



# Berusynth EPX

the next generation of  
high-performance polyalkylene  
glycol gear oils

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# Efficient. Future-ready. High-performance.

The fully synthetic high-performance gear oils in the **Berusynth EPX series** are formulated using the latest generation of advanced polyalkylene glycols base oils with a particularly high viscosity index and homogeneous molecular structure. Combined with an innovative additive package, they deliver performance levels that significantly exceed those of conventional polyalkylene glycol-based gear oils on the market.

Thanks to their specially tailored formulation, these gear oils offer outstanding oxidation stability, enabling significantly extended oil change intervals. The targeted optimization of friction behavior in gear tooth contact contributes substantially to reducing power losses in gears and bearings.

With the Berusynth EPX series, BECHEM actively contributes to greater sustainability and resource conservation in industrial operations, supporting the reduction of CO<sub>2</sub> emissions. The Berusynth EPX series is approved by gearbox manufacturer Flender for use in all types of industrial gear units.

## More stable lubrication film and reduced friction

In the SRV-FZG load stage test (2 hours, DIN 51834-4), the Berusynth EPX series demonstrates clearly superior performance compared to similar competitor products. At a test temperature of 50 °C using a cylinder (6 × 8 mm) against a lapped plate, Berusynth EPX 220 (ISO VG class 220) achieves significantly lower coefficients of friction.

While competitor oils begin to show signs of scuffing under lower loads and suffer early lubricant film breakdown, Berusynth EPX 220 withstands higher loads, maintaining a stable lubrication film and consistently low friction throughout the entire test duration.



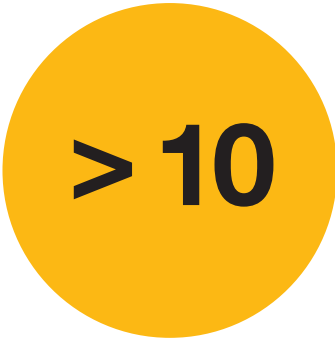
wear in  
FAG FE 8 test



coefficient of friction  
in SRV FZG load  
stage test



fail load stage  
FZG scuffing test  
A/8.3/90



fail load stage  
FVA-FZG micro-pitting test  
GT-C/8,3/90

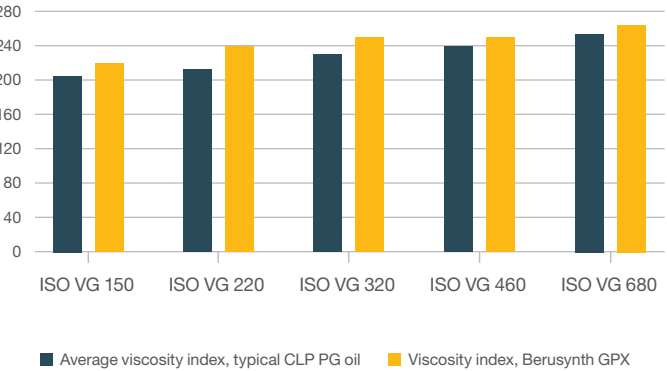
Exceeds gear oil specifications

- DIN 51517-3: 2018-09 CLP
- ANSI/AGMA 9005-F16: 2016 AS
- ISO 12925-1: 2018-01 CKD
- ISO 12925-1: 2018-01 CKSMP
- ISO 12925-1: 2018-01 CSPG
- GB 5903: 2011 L-CKD

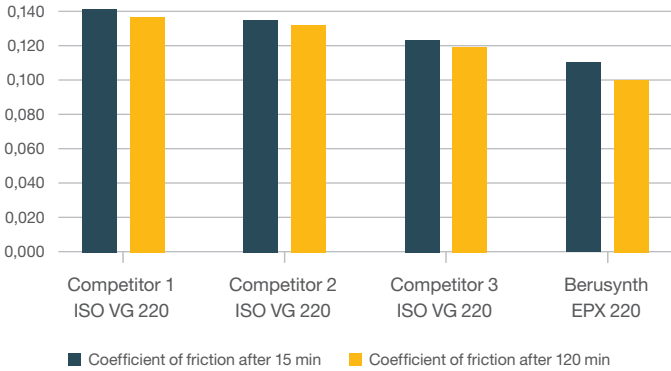
## Advantages

- Extremely high viscosity index
- Exceptionally low foaming tendency
- Excellent low-temperature performance
- Very high resistance to aging and oxidation, enabling significantly extended oil drain intervals
- Minimal residue formation, even under continuous operation at very high temperatures
- Suitable for lifetime oil fills
- Outstanding protection against wear and scuffing
- Excellent micro-pitting resistance
- High shear and film stability
- Consistently low coefficients of friction in gear contacts
- Wide operating temperature range
- Improved filterability
- Good compatibility with many sealing materials

## Comparison viscosity index CLP PG oils

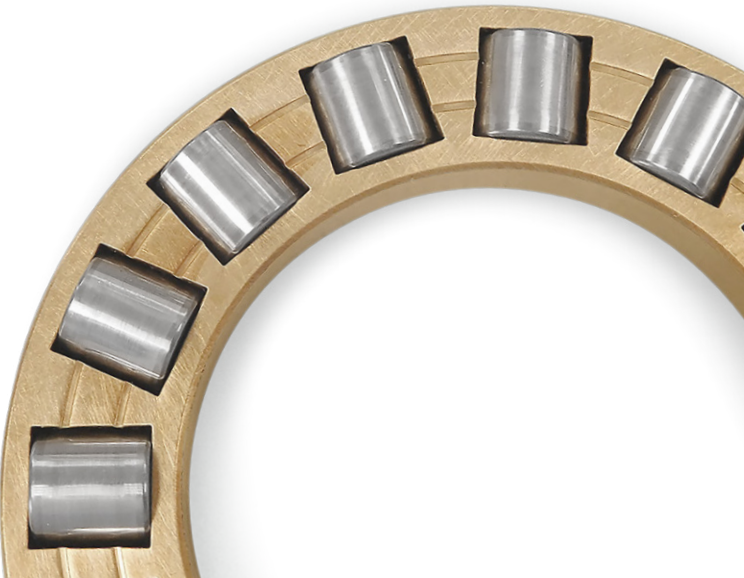


## Coefficient of friction SRV FZG load stage test



## Exceptional wear protection

According to DIN 51517-3, the permissible limit for rolling element wear in the FAG FE 8 test is just 30 mg for CLP gear oils. The products in the Berusynth EPX series significantly outperform this standard, demonstrating exceptionally low wear levels of ≤ 5 mg.



# Lubricants Reimagined

Since 1834

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