet 700 HP Plus

It is a new technology cutting fluid, free of formaldehyde donor bactericide, chlorine and secondary amines, formulated with special additives, detergent and anticorrosive agents. Specific for medium and severe cutting operations on cast iron, steels, titanium, aluminium, yellow metals and their alloys; it can also be extended to grinding operations.
Specifications:

ISO 6743/7 MAB

Very low tendency to foam

High emulsion stability

Excellent antirust properties

Water miscible cutting oils

Eni Aquamet 104 Plus

Eni Aquamet 104 Plus is a new technology multipurpose cutting fluid, free from formaldehyde donor bactericide and secondary amines. Formulated with anticorrosive, detergent and EP additives. Specific for medium severe and severe cutting operations on cast iron, mildly alloyed steels, aluminum, yellow metals and their alloys. Eni Aquamet 104 Plus is suitable for single and centralized plants.

Specifications:

ISO 6743/7 MAD

Low foaming tendency

High emulsion stability

Excellent EP and anti-wear properties

Water miscible cutting oils

Eni Aquamet CL 33

It is a cleaning product for tanks and the circuits of the machine tool where water-miscible lubricants are used. Recommended for single and centralized plants.

Specifications:

It removes sludge and residues

Effective cleaning prolongs the life of the new emulsion

Can be added directly to the tank

Chlorine free press-forming oils

Alnus SSC 608

Eni ALNUS SSC 608 is a chlorine-free oil suitable for press-forming and deep-drawing operations of carbon, unalloyed and stainless steel sheets, aluminium and alloys sheets, where a fluid product is required.

Specifications:

Ensures a remarkable toughness lubricating film

Prolongs the life of the molds

Ensures the best hygienic-sanitary conditions for operators

Chlorine free press-forming oils

Eni Alnus SSC 616/L

Eni Alnus SSC 616/L is a chlorine-free oil suitable for press-forming, deep-drawing and punching operations of carbon, alloy and stainless steel sheets.

Specifications:

ISO 6743/7 MHB

Chlorine-free oil

Deep-drawing operations

Press-forming operations

Chlorine free press-forming oils

Eni Trafila 605

Eni Trafila 605 is a chlorine-free oil, suitable for drawing and profiling copper pipes and its alloys in applications that require low speeds and high reductions.

Specifications:

High anti-corrosive properties

Good wettability and high chemical stability

High antioxidant properties

Press forming and drawing oils

Alnus PF 610

Eni ALNUS PF 610 is a chlorinated mineral oil enhanced with anti-friction and EP additives, moreover the product is suitable for marked lubricating and anti-adhesion actions. Eni ALNUS PF 610 has special antirust and antioxidant additives that ensure good protective power on worked pieces and equipments. The product is particularly suitable for automatic press-forming operations for ferrous materials, where the type of distribution with pump requires a low viscosity oil.

Specifications:

Good resistance to loads

Ensures excellent stability

Easily removable with hot alkaline solutions or by solvent

Eni Alnus PF 612

Eni ALNUS PF 612 is a chlorinated mineral oil enhanced with anti-friction and EP additives, moreover the product is suitable for marked lubricating and anti-adhesion actions for pressing, shearing and deep drawing operations.

Specifications:

High resistance to loads

Ensures excellent stability

Easily removable with hot alkaline solutions or by solvent

Alnus 336 AV

Special chlorinated product for die-drawing and press-forming operations.

Specifications:

Chlorinated product

Die-drawing operations

Press-forming operations

Eni Rolling TNX

Eni Rolling TNX is a special oil suitable for stainless steel cold rolling on Sendzimir mills. The viscosity has been accurately defined in order to limit losses due to volatility as well as ensuring a good coolant effect, also supported by a good wetness due to the presence of polar constituents. The balanced adhesiveness allows the formation of a continuous and persistent lubrication film that ensures an adequate reduction of the friction coefficient without causing slipping between the work cylinders and the sheet.

Specifications:

Balanced adhesiveness

Friction coefficient reduction without slipping of the rolled sheet

Absence of stain and spotting

Eni Rolling AST 2

Eni Rolling AST 2 is a special oil suitable for stainless steel cold rolling on Sendzimir mills. Particularly recommended to optimally meet the BA (Bright Annealed) finishing requirements for rolled sheets where highly reflective surfaces and no spotting is requested. The viscosity has been accurately defined in order to limit losses due to volatility as well as ensuring a good coolant effect, also supported by a good wetness due to the presence of polar constituents.

Specifications:

Balanced adhesiveness

Friction coefficient reduction without slipping of the rolled sheet

Absence of stain and spotting

Eni Lamium 11 C

Eni Lamium 11 C is an odorless, colourless, dearomatized and desulphurized petroleum distillate, suitable for cold aluminum rolling. The product assure good result of the laminate product and guarantees the complete absence of stainings both during rolling and after the annealing phase.

Specifications: US FDA 21 CFR 178.3910

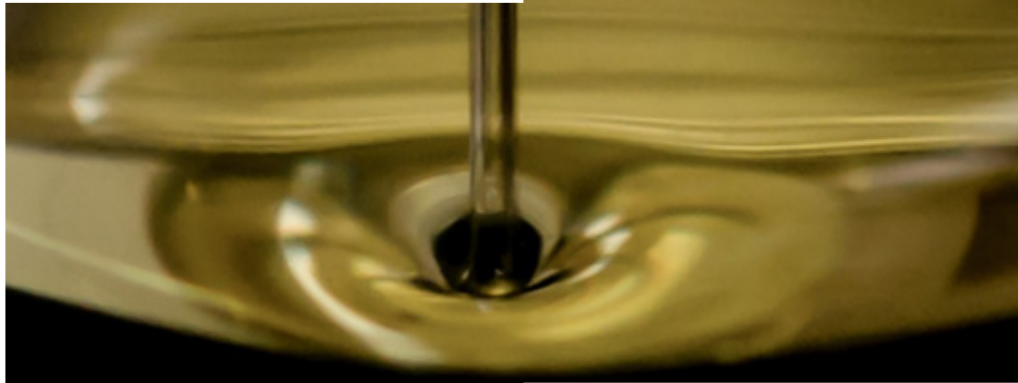
High anticorrosive properties

Good wettability and high chemical stability

High antioxidant properties

Industry

Special Oils



Eni special oils

Under the header "special oils" there is a diversity in products. In all Eni's product range, the highest attention was paid to the specific application whilst formulating the products. The products are of the highest quality and are ideal for deployment in the toughest conditions in the envisaged application.

