



Cement industry

Reliable & cost
saving lubricants

Creating value
all along your process



TotalEnergies

Summary

- Open gear lubrication
- Efficient solutions and services
- Proposed lubrication plan for cement industry
- Ecofriendly solutions
- How to upgrade the range of commodities
- Five good reasons for choosing TotalEnergies Lubrificants

COMPLETE RANGE FOR OPEN GEAR DRIVES

3 technologies for optimum lubrication
covering all lubrication methods



Gearlog®:
Thick compound with white
solid additives
New technology of high viscosity
white compounds, excellent
protection during sever conditions
and vision of the active flanks



Gear Fluid®:
Thick transparent fluids
Outstanding technology
of clear products, excellent
protection and vision
of the active flanks



Grafolog®:
Black Aluminium complex
greases with solid additives
Traditional grease technology,
very good protection and vision
of the contact between
the active flanks

Priming



BRUSH
COATING

Gearlog P

Grafolog H1

Running in



SPRAY
LUBRICATION



BATH
LUBRICATION



CIRCULATION
LUBRICATION

Gearlog R

Gear Fluid R

Grafolog
H 00 R

Grafolog R Fluid

Service lubricant



SPRAY
LUBRICATION



BATH
LUBRICATION



CIRCULATION
LUBRICATION

Gearlog 200

Gearlog 500

Gearlog 500/1000 D

Gearlog 1000

Gear Fluid 180

Gear Fluid 550

Gear Fluid 550/1000 D

Gear Fluid 1000

Grafolog H

Grafolog M/MT Fluid

AN EFFICIENT AND SIMPLE WAY TO CLEAN OPEN GEAR WHILE OPERATING

Lubriclean EP

- ✓ Less than four hours operation. No production shut down
- ✓ Savings due to:
 - One hour cleaning operation
 - Unstopped production
- ✓ Open gear protection thanks to the presence of EP additives
 - The big players trust this technology

KEY SERVICES TO IMPROVE YOUR EQUIPMENT'S RELIABILITY

LubSkills

open gear inspection

- ✓ Complete inspection report: temperatures, vibrations, lubrication system and gear set working flanks checking
- ✓ Maintenance advice & corrective actions proposition
- ✓ Lubrication & mechanical advice
- ✓ Tailor made lubrication solution

LubAnac: in service oil monitoring

- ✓ Drain intervals optimization
- ✓ Equipment lifetime extension
- ✓ Total Cost of Ownership (TCO) reduction
- ✓ Dedicated ranges for each industrial application

LubInsight: optimized maintenance software for your lubricants (CMMS)* maintenance planner

- ✓ Organization of preventive, condition-based and corrective maintenance
- ✓ Maintenance cost analysis
- ✓ Monitoring of lubricants and spare parts stock

