



Mining

Lubrication & services

Operating **sustainably**
and **responsibly** everyday



TotalEnergies

Summary

- Benefits offered by TotalEnergies Lubrificants
- Service offer
- Product offer
- Five good reasons for choosing TotalEnergies Lubrificants



The **benefits** offered by TotalEnergies Lubrificants



MINING INDUSTRY

By providing products to the major players in the market for more than 50 years, TotalEnergies is the fully integrated lubricant solution for the industry.

TotalEnergies develops for you:

- Safe and sustainable products and services for all the parts of the mine.
- A value oriented approach to enable you to reduce your production costs.
- A reliable supply chain to deliver even to the most remote sites.
- Field support and customized expertise with more than 300 engineers distributed around the world.

Our products are formulated to comply with and exceed the latest OEM specifications.

TESTIMONIALS

ON-SITE MANAGEMENT

« The implementation of the VMS (Vendor Management Scheme) by TotalEnergies did show that costs can be substantially reduced without new investments, without OPEX modification by the company and without impacts on the supply and production as well as the distribution / haulage chain. Fuel consumption decreased by 30 % . »

Laurent B. Procurement Manager

HSEQ VALUES FOR OPERATION 12 GOLDEN RULES

« The TotalEnergies team keeps safety at the highest priority while providing supply and inventory management services for hydrocarbons to the mining sites. »

Luis R. Site Manager

TECHNICAL ON SITE SUPPORT WITH NETWORK OF MINING AND REGIONAL EXPERTS

« TotalEnergies's technical staff visit our sites regularly to take part in technical meetings and to ensure product quality and performance. They have been professional and have added value to our operations. »

Julia M. Operation Manager

GLOBAL ACCOUNT MANAGEMENT

« TotalEnergies made the right move to global account management, which makes it easier for us to engage and resolve issues and do deals globally. »

Paul V. Major Mining Company in Australia



YOUR SERVICES

FLUID ANALYSIS FOR PREDICTIVE AND PROACTIVE MAINTENANCE

The LubAnac diagnosis interprets the condition of your used oil and offers a unique preventive and corrective maintenance service. It allows you to improve your equipment management by reducing your operating costs and optimizing the maintenance of your mining machines. Lubexam dashboard helps you to track your oil analysis results, easily highlight issues and follow trends.

OPEN GEAR INSPECTION AND EXPERTISE

TotalEnergies inspects open gears across the world and advises not only on lubrication, but also on maintenance and repair operations to be conducted on the open gears.

ONLINE TANK LEVEL MONITORING WITH SMART TANKS

The Smart Tanks system enables you to avoid risks of running out of stock. Thanks to the measuring device permanently located in your tanks, when a critical level (fixed by you) is reached, an alert is automatically sent to TotalEnergies which then contacts you to arrange a delivery.

OPTIMIZATION OF ENERGY CONSUMPTION

Optimizer is an energy monitoring solution developed by TotalEnergies to help mining companies manage all their sources of energy consumption.

TRAINING PROGRAMS ON LUBES, GREASES, FUELS AND SAFETY

TotalEnergies various training programs are aimed to help your team get a better understanding of fuel and lubricants and applying this knowledge to improving fuel and lubrication practices at a mine site.

MAINTENANCE SOFTWARE TO SIMPLIFY THE MANAGEMENT OF YOUR OPERATIONS

LubInsight Maintenance Planner reduces the complexity of maintenance management to increase productivity and savings.

FILTRATION SOLUTIONS TO PROTECT YOUR MACHINES

Whatever the quality of the products delivered from the refinery or lubricant blending plant, the risk of contamination and ingress of dirt and water remains present at each step of the supply chain.

TotalEnergies Mining Solutions provides effective filtration solutions aimed at closely controlling the product cleanliness and minimizing its particle content. In compliance with equipment manufacturers specifications, TotalEnergies filtration solutions reduce your maintenance and downtime.