ASP

VG 150,220

Adhesive oil on mineral oil base, reducing oil consumption in the event of loss-lubrication, centrifugal forces and vibrations.
Specifications:

Special Oils

High adhesive and cohesive properties

Prevents unwanted contamination

Lubricant savings

ASP C

VG 32, 100

Special mineral oil with tackiness properties. It absorbs moisture. Intended for use in pneumatic tools as well as in the paper, textile and packaging industry.
Specifications:

Special Oils

Guarantees excellent oiliness

Suitable for the lubrication of most compressed air tools

Absorbs moisture

Acer MV

VG 10

Special oil with very low viscosity, based on selected base stocks with antirust, antioxidant and antiwear additives. It is specially designed for the lubrication of fast spindles of machine tools.
Specifications: ISO 6743/2 FC

Special Oils

Ensures long drain intervals

Low viscosity

Excellent resistance against corrosion

ITE 600

Eni ITE 600 is a high quality uninhibited insulating oil that can be used in transformers, switchgears, condensers, rheostats and in many other electrical applications where particularly low temperature conditions can occur.

Specifications:

IEC 60296 ed. 4 (2012) - type U

Noncorrosive

Excellent dielectric strength

Good heat transfer properties

Special Oils

ITE 600 X

A mineral insulating uninhibited oil for transformers. It is formulated from a highly refined petroleum base stock on impart excellent dielectric properties.

Specifications:

IEC 60296 ed.4 (2012) - type I

Noncorrosive

Excellent dielectric strength

Good heat transfer properties

Special Oils

VAS 460/VAS 900

VG 460, 1000

Eni VAS is a straight mineral oil specifically designed for lubrication of cylinders of steam engines where condensate is recovered.

Specifications: ISO 6743/2 FC

Good demulsive properties

Good protection from corrosion and wear

Very high flashing point

Special Oils

ENI Acorus 7032

VG 32, 100

Designed for lubricating moulds used to make plain and reinforced concrete and earthenware products. Facilitates release of parts from the mould avoiding surface defects

Specifications:

Prevents rusting of mould

Prevents the formation of hard deposits

Avoids surface defects

Special Oils

Eni Agrimotor 2T

VG 68

Lubricant designed for agricultural or gardening equipment fitted with 2-stroke air-cooled engines (chainsaws, motor mowers, tillers etc.). The product is suitable for the manual preparation of the fuel-oil mixture.

Specifications:

API TC

Excellent detergent characteristics

Antiwear properties

Noncorrosive

Special Oils

Exidia HG

VG 32, 68, 220

Premium quality lubricant especially designed for slideways, even under high loads, with circulation and total loss lubrication systems. It is formulated with high quality base-stocks and an unique additive package that provides excellent antistick-slip, antiwear and antirust properties. Eni Exidia HG is recommended as hydraulic fluid in those machines, especially grinding machines, where a single oil is used for guides and hydraulic drives lubrication.

Specifications:

Excellent detergent characteristics

Anti-wear properties

Non-corrosive

Special Oils

Industry

- Greases Lithium Greases
- Lithium Complex
- Calcium
- Aluminium Complex



Eni greases

Eni offers a very wide range of lubricating greases for all applications in a variety of sectors: heavy industry (cement plants, steel mills), papermaking, factories and marine applications.

Eni Grease LP

Smooth-textured grease

Eni Grease LP is a smooth-textured grease, black-coloured, formulated with mineral base oil and with lithium-calcium soap. The EP (Extreme Pressure) additive imparts particular anti-wear and anti-welding characteristics capable of resisting the maximum mechanical stresses that occur in components subjected to heavy loads with sliding couplings. It has strong adhesive and water repellent properties which make it particularly suitable for lubrication in environments where water is present. This is available in grade 1 and 2.

Specifications:

DIN 51826 GP 1K -20	DIN 51825 KP 1K -20	ISO 12924 L-XBCHB 1
ISO 6743/6 L-CKG 1	DIN 51826 GP 2K -20	DIN 51825 KP 2K -20
ISO 12924 L-XBCHB 2	ISO 6743/6 L-CKG 2	

Long-lasting performance

Resistance to water washout

Very high resistance to loads, shocks and vibrations

Eni Grease MU

Multipurpose grease

Multipurpose grease lithium based for application where EP characteristic are not required. Suitable for the lubrication of flat and rolling bearings, joints and other parts of industrial, construction and agricultural equipment. NLGI 1,2,3.

Specifications:

DIN 51825 K 1K-20	DIN 51825 K 2K-20	DIN 51825 K 3K-20
ISO 12924 L-XBCHA 1	ISO 12924 L-XBCHA 2	ISO 12924 L-XBCHA 3

High adhesive properties

Good vibrations resistance

High anti-rust protection

Grease MU EP (BX)

Multipurpose grease

Multipurpose EP grease lithium base Suitable for the lubrication of flat and rolling bearings, also loaded, operating at high temperatures and in couplings with particularly critical start-up lubrication conditions. Suitable for lubricating gears and other components subjected to vibrations and operating at high temperatures. NLGI 00, 0, 1, 2, 3.

Specifications:

DIN 51825 KP 0K 1K 2K 3 K-20	ISO 12924 L-XBCHA 00 0 1 2 3	Deckel
DIN 51826 GP 00K 0K 1K -20	ISO 6743/6 L-CKG 00 0 1	

High adhesive properties

Good vibrations resistance

Strong stability even after intense and prolonged mechanical and thermal stress

Eni Sagus 60

Black graphite grease

Eni Sagus 60 is a dark-grey graphite grease, suitable for use on exposed machine parts, even those operating at high temperature and especially for the lubrication of gears, power screws, racks, rollers, chains, wire ropes. It finds application principally in cement works, cable transport facilities, chemical plants. NLGI 0-00.

Specifications:

DIN 51826 GF 0-00G-10	ISO 6743-6 L-CKG 0-00	
High adhesive properties	Optimal lubrication even under heavy mechanical and thermal stress	Approval according to the Danielli Standard 0.000.001 specification.

Lithium grease

Eni Longtime grease 2

EP grease

Lithium-calcium-soap basis with synthetic base oil and EP additives very good working stability and excellent adhesive properties. NLGI 2.

Specifications:

DIN 51825 T.3 KP 2K-30		
Excellent adhesive properties	High ageing stability	Excellent sealing effect.

