



Brand of **NTN Group**

LUBSOLID™

The most efficient and seamless
lubrication solution



LUBSOLID™

INNOVATION DRIVING YOUR PRODUCTION

Movement. It is constantly changing. It is analysed, brought under control, guided and mastered with the aim of deriving maximum benefit. It is more than merely a concept. It is the very essence of our commitment, namely designing and innovating to deliver the perfect solutions to the issues and constraints of today and tomorrow.

There are thousands of us around the world masterminding and developing solutions to raise the bar on your production performance. Our world-leading brands (**NTN, BCA, BOWER and SNR**) are marketed worldwide and deliver the best-fit solutions for working together and building a more environmentally-friendly society. Follow our lead and use interaction, anticipation and adaptation as the keys to guiding and shaping the future of the manufacturing, automotive and aviation markets.

€ 5.5 BILLION
turnover*

23,000
employees*

The local service of an international partner



118
Sales
offices

73
Production
sites

15
R&D
centres

* as of March 2023



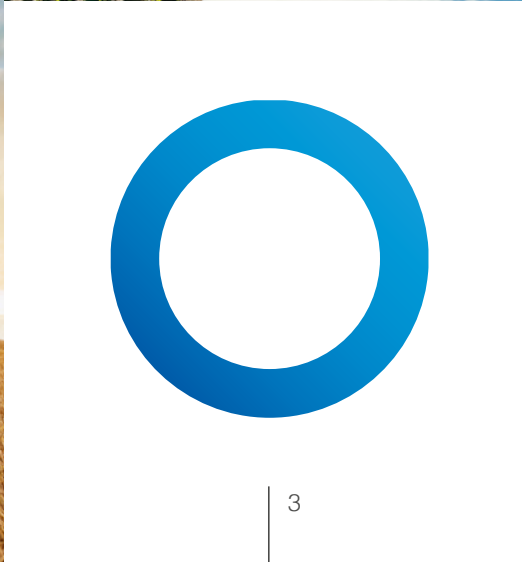
LUBSOLID™

The transformation of our industries is forcing us to question our approaches, and to develop a forward-looking and proactive mindset in the face of today and tomorrow's challenges. With this in mind, a sustainable technology like LUBSOLID™ is part of this perspective, as it creates value for your equipment and your production.

Bearings sometimes operate under difficult or even very harsh conditions. That is why we have developed and refined the LUBSOLID™ lubrication technology together with many industrial companies, manufacturers and users in order to meet the challenges you are facing.



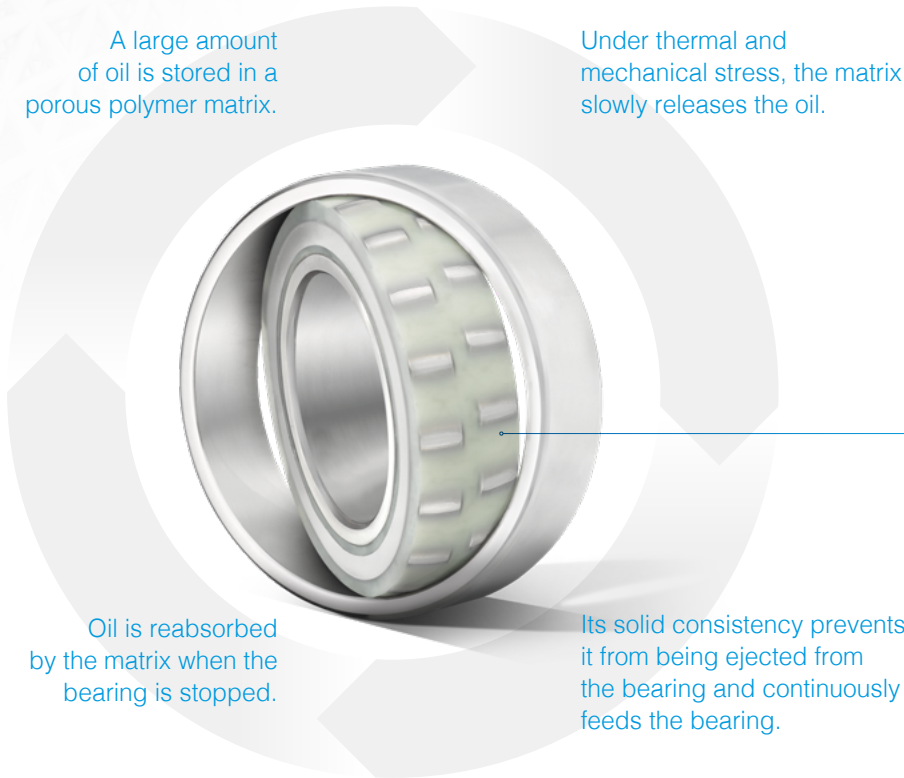
**A TECHNOLOGY
DEDICATED TO SECTORS
SUCH AS TEXTILE,
FOOD PROCESSING,
AGRICULTURE, MATERIAL
HANDLING, CONVEYING,
PACKAGING, WASTE
PROCESSING, CYCLING,
ETC.**



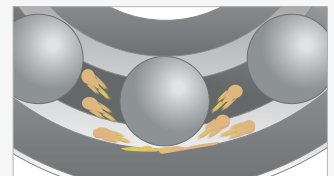
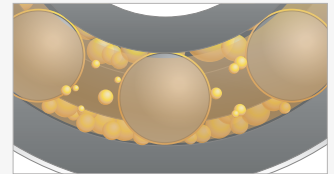
LUBSOLID™: a unique technology

LUBSOLID™ is a lubrication solution, developed to permanently lubricate rolling elements.

