



Altis

The reference grease
for high speed and
high temperature

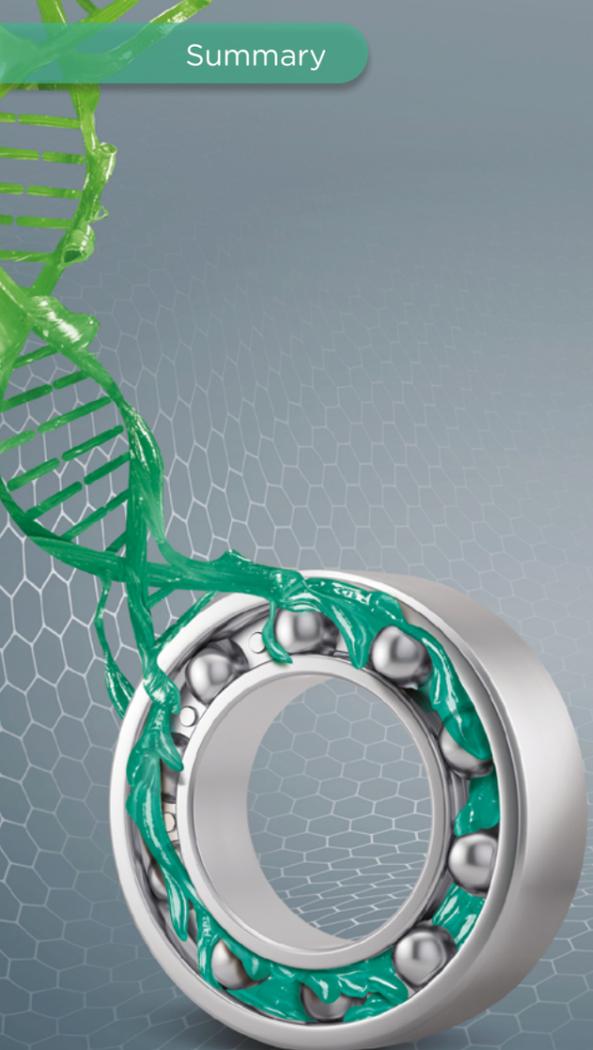
Reliable solutions
for **energy savings**



TotalEnergies

Summary

- Benefits offered by Altis grease
- The reference grease for a wide range of applications
- Five good reasons for choosing TotalEnergies Lubrificants



Altis greases

Driven by **innovation** and commitment, TotalEnergies Lubrificants offers **distinctive polyurea** greases to meet the challenges of the industry in constant motion.

The unique properties of **Altis** grease structure make them **the reference** in fill for life bearings, mechatronic systems and electric vehicle motors.



A Local partner, a worldwide presence

TotalEnergies Lubrificants: your preferred supplier providing a full range of high quality greases.

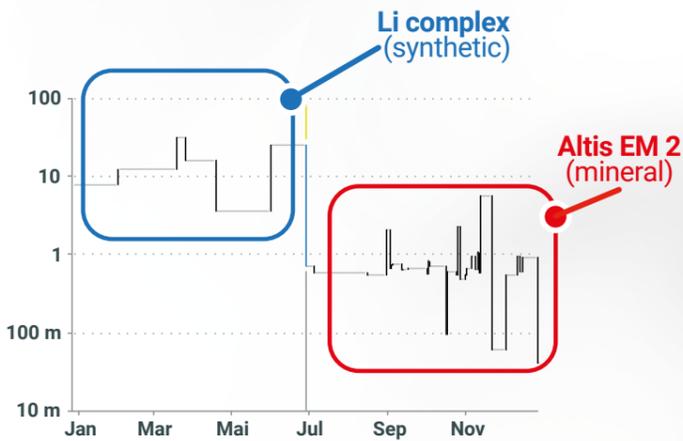
Our commitment is to **consistently support our customers** with the development of innovative and efficient solutions.

Altis Technology on the move

 **ENERGY SAVINGS**

 **LOW VIBRATIONS**

This exclusive chemical structure enables a better lubrication, **less heat generated** by internal friction and **less vibrations**.



Vibrations have been reduced by a 10 factor.

The lower internal friction leads to low vibrations level and a **reduction of the energy consumption**.