Lithium grease

Grease SLL

"Filled for life" grease

Exceptional oxidation stable grease for lubrication of "filled-for-life" reduction gears such sealed gear boxes of electric/pneumatic tools, household appliances, gear couplings, etc. NLGI 00.

Specifications:

DIN 51826 GPG 00K -30	ISO 6743/6 L-CKG 00	ISO 12924 L-XCCDA 00
High adhesive properties	Optimal lubrication even under heavy mechanical and thermal stress	Approval according to the Danielli Standard 0.000.001 specification.

Lithium grease

Eni Grease LC

Multipurpose grease

Special 'multipurpose' grease, formulated with lithium complex soap and anti-rust, antioxidant and EP (Extreme Pressure) additives. Characterized by a high dropping point and high stability, Eni Grease LC 2 has been designed to meet the particular needs of steel industry. NLGI 1, 2.

Specifications:

DIN 51825 KP 1N-20	/DIN 51825 KP 2N-20	ISO 12924 L-XBDHB 1
ISO 12924 L-XBDHB 2		
High dropping point	High stability	High adhesiveness and vibrations resistance

Lithium complex

Grease SM 2

EP grease

Lithium based EP grease with molybdenum disulfide. Particularly suitable for the lubrication of roller bearings and/or rolling bearings subjected to extreme mechanical and/or thermal stress such even in presence of vibrations. NLGI 2.

Specifications:

DIN 51825 KPF 2K -20	ISO 6743/6 L-CKG 2	ISO 12924 L-XBCHB 2
DIN 51826 OGP 2K -20		
Allows long relubrication intervals	Excellent adhesion and high resistance to water washout	Excellent anticorrosive properties

Lithium grease

Eni Grease LCX

Multipurpose grease

Eni Grease LCX is a lithium complex multipurpose grease formulated with synthetic base oil. The particular combination of antiwear, EP, anticorrosive and antioxidants additives guarantees excellent performance in severe operating conditions such as high loads and in presence of vibrations. NLGI 1, 2.

Specifications:

DIN 51825 KPHC 1,5R 40	DIN 51825 KPHC 1P 2P -40	DIN 51825 KPHC 2N -50
ISO 12924 L-XDEHB 1 2	ISO 12924 L-XEDHB 2	ISO 12924 L-XDFHB 1,5
Suitable for applications at high and low temperature	Extension of service life and relubrication intervals	Excellent adhesiveness and resistance to water washout

Lithium complex

Eni MSX 2/460 EP grease with molybdenum disulphide

It is an EP lithium complex grease formulated with synthetic base oil (PAO) with presence of a high percentage of solid lubricant (molybdenum disulphide) to improve the EP properties. NLGI 2

Specifications:

ISO 12924 L-XDFHB 2	DIN 51825 KPFHC 2R -40
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Outstanding performance at very high and at very low temperature	Excellent resistance to loads, shocks and vibrations	High oxidation stability
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Lithium complex

Eni Grease CC Smooth textured grease

Eni Grease CC 2 is a yellow anhydrous-calcium base grease, smooth-textured. It is available in grade 2. Water resistant - even hot water- grease where thermal and mechanical loads are relatively low.

Specifications:

DIN 51825 K 2G -20	ISO 12924 L-XBBGA 2
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Good lubricating and protective characteristics	Water Repellent and insoluble both in hot or cold water	Easy application
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Calcium grease

Eni Eco Biodegradable grease 

Can be used as disposable lubricant for agricultural machinery, marble cutting and machinery operating in natural reserves or in waste water treatment plant. Especially developed for the continuous lubrication of the bearings of the TBM (Tunnel Boring Machine) for the mechanized excavation of tunnels. NLGI 0

Specifications:

DIN 51825 K 0F -30	ISO 12924 L-XCBDA 0	Biodegradabilità CEC L-33-T82: >95%
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Good resistance to the water washout	Good anti-wear and anti-rust properties	Low environmental impact
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Calcium grease

Eni Grease PV EP grease

Calcium based grease for lubrication and protection of mechanical parts exposed to hostile conditions e.g. (sea)water. NLGI 2.

Specifications:

NATO Code-G-460	BWB TL 9150 066	DEF STAN 91-34/2
ISO 12924 L-XCBHB 2	DIN 51502 KPF 2G-30	

Very good load carrying capacity	High adhesiveness to metallic surfaces	Outstanding corrosion protection in wet and marine environments
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Calcium grease

Eni Eco Plus 2 Biodegradable grease 

Lubrication of bearings, chains, wire ropes and components operating in environmentally sensitive areas where contamination of the environment is a risk. NLGI 2.

Specifications:

DIN 51825 KP 2K-30	ISO 12924 L-XCCHB 2	Biodegradabilità OECD 301 B: >60%
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Very good adhesion and water resistance	High protection against corrosion in wet and marine environments	Excellent low temperature pumpability
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Calcium grease

Autol Top 2000 Multipurpose grease

Grease with exceptional adhesive properties and very good extreme-pressure-properties. Under difficult conditions it reduces wear and is especially resistant to wash outs in the lubrication points. It is extremely resistant to salt water. NLGI 2

Specifications:

DIN 51825 KP 2K -30	ISO 12924 L-XCCHB 2
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Resistance to high loads, shocks, and vibrations.	Very high resistance to water washout	Excellent antirust and anticorrosive properties
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Calcium grease

AUTOL Top 2000 Fettspray

CFC-free grease spray

Should be used for the lubrication of parts that are difficult to reach such as Bowden wires, cables and chains, but is also suitable for friction points that are exposed to high impact loads, vibration and/or adverse weather conditions.

Specifications:

DIN

Good creeping properties

Long relubrication intervals

Good corrosion protection

Calcium grease

Top 2000 high temperature

Multipurpose grease

It is a high-pressure high-temperature grease suitable for the lubrication of roller and slide bearings, even under impact loads. NLGI 2.

Specifications:

DIN 51825 KP 2K-20

High temperature grease

Good adhesive properties

Extreme mechanical and thermal stability

Calcium grease

Eni AC

EP grease

Eni AC grease is especially designed and manufactured to meet the needs of the steel industry where it is applied in the lubrication of bearings at high temperatures (roller ways of slabbing, of the continuous casting ovens, etc.) and where a grease that can be pumped through particularly long and complex centralized supply circuits. This is available in NLGI grade 1 and 2.