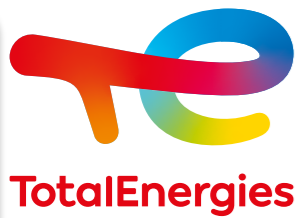
ROTARY KILNS: INTERNAL FACE OF FLOATING KILN'S TYRES LUBRICANTS

Grafolog 1278 S

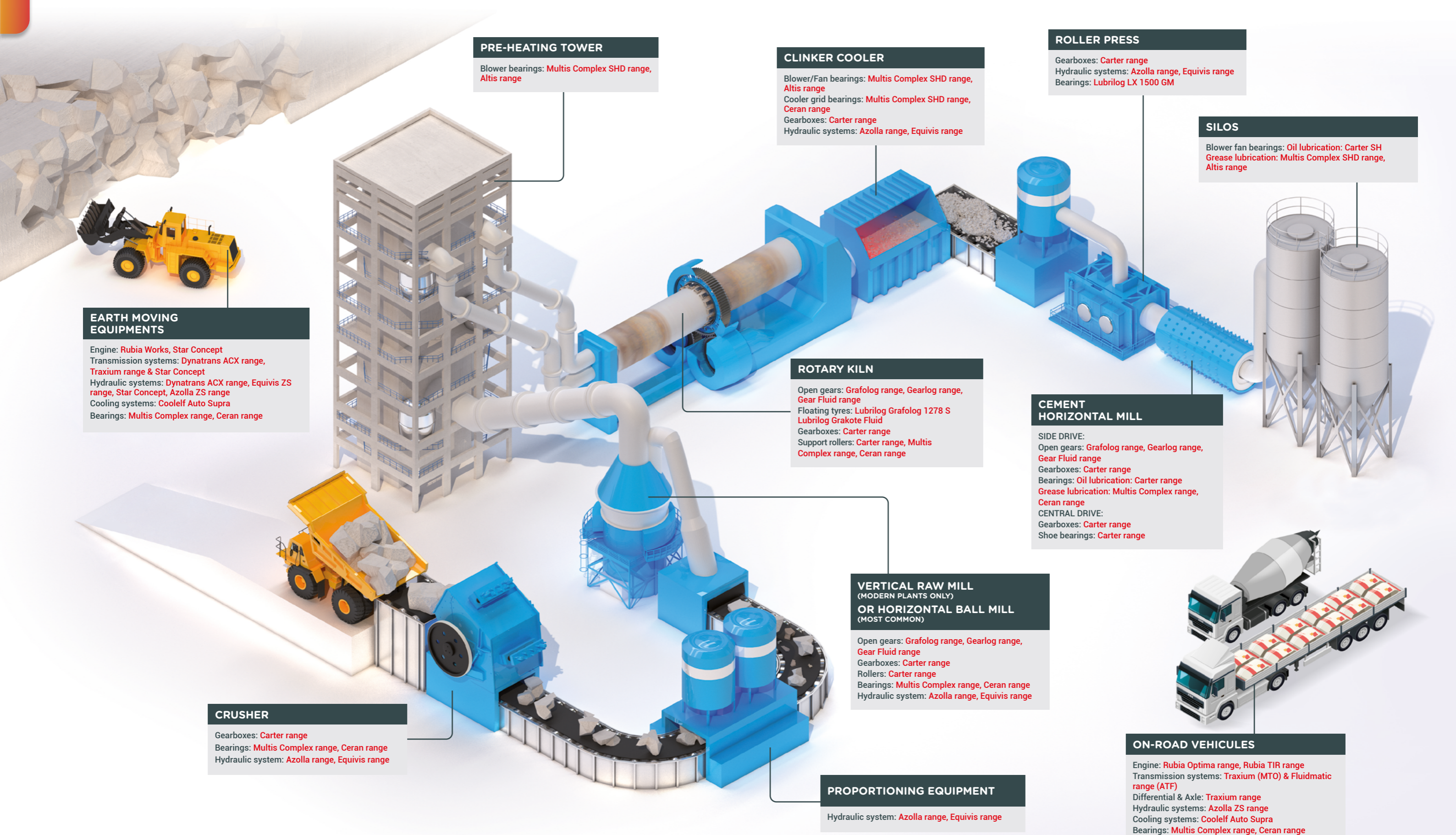
- ✓ Semi-colloidal liquid
- ✓ Water based product with graphite content
- ✓ Fire resistant & no risk for human health

Grakote Fluid

- ✓ Oil based liquid paste
- ✓ Special metallic powder additives



TotalEnergies team is at your disposal to guide you to choose the optimum lubrication solution



EARTH MOVING EQUIPMENTS
 Engine: **Rubia Works, Star Concept**
 Transmission systems: **Dynatrans ACX range, Traxium range & Star Concept**
 Hydraulic systems: **Dynatrans ACX range, Equivis ZS range, Star Concept, Azolla ZS range**
 Cooling systems: **CoolElf Auto Supra**
 Bearings: **Multis Complex range, Ceran range**

PRE-HEATING TOWER
 Blower bearings: **Multis Complex SHD range, Altis range**

CLINKER COOLER
 Blower/Fan bearings: **Multis Complex SHD range, Altis range**
 Cooler grid bearings: **Multis Complex SHD range, Ceran range**
 Gearboxes: **Carter range**
 Hydraulic systems: **Azolla range, Equivis range**

ROLLER PRESS
 Gearboxes: **Carter range**
 Hydraulic systems: **Azolla range, Equivis range**
 Bearings: **Lubrilog LX 1500 GM**

SILOS
 Blower fan bearings: **Oil lubrication: Carter SH**
 Grease lubrication: **Multis Complex SHD range, Altis range**

ROTARY KILN
 Open gears: **Grafolog range, Gearlog range, Gear Fluid range**
 Floating tyres: **Lubrilog Grafolog 1278 S, Lubrilog Grakote Fluid**
 Gearboxes: **Carter range**
 Support rollers: **Carter range, Multis Complex range, Ceran range**