Our formulation contains more oil than a lubricated bearing. The lubrication's reliability allows to extend the service life of the bearing without ever having to re-lubricate it, while significantly improving your environmental impact.



Solid lubrication



Standard grease

A POLYMER MATRIX?

A polymer is a substance composed of macromolecules, which are in turn made up of monomer units linked together by covalent bonds. The polymer matrix functions as a structure that retains, distributes and reabsorbs the lubricant as the bearing operates.

A TEAM OF EXPERTS AT YOUR SERVICE!

Depending on your applications and their technical constraints (speed, temperature, friction torque, pollution level, etc.), our experts will guide you towards the product that meets your needs:

- An industrial or food-grade (NSF H1 certified) LUBSOLID™ formula
- A custom-made bearing or the filling of a catalogue SNR bearing

DID YOU KNOW?

70% of bearing failures are due to poor lubrication: too much or too little lubricant, non-respect of greasing frequencies, incorrect choice of grease or even immiscible lubricants.

The assurance of smooth production



More productive

- **Maintenance-free for more comfort in daily use:** deletion of bearing greasing
- **Optimisation of total cost of ownership (TCO):** time savings, cost savings and less production downtime

Cleaner

- **No grease leakage:** the polymer matrix distributes and then, like a sponge, retains the oil that cannot escape from the bearing

Safer

- **Additional protection against liquid and solid pollution:** the matrix fills the free space in the bearing and prevents dirt from entering.
- **Higher added value:** more robust equipment for harsh environments (resistance to high-pressure washing, longer service life in oscillating applications)

More sustainable

- **Eco-responsibility:** in line with the current challenges, allows a rational bearing consumption and eliminates grease consumption
- **Elimination of soil pollution:** no lubricant leakage in outdoor applications (agriculture, quarries, etc.)

Manufacturers and users, why use our LUBSOLID™ solution?

Save time and money

Since they are maintenance-free and have longer service life than conventionally greased bearings*, LUBSOLID™ products save time and money. The bearings do not need to be regreased and their replacement is spaced out. As a result, there is less production downtime. In conveying applications, the service life can be increased up to 20 times!

Respond to highly polluted and/ or humid environments

LUBSOLID™ acts as an additional barrier against solid and liquid contamination. By filling 100% of the free volume of the bearing, it envelops and protects moving parts. This makes it an ally in harsh environments such as agriculture, woodworking, waste processing, etc.

Carry out high-pressure washing

Bearing seals can be damaged and grease can escape during high-pressure washing. The solid consistency of the LUBSOLID™ solution keeps the lubricant inside the bearing to increase its durability.

For this, the LUBSOLID™ technology is a major asset in food-processing industries and more generally when health conditions are required.

Ensure impeccable cleanliness

Whether it is subject to health or safety standards, for flawless and smooth production, LUBSOLID™ allows you to be proactive in improving product cleanliness and safety.

This technology is particularly used in the food-processing and packaging industries, where contamination of food or packaging by lubricating oil is not desired.



* Depending on the application and the difficulty of the operating conditions



Keep employees safe

Production workshops must be safe spaces for the people working there. LUBSOLID™ reduces the risk of lubricant leakage onto the floor. It avoids to mobilise resources to carry out regreasing operations in difficult or dangerous areas, such as overhead conveyors. This way, the maintenance staff can focus on tasks with the highest added value.

Enhance my production

Users' needs are changing and companies need to use reliable and sustainable solutions for their production.

Therefore, using the LUBSOLID™ technology is investing to guarantee the durability of your facilities.

Work in oscillation

Oscillation is one of the most severe operating conditions for bearings. The LUBSOLID™ technology maintains the lubrication of the rolling elements without the lubricant being rolled off the rolling element/bearing raceway contact. Thus, the onset of FEB (False Brinell Effect) is considerably delayed*. In the textile, bicycle and motorcycle industries, this solution is an asset for providing reliability and robustness to equipment.

Centrifugal operation

When the bearing is subjected to centrifugal force, the lubricant can be ejected from the bearing and lead to failure. The LUBSOLID™ matrix keeps the lubricant inside the bearing to maintain all its properties. This prevents oil from being ejected, and the bearing lasts longer.

* Depending on the application and the difficulty of the operating conditions.

 LUBSOLID™

Discover our ranges

Discover our range dedicated to food-processing applications, as well as our NTN brand range.