Specifications:

DIN 51825 KP 1N-20

DIN 51825 KP 2N-20

ISO 12924 L-XBDHB 1

ISO 12924 L-XBDHB 2

Very high dropping point

Excellent resistance to water wash-out

Remarkable antirust / antioxidant power

Aluminium complex

Sagus AC 460

Black graphite grease

Black graphite grease aluminum complex mineral-based, particularly suitable for the lubrication of components discovered operating even at high temperatures: gears, worm screws, racks, rollers, chains, metal cables. NLGI 0.

Specifications:

DIN 51826 OGFP 00K-10

ISO 12924 L-XADHB 2

ISO 6743-6 L-CKG 00

DIN 51502 GPF 00N-10

Meets high values in tribological tests

Excellent adhesiveness

Extension of re-lubrication intervals

Aluminium complex

Eni HTX - SIL

Translucent grease

It is ideal for the long-lasting lubrication of bearings, sliding guides and organs operating at low speed, at very high temperatures and in the presence of water, chemicals, oils and gas. NLGI 3,5

Specifications:

ISO 12924 L-XDGAA 3,5

DIN 51825 KSI 3,5S -40

High performance in high temperature applications

Good resistance to chemicals, oils, gases and water

High stability over time

Silicone grease



Lubricants for the maritime sector

Marine

Engine Oils Two stroke engine
Four stroke engine

Engine oils for other onboard applications Two stroke engine
Four stroke engine



Marine engine oils

Eni offers a line of lubricants for marine crosshead Diesel engines formulated from a high-quality base stock, additivetreated to guarantee superior cylinder lubrication of two-stroke crosshead diesel engines

Punica 5100

Cylinder lubricant

Cylinder lubricant designed to lubricate and protect the pistons, rings and liners of low speed two-stroke crosshead engines operating with high sulphur oil.

Specifications:

Cylinder oil SAE 50 TBN 100 MAN

Neutralization of acids deriving from the combustion process

Minimise scorrosive wear effects

Outstanding thermal and oxidative stability

Oils for 2 stroke engines

Punica 570

Cylinder lubricant

Cylinder lubricant designed to lubricate and protect the pistons, rings and liners of low speed two-stroke crosshead engines operating with medium or high sulphur residual fuel oil.

Specifications:

Cylinder oil SAE 50 TBN 70 WIN GD

Prevent acidic corosion

Neutralization of acids deriving from the combustion process

High thermal stability

Oils for 2 stroke engines

Punica 540

Cylinder lubricant

Cylinder lubricant designed to lubricate and protect the pistons, rings and liners of low speed two-stroke crosshead engines operating with low sulphur residual fuel oil.

Specifications:

Cylinder oil SAE 50 TBN 70

Prevent acidic corosion

Neutralization of acids deriving from the combustion process

High thermal stability

Oils for 2 stroke engines

Oils for 2 stroke engines

Punica 525

Cylinder lubricant

Cylinder lubricant designed to lubricate and protect the pistons, rings and liners of low speed two-stroke crosshead engines operating with high sulphur oil.

Specifications:

Cylinder oil SAE 50 TBN 100 MAN

Neutralization of acids deriving from the combustion process	Minimise scorrosive wear effects	Outstanding thermal and oxidative stability
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Oils for 2 stroke engines

Cladium 50

Detergent lubricant

Cylinder lubricant designed to lubricate and protect the pistons, rings and liners of low speed two-stroke crosshead engines operating with medium or high sulphur residual fuel oil.

Specifications:

System Oil SAE 30 TBN 5 WIN GD

Prevent acidic corrosion	Neutralization of acids deriving from the combustion process	High thermal stability
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Oils for 4 stroke engines

Cladium 120

Detergent lubricant

Specifically formulated for naturally-aspirated or even highly supercharged marine diesel engines. Its additive package is suitably balanced in order to permit the use of either gasoil or marine diesel fuels, while ensuring top performance in engines with very high mean effective pressures. Despite its high detergent/ dispersant efficiency, the demulsibility characteristics allow rapid separation of water accidentally entering the engine.

Specifications:

SAE 30/40 TBN 12	API CF
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Excellent detergent properties	Prevents sludge deposition	Effective neutralization of acidic products
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Oils for 4 stroke engines

Cladium 140 S

Detergent lubricant

Specifically developed for high performance aspirated or supercharged Diesel engines, for marine and railway propulsion and industrial applications, using liquid fuels like gasoil, Marine Diesel Oil (MDO), Light Fuel Oil (LFO) and vegetable oil, or using gas in a dual-fuel system. The use of this product must be in agreement with the OEM's indications. **Specifications:**

Cylinder oil SAE 50 TBN 100 MAN	API CF	Wartsila
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Very high detergent properties	Prevents the formation of sludge	Strong antiwear, anticorrosion and antifoam properties
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Oils for 4 stroke engines

Cladium 300

Detergent lubricant

Lubricant for use in four-stroke diesel engines operating on residual fuels and under conditions which ask an oil with a medium-high Total Base Number. The product is specifically designed for diesel engines, which API CF form significant amounts of acid mist versus a low power or stop-and-go activities. **Specifications:**

SAE 30/40 TBN 12	API CF
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Prevents acidic corrosion	Antiwear characteristics	Strong demulsibility
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Oils for 4 stroke engines

Cladium 400

Detergent lubricant

Four-stroke engine oil for use in diesel engines that operate with a high sulfur content, thus requiring a particularly high Total Base Number particularly in operating conditions. It has so much calcium carbonate reserve in order to fight efficiently the formation of acid mists as a result of the use of fuel oil with a very high sulfur fuel. This reserve is also particularly useful in engines with very low oil consumption or operating at such low temperatures to promote sulfuric acid condensation.

Specifications:

SAE 30/40	API CF	Wartsila (Vasa 32 Engines)
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Prevent acidic corrosion	Neutralization of acids deriving from the combustion process	High thermal stability
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Oils for 2 stroke engines

Cladium 300 S

Cylinder lubricant

Cylinder lubricant designed to lubricate and protect the pistons, rings and liners of low speed two-stroke crosshead engines operating with high sulphur oil.

Specifications:

Cylinder oil SAE 50 TBN 100 MAN

Neutralization of acids deriving from the combustion process

Minimise scorrosive wear effects

Outstanding thermal and oxidative stability

Oils for 2 stroke engines

Cladium 400 S

Detergent lubricant

Cylinder lubricant designed to lubricate and protect the pistons, rings and liners of low speed two-stroke crosshead engines operating with medium or high sulphur residual fuel oil.