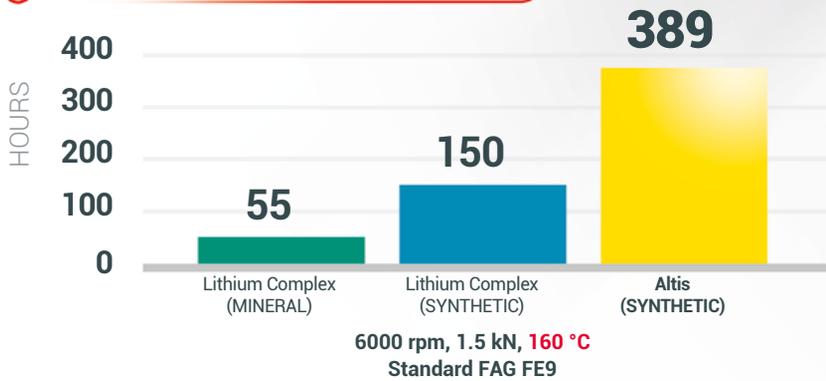




HIGH SPEED & HIGH TEMPERATURE



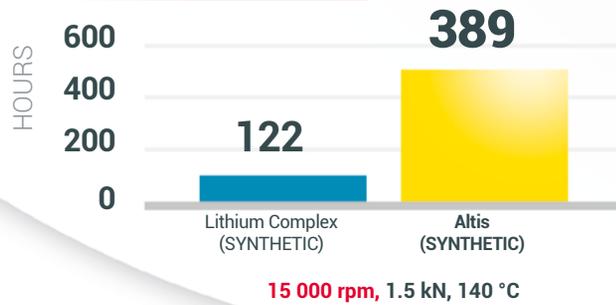
HIGH TEMPERATURE TEST



FAG FE9 endurance test proves high reliability of Altis greases. Altis range provides **long service life** even at **high temperatures** and high shears.



HIGH SPEED TEST



Thanks to its distinctive thickener, Altis EM2, Altis MV2 and Altis SH2 greases perform in **high-speed bearings** such as in electric motors, fans and blowers.

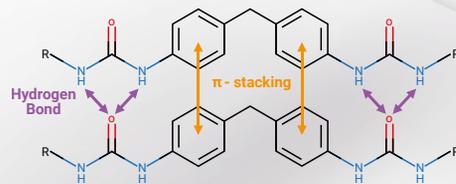


DURABLE & RELIABLE



DISTINCTIVE STRUCTURE

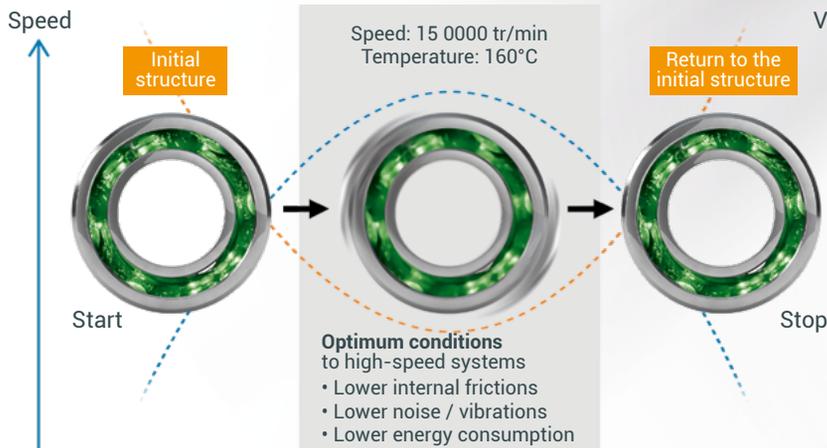
Our grease specialists developed a distinctive polyurea thickener which is characterized by a thixotropic behavior.



SEM-FEG picture

Network stability is mainly due to:

- π -stacking interaction
- Hydrogen bonds between urea group



Polyurea thickener is an organic thickener whose hydrogen bonds enable reversibility. Under shear the grease changes its rheologic behavior and returns to its original state after service.

Thixotropic behavior:

The exceptional long-life performance of polyurea greases is resulting from the chemical configuration which provides a good network stability.



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Altis range

80 cSt	105 cSt	160 cSt	500 cSt	KV@40 °C
<p>Altis SH2 <i>Synthetic</i></p>  <p>OPERATING RANGE -40 °C 180 °C</p> <p>APPLICATIONS</p> <ul style="list-style-type: none"> • Electric motors • Alternators • Fans and blowers <p>DIN CLASSIFICATION KP2R-40</p> <p>SPECIFIC PROPERTIES</p> 	<p>Altis EM2 <i>Mineral</i></p>  <p>OPERATING RANGE -20 °C 160 °C</p> <p>APPLICATIONS</p> <ul style="list-style-type: none"> • Electric motors • Pumps • Alternators • Fans and blowers <p>DIN CLASSIFICATION KP2P-20</p> <p>SPECIFIC PROPERTIES</p> 	<p>Altis MV2 <i>Mineral</i></p>  <p>OPERATING RANGE -20 °C 160 °C</p> <p>APPLICATIONS</p> <ul style="list-style-type: none"> • Fans and blowers <p>DIN CLASSIFICATION KP2P-20</p> <p>SPECIFIC PROPERTIES</p> 	<p>Altis HV1 <i>Mineral</i></p>  <p>OPERATING RANGE -20 °C 180 °C</p> <p>APPLICATIONS</p> <ul style="list-style-type: none"> • Continuous casting • Cold rolling mills • Industrial fans/blowers • Wood pellets mills <p>DIN CLASSIFICATION KP1R-20</p> <p>SPECIFIC PROPERTIES</p> 	



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.

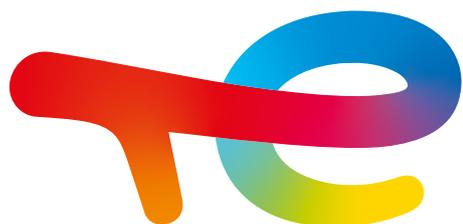


Innovation & Research

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



lubricants.totalenergies.com



TotalEnergies Industry Solutions



ms.industry@totalenergies.com

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