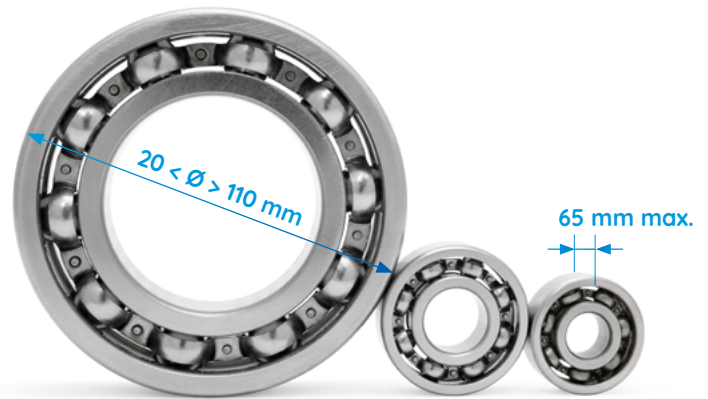


Frequently asked questions

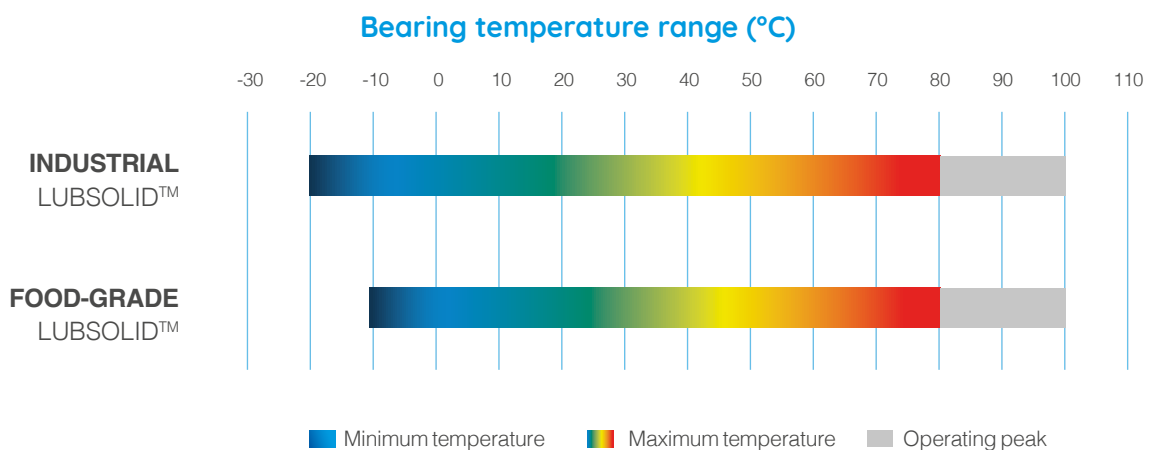
Which bearings can be filled with LUBSOLID™ ?

It is possible to fill ball bearings and inserts, needle roller bearings, spherical roller bearings and cylindrical roller bearings. The width of the bearing must be less than or equal to 65 mm and its external diameter between 20 and 110 mm.

A specific study can be carried out for smaller or larger bearings.



What is the temperature range at which the bearings can operate?



What is the maximum speed at which the bearings can operate?

Type of bearing	Formulation of LUBSOLID™	Limit speed (NDm)
Deep-groove ball bearing Bearing insert	Food grade	35 000

Other product types on request.

These values are based on operation at an ambient temperature of 20°C.



What are the axial load limits (axial to radial force ratio)?

LUBSOLID™ has no impact on the load limits, these values are specific to the bearing.

Does LUBSOLID™ replace seals?

LUBSOLID™ is not a substitute for seals; it provides additional protection for the rolling elements.

Does LUBSOLID™ influence static and dynamic load capacities?

The LUBSOLID™ matrix has no impact on the load capacities of the bearing. The load capacities only take into account the geometry of the rings and rolling housings. The load capacities of bearings are defined by ISO 281 and 76. A bearing with LUBSOLID™ has the same load capacity as a grease or oil lubricated bearing.

Does LUBSOLID™ influence the bearing properties?

LUBSOLID™ has a limiting effect on speed, torque and temperature for use characteristics.

Which polymer is used?

The polymer used is a plastic formed from long molecular chains of carbon and hydrogen. Initially in powder form, the polymer is mixed with oil and then heated to form a porous sponge-like structure. The polymer then functions as a structure that retains, distributes and reabsorbs the lubricant as the bearing operates. The pores of the polymer must be small enough to allow oil to flow through them by surface tension.

What precautions should be taken to optimise the service life?

To ensure optimal operation of your bearings with LUBSOLID™, we recommend that you do not heat them above 100°C and that you follow the mounting procedures and misalignment limits specific to the bearing.



With which substances is LUBSOLID™ not compatible?

Do not use LUBSOLID™ when the bearings are in contact with solvents (heptane, acetone, benzene, aviation fuel, etc.), as this may lead to premature failure. A physical-chemical compatibility test can be carried out before installation.





NTN

Make the world **NAMERAKA**



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