Specifications:

System Oil SAE 30 TBN 5 WIN GD

Prevent acidic corrosion

Neutralization of acids deriving from the combustion process

High thermal stability

Oils for 4 stroke engines

Cladium 500 S

Detergent lubricant

Specifically formulated for naturally-aspirated or even highly supercharged marine diesel engines. Its additive package is suitably balanced in order to permit the use of either gasoil or marine diesel fuels, while ensuring top performance in engines with very high mean effective pressures. Despite its high detergent/ dispersant efficiency, the demulsibility characteristics allow rapid separation of water accidentally entering the engine.

Specifications:

SAE 30/40 TBN 12

API CF

Excellent detergent properties

Prevents sludge deposition

Effective neutralization of acidic products

Oils for 4 stroke engines

i-Sigma Top 10W-40

Other on board applications

10W-40 gradation enables Eni i-Sigma top 10W-40 to be suitable for any weather condition allowing easy cold starting. Eni i-Sigma top 10W-40 is officially approved or meets the requirements of the service specifications of most manufacturers particularly for Scania engines. The large percentage of additives adopted enables very long life between oil drains and the product is also indicated in case of discontinuous engine operation. **Specifications:**

Acea E4, E7	API CI-4	Cummins CES 20078
Deutz DQC III-18 (Approved)	MACK EO-N (Approved)	MAN M 3277 (Approved)
MB-Approval 228.5	MTU type 3 (Approved)	Renault VI RLD-2 (Approved)
Volvo VDS-3 (Approved)		

Fuel savings

Extended change intervals.

Excellent oxidation resistance

Oils for 4 stroke engines

i-Sigma Performance E7 15W-40

Other on board applications

Long-drain multigrade oil for diesel engines operating under severe duty. The superior quality of the base stock and the large percentage of additives used enable very long life in service. The oil can also be used, with a wide margin of quality, in previous generation diesel engines installed in vehicles engaged on urban and short-haul goods and passenger service. **Specifications:**

ACEA E7, E5, E3, B3	API CI-4/CH-4/SL	Caterpillar ECF-1a, ECF-2
MAN M 3275-1	Deutz DQC III-10 (Approved)	MACK EO-N (Approved)
MB-Approval 228.5	MTU type 2 (Approved)	Renault VI RLD-2 (Approved)
Volvo VDS-3 (Approved)		

Guarantees pistons cleanliness

Antioxidant, antirust and antiwear properties

Extended change intervals.

Oils for 4 stroke engines

i-Sigma Performance E3 15W-40

Other on board applications

Its detergent-dispersant properties, combined with its very high, long-lasting ability to neutralize acidic products of combustion, confirmed by the compliance with requirements of ACEA E5, E3, B3 and API service CH-4, SJ, keep pistons exceptionally clean, while solid combustion products are held in suspension, thus preventing the formation of harmful crankcase deposits.

Specifications:

ACEA E3	API CG-4	MAN M 3275-1
MB 228.1	MTU type 2	

Prevent acidic corrosion

Antioxidant, antirust and antiwear properties

High viscosity index

i-Sigma Universal 15W-40

Other on board applications

S.H.P.D.* multigrade long oil-drain engine lubricant suitable for the lubrication of supercharged diesel engines operating under severe duty; it is also suitable for the lubrication of all gasoline car engines, either naturally aspirated or turbocharged, thus offering an ideal choice for the lubrication of mixed fleets. The superior quality of the base stock used and the large percentage of additives adopted enable long drainage intervals. Specifications:

ACEA E2	API CG-4/SL	MAN 271
MB 228.1, 229.1		

Antioxidant, anti-rust and anti-wear properties

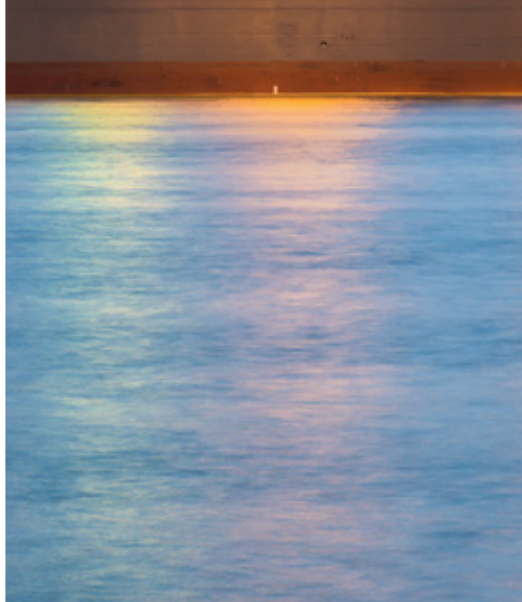
Extended change intervals.

Anti-corrosive properties



Marine

- Hydraulic oils
- Gear oils
- Compressor oils
- Turbine oils



Oso

ISO VG 10 - 150

Eni OSO is a high performance antiwear hydraulic oil, specifically designed to meet the most rigorous performance requirements of a wide range of hydraulic system and component manufacturers. It's formulated with selected base oils treated with "low zinc" technology ensuring excellent antiwear, antirust and antioxidant properties. It has an outstanding filterability in service. Specifications:

ISO 11158 HM	DIN 51524-2 HLP	AFNOR NF E 48603 HM,
BS 4231 HSD	Fives Cincinatti P-70 level	ATOS Table P002-1/E
Eaton Vickers I-286-S	Denison HF-0, HF-1, HF-2	Rexroth RD 90220-01/12.10
Danieli Standard n. 0.000.001 - Rev.15	Muller Weingarten DT 55 005	ZF TE-ML 04K

Low zinc formula

Antiwear & antirust

Outstanding filterability

Hydraulic Oils

Arnica

ISO VG 15 -100

Eni Arnica is a high performance antiwear hydraulic oil, specifically designed to meet the needs of modern, high pressure, industrial and mobile equipment hydraulic systems. It's formulated with selected base oils treated with "low zinc" technology ensuring excellent thermal, oxidative and hydrolytic stability. Specifications:

ISO 11158 HV DIN 51524-3 HVLP	AFNOR NF E 48603 HV	BS 4231 HSE
Rexroth RD 90220-01/12.10	Eaton Vickers I-286-S level + M-2950-S	Fives Cincinatti P-70
Denison HF-0	Commercial Hydraulics Linde	AISE 127 CETOP RP 91 H HV
Sauer Danfoss 520L0463	Danieli Standard n. 0.000.001 - Rev.15	ZF TE-ML 04R