CEMENT HORIZONTAL MILL
SIDE DRIVE:
 Open gears: **Grafolog range, Gearlog range, Gear Fluid range**
 Gearboxes: **Carter range**
 Bearings: **Oil lubrication: Carter range**
 Grease lubrication: **Multis Complex range, Ceran range**
CENTRAL DRIVE:
 Gearboxes: **Carter range**
 Shoe bearings: **Carter range**

VERTICAL RAW MILL (MODERN PLANTS ONLY) OR HORIZONTAL BALL MILL (MOST COMMON)
 Open gears: **Grafolog range, Gearlog range, Gear Fluid range**
 Gearboxes: **Carter range**
 Rollers: **Carter range**
 Bearings: **Multis Complex range, Ceran range**
 Hydraulic system: **Azolla range, Equivis range**

CRUSHER
 Gearboxes: **Carter range**
 Bearings: **Multis Complex range, Ceran range**
 Hydraulic system: **Azolla range, Equivis range**

PROPORTIONING EQUIPMENT
 Hydraulic system: **Azolla range, Equivis range**

ON-ROAD VEHICLES
 Engine: **Rubia Optima range, Rubia TIR range**
 Transmission systems: **Traxium (MTO) & Fluidmatic range (ATF)**
 Differential & Axle: **Traxium range**
 Hydraulic systems: **Azolla ZS range**
 Cooling systems: **CoolElf Auto Supra**
 Bearings: **Multis Complex range, Ceran range**

SOLUTIONS FOR QUARRY & CRUSHERS

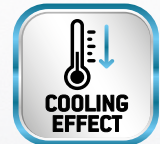
TotalEnergies range of lubricants are specially designed and formulated considering the tough and demanding application of quarry and material handling.

All our products are:

- ✓ Approved by the most demanding OEMs
- ✓ Following the latest emission regulations
- ✓ Suitable for the latest exhaust gas after-treatment systems
- ✓ Offering fuel economy with FE range

Star Concept: an innovative solution targeting product rationalization and simplification leading to savings.

- ✓ Reduce the number of lubricants from 5 to 2
- ✓ Approved by the most demanding OEMs



ECOFRIENDLY SOLUTIONS

New generation of high-performance biodegradable range of lubricants suitable to satisfy the demanding condition of cement production line.



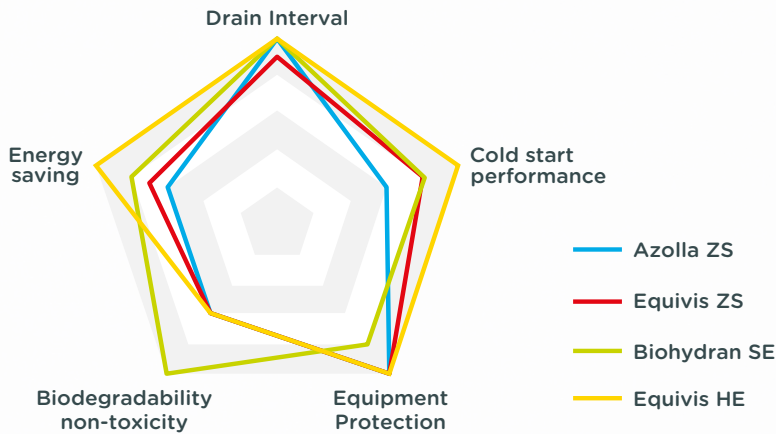
Hydraulic oils: Biohydran range
Gear oils: Carter BIO Range
Greases: Biomultis EP 2

- ✓ Approved by important OEMs
- ✓ Excellent biodegradability
- ✓ Excellent protection and lubrication of the equipment
- ✓ Low eco toxicity
- ✓ Reduce the carbon footprint

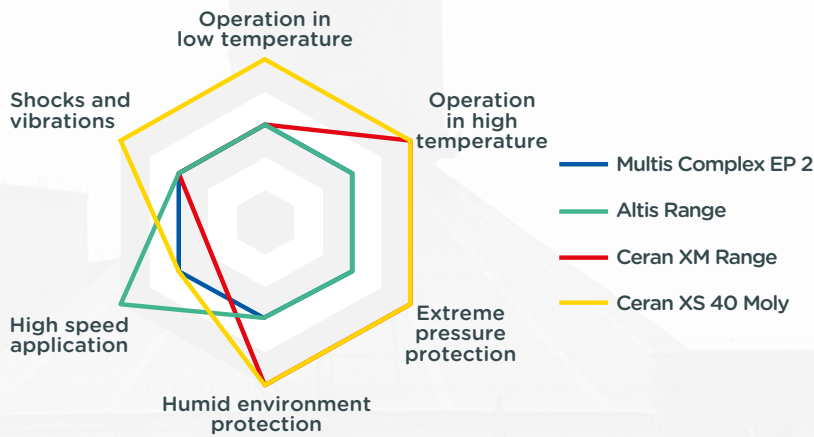
TotalEnergies Lubrificants includes a dedicated range for each application specially designed according to its needs and challenges. TotalEnergies Lubrificants offers an exceptional performance that allows to:

- ✓ Extend equipments' lifetime
- ✓ Reduce unplanned downtime
- ✓ Reduce Total Cost of Ownership

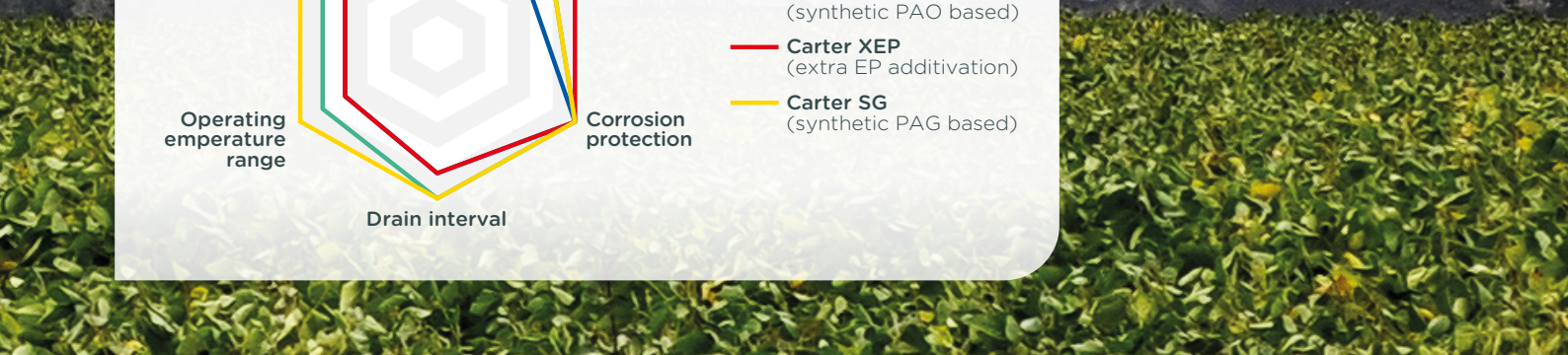
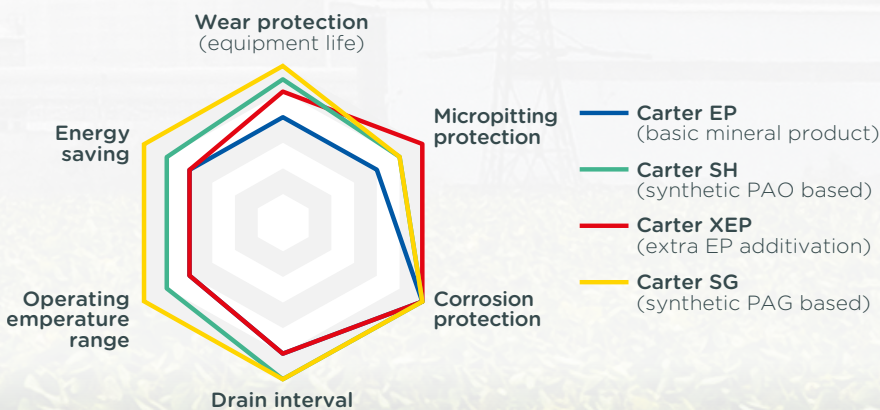
HYDRAULIC RANGE



GREASES RANGE



GEAR OILS RANGE



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.

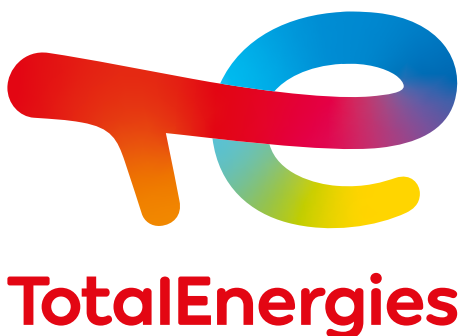


Innovation & Research

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.



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



TotalEnergies Industry Solutions