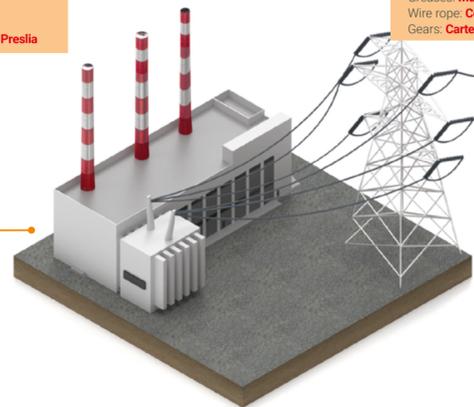
BOOST YOUR PRODUCTIVITY AND REDUCE YOUR MAINTENANCE COST WITH FIELD PROVEN SOLUTIONS:

- Extend fleet utilization with increased drain intervals thanks to specially designed engine oils, **Rubia Works**, transmission fluids, **Dynatrans ACX** and top of the class oil monitoring with **LubAnac**.
- Increase productivity of the plant by reducing downtime due to bearing failure with **Ceran XM**, leading calcium sulfonate complex grease technology.
- Produce more on your mills by cleaning the open gear with **Lubriclean EP** in only 3 hours instead of 2 days.



POWER GENERATION

Gas engine: **Nateria**
Semi fast engine: **Aurelia T1**
Electrogenerator: **Rubia Works**
Power transformer: **Isovoltine**
Distribution transformer: **Isovoltine**
Steam / Gas / Turbine / Combined cycle: **Preslia**



DRAGLINES, ROPE SHOVELS AND BUCKET WHEEL EXCAVATORS

Open gears: **Grafolog H, Logrease EP**
Greases: **Multis HP 2 Moly, Multis Mine OGL 1**
Wire rope: **Ceran AD+, WR**
Gears: **Carter SH**



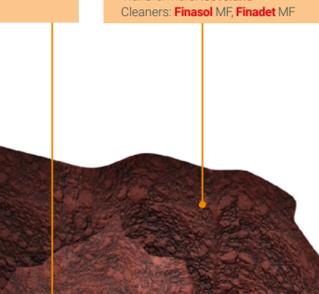
UNDERGROUND MINING

Engine oil: **Rubia Works**
Fire resistant hydraulics: **Hydransafe**
Transformers: **Isovoltine Bio**
Longwall fluids: **Hydransafe HFA**



SPECIAL APPLICATIONS

Compressors: **Dacnis SH**
Pneumatic: **Pneuma**
Transformers: **Isovoltine**
Cleaners: **Finasol MF, Finadet MF**



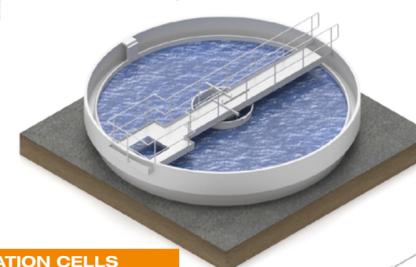
ARCTIC CONDITIONS

Engine oils: **Rubia Works FE 3000 5W-30, Rubia Works FE 4000 10W-30**
Transmission: **Dynatrans ACX 0W-20, Dynatrans ACX 5W-30**
Hydraulics: **Equivis XLT, Equivis AF**
Greases: **Ceran XS 40 Moly, Multis Complex HV0 Moly, Multis HP 2 Moly**



THICKENER TANK

Gears: **Carter EP/SH**
Bearings: **Multis EP, Ceran XM**
Open gears: **Grafolog, GearFluid, Copal OGL, Gearlog**



FILTERS

Bearing grease: **Ceran XM** to reduce downtime with longer bearing life.



PREDECTIVE MAINTENANCE

Oil monitoring: **LubAnac**, services on site or off site lab connected to a global data base and software for interpretation of results.
Software to get the most out of your data: **Lubinsight Maintenance Planner** for predictive maintenance and **Optimizer** to reduce energy consumption.

ON ROAD TRANSPORTATION

Engine: **Rubia**
Bearings: **Ceran, Multis**
Chassis: **Copal OGL**

LOCOMOTIVE

Engine oil: **Rubia G**
Gear boxes: **Carter EP/SH**
Bearings: **Ceran, Multis**

FLOATING CRANES

Wire ropes: **Ceran AD+**

STORAGE DEPOT MANAGEMENT

TotalEnergies can operate your depot to ensure smooth operations. Smart Tanks gives you live access to your tank level, through an easy to install advanced sensor.