Excellent antiwear properties

Wide temperature range

Excellent viscosity stability

Hydraulic Oils

Acer

ISO VG 15 - 680

Eni Acer is a lubricant for circulation systems, oleodynamic circuits and air compressors where antirust and antioxidant properties are required. Eni Acer is particularly recommended for lubrication of journal and rolling bearings, crank mechanisms and gear couplings that are not demanding antiwear or E.P.* performances, joints and wet clutches not for automotive applications. Eni Acer can also be used as crankcase oil in large diesel engines with separate lubrication and water-cooled pistons Specifications:

ISO 11158 HL	DIN 51524-1 HL	AFNOR NF E 48603
HL CETOP RP 91 H HL BS 4231 HSC	ISO 12925-1 CKB	DIN 51517-2 CL ANSI/AGMA 9005-E02
ISO 6743/3 DAB DIN 51506 VCL	Morgoil rev. 3.0 - 1999	

Optimal demulsive capacity

Antioxidant, antirust and antiwear properties

Antifoam and air release action

Hydraulic Oils

Eni Rotra ATF II D

ISO VG 10 - 150

Eni Rotra ATF II D is a special lubricant used primarily in automatic gearboxes and in many other applications where oils suitable for low temperature conditions, with high viscosity index and high stability at mechanical stresses are required. It is suitable for first filling and for topping up in automatic and hydraulic transmissions of those manufacturers that prescribe fluids that comply with the GM DEXRON IID specification. Specifications:

Allison C-4	Caterpillar TO-2	MB 236.6
Voith H55.6335.xx	Ford MERCON	GM DEXRON IID
MAN 339 type V1 (Approved)	MAN 339 type Z1	ZF TE-ML 05L, 09, 17C quality
ZF TE-ML 04D, 11A, 14A (Approved)		

Excellent oxidation stability

Excellent viscosity properties

Antirust & antifoam properties

Eni Rotra ATF Multi

ISO VG 15 -100

Eni Rotra ATF Multi is a premium synthetic technology lubricant that is suitable for a variety of different automatic transmissions. Specifications:

GM DEXRON IIIH	Ford MERCON/MERCON V	CHRYSLER ATF+3/+4
MB-Approval 236.9	MAN 339 type V1	MAN 339 type Z2
MAN 339 type Z11	JASO 1-A	AISIN JWS 3309
NISSAN MATIC D, J, K	Toyota T-IV	Voith H55.6335 (G607) level

Excellent oxidation stability

Excellent viscosity properties

Antifoam properties

Eni Rotra MP 80W-90

ISO VG 15 - 680

Eni Rotra is a mineral oil for the lubrication of manual transmissions and differentials. It is suitable for first filling and for topping up in automatic and hydraulic transmissions of those manufacturers.

Specifications:

API GL-5	MIL L 2105 D	MAN 342 type M1
MAN 342 type M2 (Approved)	ZF TE-ML 05A, 12E (Approved)	ZF TE-ML 16B, 17B, 19B, 21A (Approved)
ZF TE-ML 07A, 08		

Operating under the most extreme conditions

Good oxidation stability

Antirust and antifoam properties

Fin

Fin 332 F & Fin 360/EP/F

Eni FIN is a oil with good adhesive properties for open gears and wire ropes. These oils are adhesive black-coloured mineral-based lubricant suitable for lubrication of machinery exposed to the atmosphere. Eni FIN 332/F has been developed, notably, for lubrication and protection of open gears, wire ropes, springs, guides, racks and open machinery parts in general, subjected to moderate mechanical loads and thermal stresses. Specifications:

DIN 51513 BC-V	ISO 6743/6 CKH-DIL
ISO 6743/6 CKJ-DIL	DIN 51513 BC-V

Strong resistance to water washout

Good adhesiveness

Applicability in cold conditions

Blasia

ISO VG 68 - 680

Eni Blasia gear oils have E.P.* characteristics for enclosed industrial gears lubricated with splash or circulation systems especially where high loads and temperatures, high speeds and sliding friction is present. Eni Blasia can be also used to lubricate other heavily-loaded components such as couplings, transmission screws and low speed plain bearings. Suitable for use in oil-mist lubrication systems. Specifications:

ISO 12925-1 CKD	DIN 51517-3 CLP	AIST No.224
ANSI/AGMA 9005-E02	David Brown S1.53 101 level	Fives Cincinatti P-76 level
Muller Weingarten DT 55 005 CLP		

Good antioxidant properties

Non-corrosive behaviour

Outstanding demulsive capacity

Blasia SX

ISO VG 100 - 320

The product is a synthetic oil for the lubrication of gears and bearings operating at high temperatures (continuous bulk temperatures up to 120 °C with peaks in the hottest points up to 200 °C) The choice of a high quality synthetic basestock (PAO)* and a carefully selected additive system has allowed to get very high performances with particular regard to thermal-oxidation stability. Eni Blasia SX 100 is recommended for the lubrication of bearings of marine separators, gears and other couplings operating at high temperatures (glassforming machines, steelstrip mills, furnaces and ceramic and paper-making machinery); the product can also be used in rotary air compressors. Specifications:

DIN 51517-3 CLP	ANSI/AGMA 9005-E02	ZF TE-ML 04H
ISO 12925-1 CKT	Alfa Laval	

Antioxidant properties

Very high viscosity index

Outstanding demulsive capacity

Blasia S

ISO VG 150 - 460

Eni Blasia S is a line that has synthetic lubricant formulated with selected polyglycols and special additives that deliver high lubricity properties. Eni Blasia S 220 is specifically suitable for lubrication of rolling and sliding bearings, gears and other couplings operating at very high temperatures (ovens and machineries for glass manufacture, plastic materials production, paper and woodpulp machineries, ceramic production, etc). **Specifications:**

ANSI	AGMA 9005-E02	DIN 51502 CLP-PG
ISO 12925-1 CKT	ISO 12925-1 CKE	Loesche
Sacmi 200.02.A01	Schindler	

Thermo-oxidative resistance

Robust protection from wear

Friction reduction in highly loaded couplings and worm gears

Dicrea

ISO VG 46, 68, 100, 150, 220, 320

This is a lubricant for rotary air compressors (vane or screw type) that can be used even in case of very high air delivery temperature (more than 200°C). **Specifications:**

ISO 6743/3 DAH	ISO 6743/3 DAB	ISO 6743/3 DVA
DIN 51506-VDL	Italvacuum	HATLAPA
NEA Neuman & Esser	Sulzer Burckhardt	

