Sustainable High-Performance lubricants for Industrial Gear Oils

Encontro Internacional com o Mercado de Óleos Industriais 2025, São Paulo

Mariana Silva
September 30th, 2025

We go far beyond chemistry
Evonik in figures

FINANCES

€15.2
billion
in sales generated by our company in the 2024 fiscal year.

€2.1
billion
was our adjusted EBITDA in 2024, with a corresponding EBITDA margin of 13.6%.

BUSINESS

9,200
products
in our portfolio – from ABIL® to NANOPOX® and ZETASPERSE®.

104
production locations
ensure close proximity to customers and markets, whether in North America, South America, Europe or Asia.

INNOVATION

21,400
patents
stand for Evonik's innovative spirit. Our first patent dates back to 1882/83.

€459
million
invested in our company's research and development activities in 2024.

PEOPLE

32,000
employees
represent 110 nations. Plenty of potential to develop tailor-made solutions for every market in the world.

60%
women
on our executive board – no other company in the DAX or MDAX has a higher proportion.

EVONIK Leading Beyond Chemistry

Evonik operates under two core segments
Oil Additives develops high performance additives for lubricants

Evonik
The Group | Corporate brand

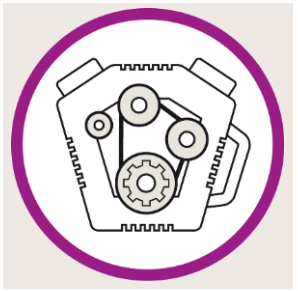
Executive Board

Business Lines

Advanced Technologies		Custom Solutions	
Active Oxygens	Crosslinkers	Comfort & Insulation	Health Care
High Performance Polymers	Animal Nutrition	Interface & Performance	Coating & Adhesive Resins
Smart Effects		Coating Additives	Catalysts
		Care Solutions	Oil Additive

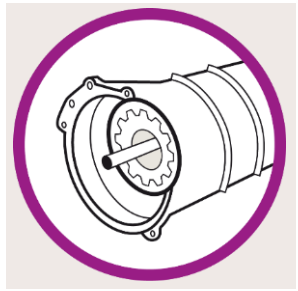
Regions

Functions



Engine Oils

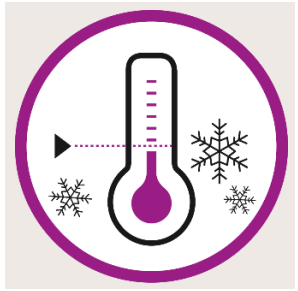
Gear Oils



Transmission Fluids

Hydraulic Fluids

Biodegradable Fluids



Wax Modifiers

EVONIK
Leading Beyond Chemistry

Evonik technology for Industrial Gear Oils ensures high performance with lower formulation costs

Gear oil solutions maximize efficiency and performance across broad operating

- High VI, solvency and stability for long ODI
- State of the art wear and corrosion protection, paint and seal compatibility
- Approved by Flender, SEW, ZF and others

- Reduce wear through improved fluid viscosity
- Reduced peak temperatures and extended ODI
- Potential energy savings of 3 % by viscosity grade reduction versus mineral based IGO
- Viscosity control allows for smoother cold starts without sacrificing protection under extreme heat

*“Without sustainable **high-performance** lubricants, nothing moves”*

EVONIK Leading Beyond Chemistry

A truly sustainable lubricant contributes throughout the various stages of its life cycle

Cradle-to-Grave – Live cycle assessment

Material supply	Manufacturing	Use-Phase	End-of-Life
▪ Low footprint ▪ Circular or biobased raw materials	▪ Carbon footprint of product/lubricant ▪ Energy consumption	▪ Energy efficiency ▪ Ressource efficiency	▪ Design for recycling
▪ Raw materials costs	▪ Purchasing and installing equipment and lubricant	▪ Operating costs ▪ Maintenance and downtime	▪ Lifecycle costs

Total cost of ownership and sustainability go hand in hand

EVONIK Leading Beyond Chemistry

A key to a transformation towards more sustainable lubricants lies in the adoption by the end user

Lubricant with high VI and reduced friction for industrial equipment

- Less energy consumption
- More durability
- Less maintenance
- Approved by leading OEM

EVONIK Leading Beyond Chemistry

A key to a transformation towards more sustainable lubricants lies in the adoption by the end user

Lubricant with high VI and reduced friction for industrial equipment

- Less energy consumption
- More durability
- Less maintenance
- Approved by leading OEM

EVONIK Leading Beyond Chemistry

Use Case:

Cooling Tower at Evonik Antwerpen site

EVONIK Leading Beyond Chemistry

Upgrading the industrial gear oil is an efficient measure to increase resource efficiency in the use phase