GREASES

Pin/bushes and bearings:
- without solid additives: **Multis EP2, Multis XHV2, Ceran XM Z20**
- with solid additives: **Multis HP 2 Moly, Multis Complex HV2/XHV2 Moly, Multis Mine OGL 1, Ceran XM Z20 Moly**
Swing gears: **Ceran GEP, Copal OGL**
Dual both pin/bushes and swing gear: **Multis HP 2 Moly, Multis Complex XHV2 Moly, Multis Mine OGL 1**

COOLANTS

Coolif Auto Supra, very long life organic coolant.

ENGINE OILS

Rubia Works are a dedicated range of engine oils for the most severe mining conditions, exceeding the OEMs requirements to increase the drain intervals and optimize equipment utilization. Also exists in a **fuel economy** version to save around 2% on fuel.

TRANSMISSION AND HYDRAULICS

Transmissions: **Dynatrans ACX** range with extended drain intervals
Hydraulics:
- with Zinc: **Azolla ZS, Equivis ZS**
- ash free: **Azolla AF, Equivis AF**
Gears and final drives: **Dynatrans FD-1 SAE 60, Dynatrans GEA, Trans Axle range, Traxium Axle range**

FLOTATION CELLS

Gear boxes: **Carter SH** to reduce downtime with extended drain intervals
Electric motors: **Altis SH 2, Altis EM 2**



CRUSHERS

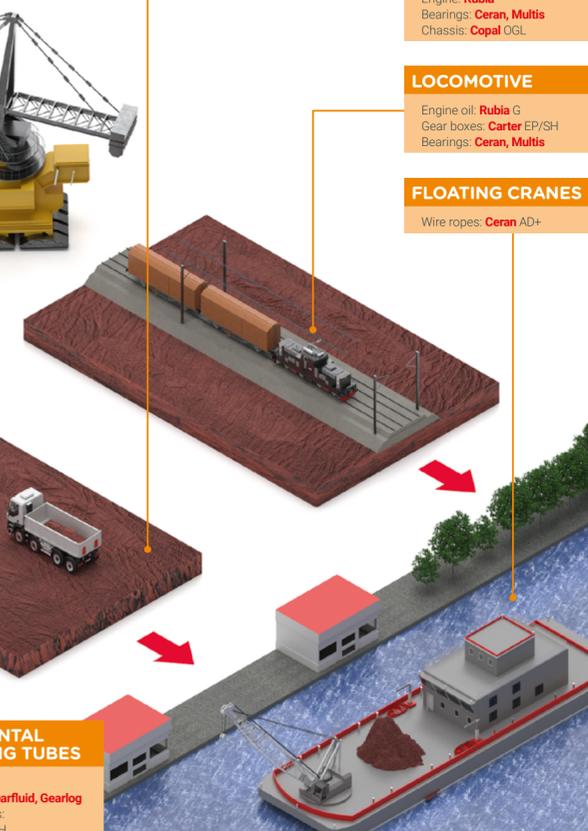
Gear boxes: **Carter EP/SH**
Bearing greases: **Multis, Ceran**

OPEN GEAR INSPECTIONS

Trained engineers to inspect your gears. Full report to optimize the life of your equipment. Gear cleaning in only 3 hours with **Lubriclean EP**

HORIZONTAL ROTATING TUBES

Open gears: **Grafolog, Gearfluid, Gearlog**
Gear boxes: **Carter EP/SH**
Bearings: **Ceran, Multis**





A major player

With our production, supply chain and commercial presence in more than 160 countries, we deliver a full range of lubricants.

Support and partnership

Thanks to local technical presence, we provide a high level of service to optimize your Total Cost of Ownership.

References & OEMs

TotalEnergies Lubrificants cooperates with equipment manufacturers to create high-technology products for optimal performance and production of your machinery.

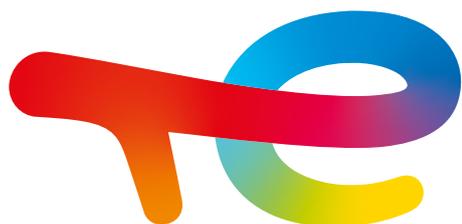


Innovation & Research

TotalEnergies Lubrificants invests in biotechnologies to find the most suitable components to reach energy efficiency through formulations designed in our Research Centers.

Quality and environment

TotalEnergies Lubrificants ISO 9001 and 14001 certifications are the guarantee of a long term commitment to quality and environment. From the initial design stage, our R&D teams seek to develop products that minimize toxicity risks and environmental impact.



TotalEnergies



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Safety Data Sheets are available at ms-sds.totalenergies.com