Non-corrosive behaviour

Antiwear action

Effective thermo-oxidative stability

Dicrea SX

ISO VG 46, 68

Eni Dicrea SX is a synthetic lubricant based on polyalphaolefin for rotary and reciprocating air compressors that allows to considerably prolong the oil charge life if compared with mineral lubricants. **Specifications:**

ISO 6743/3 DAB	DIN 51506-VDL	ISO 6743/3 DAJ
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Optimal demulsive capacity

Antioxidant, antirust and antiwear properties

Antifoam and air release action

Dicrea ESX 100

Eni Dicrea ESX 100 is a synthetic lubricant based on esters specifically formulated for cylinders of reciprocating air compressors. It allows to prolong the oil charge life and is also suitable for lubrication of compressor bearings. **Specifications:**

DIN 51506-VDL	ISO L-DAB	ISO L-DAJ
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Effective antiwear action

Non-corrosive behaviour

Outstanding thermo-oxidative stability

Ote

ISO VG 32, 46, 68, 100

Top quality mineral oil designed to satisfy even the most severe lubrication requirements of steam, gas and water turbines, having especially high oxidation and aging resistance as well as very high demulsibility. **Specifications:**

ISO 8068 TSA/TGA	DIN 51515-1 TD, BS 489:1999	Ansaldo Energia 606W807 Rev.C (2012)
GE GEK 28143B	Siemens TLV 9013 04	ASTM D 4304 Type I
JIS K 2213 -1983 Type II	Doosan Skoda Power	Nuovo Pignone SOM 17366
Mitsubishi Spec. NO. E00-001 Rev.2	CEI 10-8 (1994)	

Prolongs re-lubrication intervals

Excellent thermal-oxidative properties

Outstanding demulsibility

OTE GT

ISO VG 15, 32, 46

Superior quality lubricant specifically designed for use in gas turbine applications, formulated with selected base stocks and specially chosen additives to ensure an exceptional resistance to oxidation and antirust. Its "mild E.P." properties makes it suitable for lubrication of turbine reduction gear units. **Specifications:**

ISO 8068 TSA/TSE/TGA/TGB/TGE/TGSB/TGSE	Ansaldo Energia TGO2-0171-E00001/B (2016)	Ansaldo Energia 606W807 Rev.C (2012)
ASTM D 4304 Type II	GM Lubricant Standard LS2	GE GEK 28143B
GE THERMODYN ISPSH902SDI	MAN GHH BORSIG SP 079984 E 0000 E 99	Siemens MAT812109 MAT812107
SOLAR ES 9-224U - Class II	ALSTOM HTDG 90117 V0001 X	DIN 51515-1 TD
DIN 51515-2 TG	Siemens TLV 9013 04	Siemens TVL 9013 05

Ote 80 EP

ISO VG 80

Principally developed for the lubrication of all parts of steam turbines (bearings, gears, governor systems, etc.) particularly for marine use. **Specifications:**

NATO O-250	ISO 6743/5 L-TSA
ISO 6743/5 L-TSE	MIL-PRF-17331L
M.M. O-2001 (Simbolo NATO O-240)	

Excellent oxidation stability

Robust antirust
and anticorrosive properties

Excellent demulsibility

Ote 65 MM

ISO VG 68

It is recommended for the forced lubrication of gears, propulsion gearboxes, mechanical devices, reversing gears and for hydraulic systems installed on ships. **Specifications:**

MM-O-2001/B (NATO code O-240)

Extended re-lubrication intervals

Excellent demulsibility

Antirust, anticorrosive &
antifoam properties

Turbo 23699

ISO VG 22

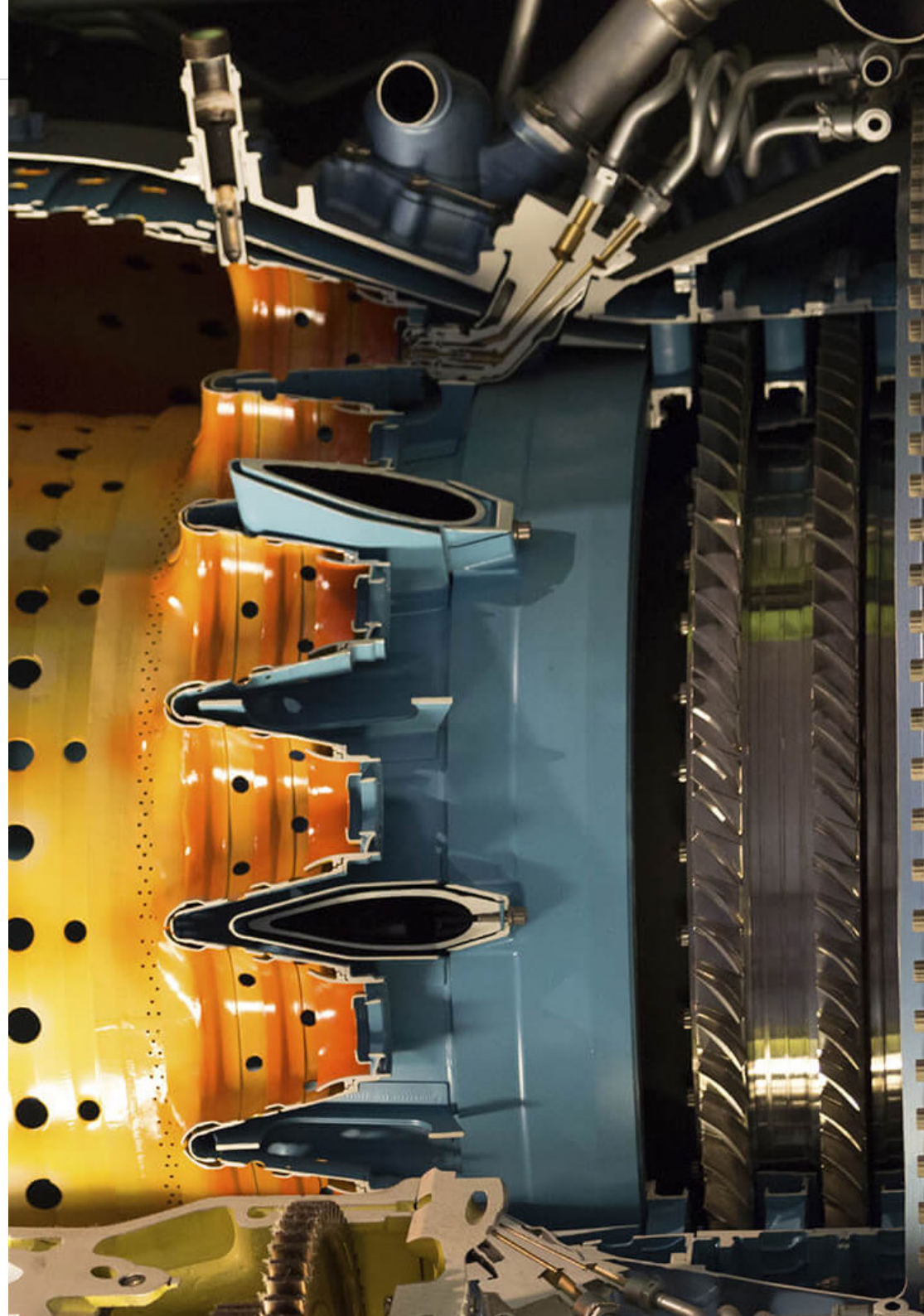
Eni Turbo 23699 is a high performance lubricant for aircraft gas turbine engines used in industrial and marine applications requiring MIL-PRF-23699-STD level performance. It is formulated with synthetic base stocks and additives ensuring excellent thermal and oxidative stability, as well as antiwear properties. **Specifications:**

