



Turmo[®] comp HD 150 Lubricant Compound

Maintenance-Free Roller Bearings with Extended Service Life - even under Critical Operating Conditions

Unique conditions and environments demand special solutions. **Turmocomp HD 150** is a new lubrication concept enabling roller bearing lubrication in complex operating conditions.

Turmocomp HD 150 is a composition of ultrahigh molecular polymers and synthetic, temperature-stable base oils. In food processing applications, physiologically safe and NSF/INS H1-approved oils can be utilised.

The **Turmocomp HD 150** compound

- is not water-soluble,
- not harmful to the environment and
- prevents bearing cavity contamination with dirt and humidity.

To protect the roller bearing in extreme operating conditions, bearing cavities are filled with **Turmocomp HD 150** and then treated with heat. By applying heat, the compound hardens and forms a semi-solid, porous matrix structure. It completely fills the bearing cavities and does not displace easily, compared to lubricating greases. In bearings, this structure therefore allows a significantly larger storage of the application specific lubricant.



Fig.1 and 2: Cured Turmocomp HD 150

Function

The **Turmocomp HD 150** body rotates with the bearing cage as well as the rolling elements during bearing operation. Due to the continuous sliding movement of rolling element and compound, the lubricant is distributed from the porous matrix to the sliding surfaces. This ensures a continuous lubricant film supply to the friction points.

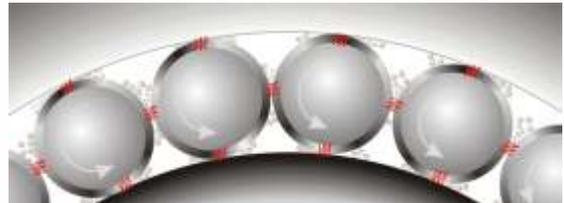


Fig. 3: Roller bearing lubricated with grease



Fig. 4: Roller bearing lubricated with Turmocomp HD 150

As all bearing cavities are filled with **Turmocomp HD 150** (Fig. 4), condensation within the bearing is prevented, even when subject to varying temperatures. Roller bearings lubricated with the compound have an equal load carrying capacity as bearings lubricated with high-performance greases or dry lubricants. **Turmocomp HD 150** prevents premature bearing failure with a significantly longer and maintenance-free service life, particularly in harsh applications, such as dusty and humid environments.

Features

- Very high media, dust and water resistance
- Good corrosion protection
- No evaporation or dripping out of the bearing
- No condensation due to extreme temperature differences
- Low friction coefficient and very good wear protection
- Continuous lubrication
- High load and impact carrying capacity
- Larger lubricant quantities stored in the bearing compared to conventional grease lubrication

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- even under Critical Operating Conditions



Applications

Bearings lubricated with **Turmocomp HD 150** are used at lubrication points with limited access or where optimum lubrication with conventional greases or oils cannot be realised, due to technical reasons. This LUBCON lubricant is an environmentally friendly and physiologically safe solution, particularly in sensitive areas that require H1-certification.

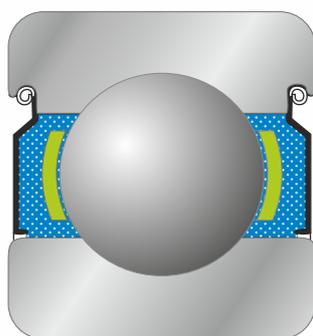


Fig. 5: Cross-section of a roller bearing filled with **Turmocomp HD 150**

Turmocomp HD 150 is suitable for almost every roller bearing geometry. It can be preferably utilised in low to moderate speeds as well as high loads. The compound provides excellent protection against humidity and dust as well as smooth operation of rolling elements, due to high infilling.

Turmocomp HD 150 is well enclosed in the bearing and prevents evaporation or dripping of the lubricant. It forms an extremely resistant lubricating film.

Turmocomp HD 150 is suitable e. g. for the lubrication of roller bearings with rotating outer ring. Excellent lubricating results have also been achieved during lubrication of pivot lever bearings. Moreover, it can be utilised for the lubrication of vertically mounted multi-row bearings in the paper and corrugating industry. Due to its matrix-structure, the lubricant stays exactly at contact surfaces and protects the bearing reliably against starch or fibre residue penetration.

The use of this compound is also recommended in the automotive industry for the lubrication of axle journal bearings subject to radial and axial forces. **Turmocomp HD 150** shows positive influence on damping and steering, provides good lubricating conditions and excellent corrosion and wear protection.

Further applications:

- Beverage, food, cosmetics and pharmaceutical industry
- Agriculture machines
- Steel and rolling mills
- Wood working and wood processing industry
- Automotive and motorcycle production
- Conveyors

Turmocomp	HD 150
Operating temperature range	-40 °C up to 80 °C (-40 °F up to 176 °F)
Temperature stability of base oil	Approx. 160 °C (320 °F)
Density at 20 °C (68 °F)	0,93 g/cm ³
Water resistance	very good
Chemical resistance	Resistant to acids, lyes as well as most solvents
Speed factor	Ball bearing: $n \cdot dm = \text{max. } 120\,000$ Needle roller bearing: $n \cdot dm = \text{max. } 50\,000$

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