Upgrade from a mineral to Synthetic/GIII lubricant in 3 gearboxes

Additional fan installed to dissipate heat from gearbox

Lubricant was not considered as potential measure to reduce heat

Extremely costly oil change procedure

Synthetic lubricant significantly reduces the temperature

Benefits of a modern Synthetic Lubricant can be seen immediately

Difference in temperature in average by -5°C

Reduced maintenance and energy costs, longer machine lifetime

Close cooperation from equipment OEM to operator helps overcoming hurdles on the way to more sustainable solutions

Hurdles that need to be overcome

- Select system and analyze
- Collect data to estimate savings
- Change oil

Factors speeding up transformation

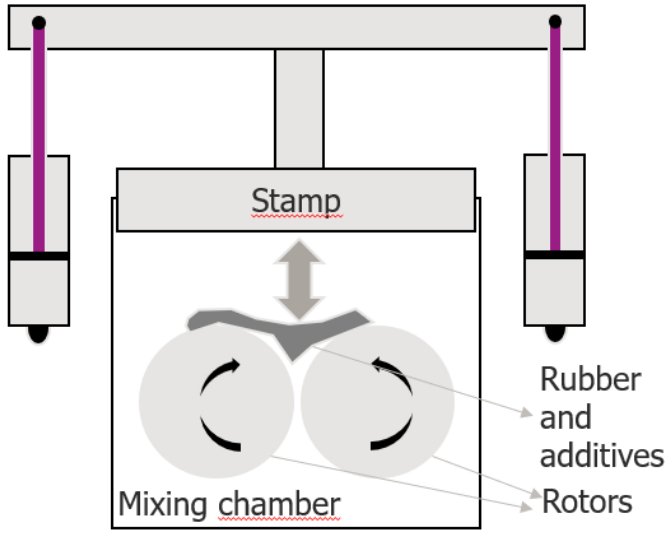
- Explain benefits
- Involve existing structures, such as lubricant expert, local energy manager
- Provide technical support

Use Case:

Tire Production

EVONIK
Leading Beyond Chemistry

Implementing scaling effects to maximize energy savings at industrial sites



Rubber mixer at a tire production

Upgrade of hydraulic oil and industrial gear oil

IGO Mineral 220 vs. GIII-Synthetic IGO 220

HVP 46 vs. Efficient HVLP 32

To generate savings data, measure one machine and scale-up to other machines

Upgraded lubricant significantly reduces energy consumption

Significant Energy Efficiency gains

Higher load led to higher savings

Return on investment <3 months (IGO) and <6 months (HF)

All mixers at the site were upgraded

EVONIK Leading Beyond Chemistry

Use case:

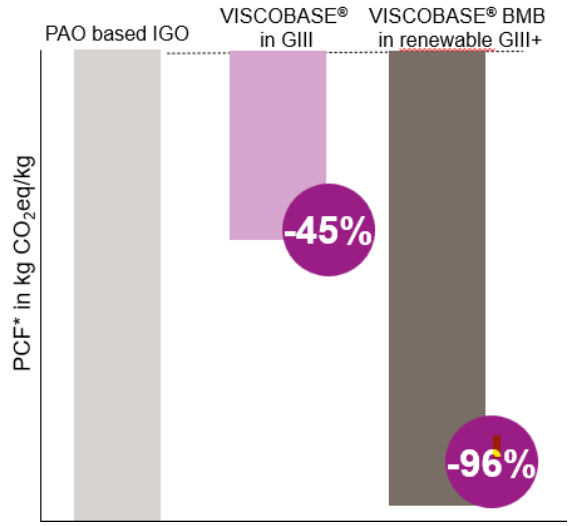
Cooling tower at Evonik Shanghai MUSC site

Lubricant cost savings and CO_2 footprint reduction for next generation solutions are achieved in one step

Exchange of industrial gear oil with another formulation fulfilling the same high-performance standard…

…realizing savings in cost and CO_2

-45% reduction in product carbon footprint



Alternative formulation allows for lubricant cost savings

EVONIK Leading Beyond Chemistry

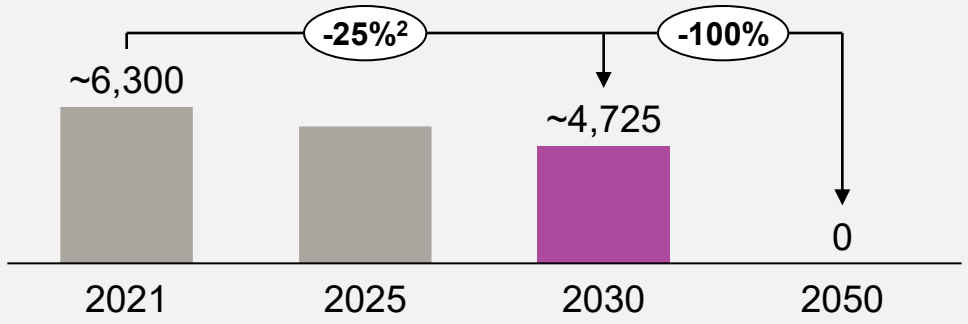
Our commitments to reaching the Paris Climate Agreement