NATO O-156	DEF-STAN 91-101/1	MIL-PRF-23699 Class STD
ISO 6743/5 TGCE	Pratt & Whitney PWA 521-B	MIL-PRF-23699 Class STD
Siemens SGT-A35 RB (RB211)		

Outstanding thermal and
oxidation stability

Good antiwear properties

Low pour point



Marine

- Greases**
- Lithium Greases
 - Lithium Complex
 - Calcium
 - Biodegradable



Eni greases

To complete the line for the marine sector, Eni provides a line of lubricants to satisfy further lubricating needs in engines for special on board applications, such as life and rescue boats and auxiliary and emergency generators.

Eni Grease MU

Multipurpose grease

Multipurpose grease lithium based for application where EP characteristic are not required. Suitable for the lubrication of flat and rolling bearings, joints and other parts of industrial, construction and agricultural equipment. NLGI 1,2,3.

Specifications:

DIN 51825 K 1K-20	DIN 51825 K 2K-20	DIN 51825 K 3K-20
ISO 12924 L-XBCHA 1	ISO 12924 L-XBCHA 2	ISO 12924 L-XBCHA 3
High adhesive properties	Good vibrations resistance	High anti-rust protection

Lithium grease

Grease MU EP (BX)

Multipurpose grease

Multipurpose EP grease lithium base Suitable for the lubrication of flat and rolling bearings, also loaded, operating at high temperatures and in couplings with particularly critical start-up lubrication conditions. Suitable for lubricating gears and other components subjected to vibrations and operating at high temperatures. NLGI 00, 0, 1, 2, 3.

Specifications:

DIN 51825 KP 0K 1K 2K 3 K-20	ISO 12924 L-XBCHA 00 0 1 2 3	Deckel
DIN 51826 GP 00K 0K 1K -20	ISO 6743/6 L-CKG 00 0 1	
High adhesive properties	Good vibrations resistance	Strong stability even after intense and prolonged mechanical and thermal stress

Lithium grease

Grease SM 2

EP grease

Lithium based EP grease with molybdenum disulfide. Particularly suitable for the lubrication of roller bearings and/or rolling bearings subjected to extreme mechanical and/or thermal stress such even in presence of vibrations. NLGI 2.

Specifications:

DIN 51825 KPF 2K -20	ISO 6743/6 L-CKG 2	ISO 12924 L-XBCHB 2
DIN 51826 OGPf 2K -20		
Allows long relubrication intervals	Excellent adhesion and high resistance to water washout	Excellent anticorrosive properties

Lithium grease



Eni Grease LC

Multipurpose grease

Special 'multipurpose' grease, formulated with lithium complex soap and anti-rust, antioxidant and EP (Extreme Pressure) additives. Characterized by a high dropping point and high stability, Eni Grease LC 2 has been designed to meet the particular needs of steel industry. NLGI 1, 2.

Specifications:

DIN 51825 KP 1N-20	/DIN 51825 KP 2N-20	ISO 12924 L-XBDHB 1
ISO 12924 L-XBDHB 2		

High dropping point	High stability	High adhesiveness and vibrations resistance
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Lithium complex

Eni Grease LCX

Multipurpose grease

Eni Grease LCX is a lithium complex multipurpose grease formulated with synthetic base oil. The particular combination of antiwear, EP, anticorrosive and antioxidants additives guarantees excellent performance in severe operating conditions such as high loads and in presence of vibrations. NLGI 1, 2.

Specifications:

DIN 51825 KPHC 1,5R 40	DIN 51825 KPHC 1P 2P -40	DIN 51825 KPHC 2N -50
ISO 12924 L-XDEHB 1 2	ISO 12924 L-XEDHB 2	ISO 12924 L-XDFHB 1,5

Suitable for applications at high and low temperature	Extension of service life and relubrication intervals	Excellent adhesiveness and resistance to water washout
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Lithium complex

Eni Grease PV

EP grease

Calcium based grease for lubrication and protection of mechanical parts exposed to hostile conditions e.g. (sea)water. NLGI 2.

Specifications:

NATO Code-G-460	BWB TL 9150 066	DEF STAN 91-34/2
ISO 12924 L-XCBHB 2	DIN 51502 KPF 2G-30	

Very good load carrying capacity	High adhesiveness to metallic surfaces	Outstanding corrosion protection in wet and marine environments
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Calcium grease

Eni Eco

Biodegradable grease

Can be used as disposable lubricant for agricultural machinery, marble cutting and machinery operating in natural reserves or in waste water treatment plant. Especially developed for the continuous lubrication of the bearings of the TBM (Tunnel Boring Machine) for the mechanized excavation of tunnels. NLGI 0

Specifications:

DIN 51825 K 0F -30	ISO 12924 L-XCBDA 0	Biodegradabilità CEC L-33-T82: >95%
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Good resistance to the water washout	Good antiwear and antirust properties	Low environmental impact
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Calcium greas

Eni Eco Plus 2

Biodegradable grease

Lubrication of bearings, chains, wire ropes and components operating in environmentally sensitive areas where contamination of the environment is a risk. NLGI 2.

Specifications:

DIN 51825 KP 2K-30	ISO 12924 L-XCCHB 2	Biodegradabilità OECD 301 B: >60%
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Very good adhesion and water resistance	High protection against corrosion in wet and marine environments	Excellent low temperature pumpability
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Calcium grease





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eni



eni benelux

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