Evonik intends to be climate neutral by 2050. Committed to SBTi[1]

Our path to climate neutrality

2050 -100%

Scope 1 & 2



Targets for GHG emissions' reduction

Scope 1 and 2
(Well below 2° C)

2030 -25%

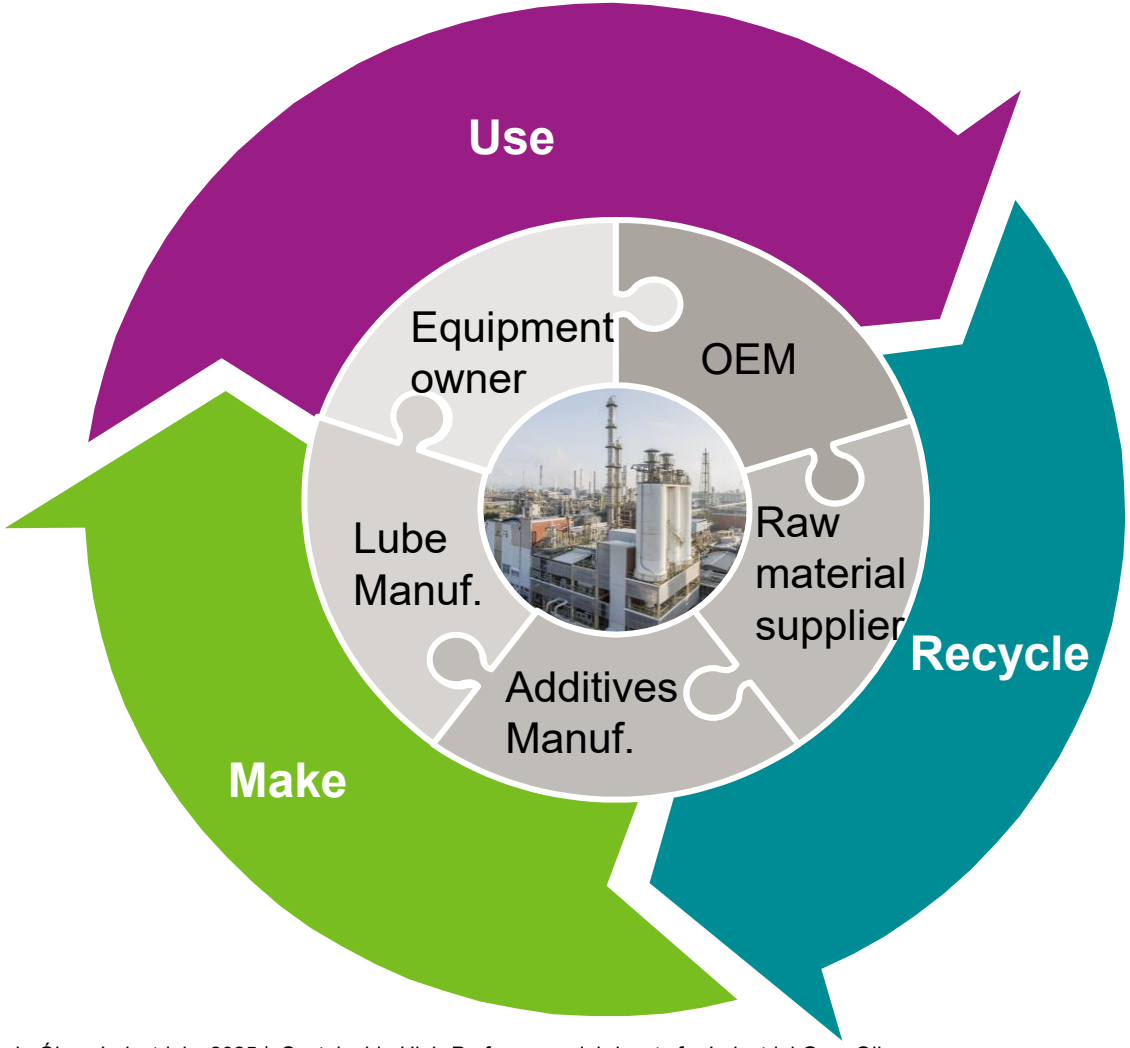
Scope 3

2030 -11%

1) SBTi = Science Based Targets initiative 2) Gross emissions; reference year 2021

EVONIK Leading Beyond Chemistry

Without sustainable lubricants nothing moves – when we as lubricant industry convince the end user of the benefit they bring



Sustainable high-performance lubricants benefit everyone, end-users, the lubricant industry and the planet alike

EVONIK
Leading Beyond Chemistry