

DUROLUB[®] solutions for:
Food and Beverage,
pharmaceutical industries



**The next generation bearing lubrication
made available to everyone by**

The basic requirement for any operation in food and beverage, pharmaceutical industries is a clean and hygienic environment. Regular cleaning, often with aggressive chemicals and high pressure cleaners, is a daily standard procedure. Any contamination of the product by oil or grease must be minimized. Production processes, like cleaning - cooling - baking, demand special attention to the bearing lubrication:



The typical challenges for the bearing lubrication are:

- wet environment - process water
- cleaning - (detergents / chemicals)
- pressure cleaning
- hot or cold processing
- food grade lubricant suitable for incidental contact with processed product
- low maintenance costs
- reduced environmental impact

The thb lub-systems Durolub® variants are the high-end solution to all these challenges. We fill our compound lubricants in any type and brand of bearings. You are not forced to buy a specific brand for whatsoever reason.

WET ENVIRONMENT

Water and moisture inside a bearing decreases the lubrication effectiveness of the lubricant, cause wear and corrosion. The bearing will fail prematurely. Frequent relubrication tends to be unsuccessful and contaminates the environment.

Durolub® DL is a thermally treated polymer compound with a high performance synthetic oil, which cannot be washed out of the bearing. It is extremely resistant to water and resistant

to most acids, leaches and solvents

PRESSURE CLEANING

Integrated seals will be deflected inward the bearing by the water jet, water / detergent can easily move into the bearing, the lubricant will be washed out of the bearing.

Durolub® DL is filled into all free space of the bearing. After the thermal treatment Durolub® is a solid compound which provides additional support to integrated seals and avoids the inward deflection.

HOT PROCESSING

Operating temperatures above 100°C reduce the life-time of ordinary mineral-oil based lubricants significantly. Seal and cage material needs to be

adjusted, the thermal treatment of bearing rings should be according to the planned operating temperature range.

thb offers a wide range of products for grease / polyglycol / solid and solid lubricants. There is also a special Durolub® variant called Durolub® SLC.

Durolub® SLC is a special dry lubricant compound filled into the free space of the bearing. During rotation of the bearing, small quantities of the dry lubricant are transferred to the contacting surfaces. This, about 1µm thick lubrication film, lubricates the bearings and can be used for operating temperatures up to 300°C - temperature peaks are causing no problems, only above 350°C the efficiency of DL-SLC is reduced by oxidation.

The typical application in the food and beverage industry are bakery ovens.



– Durolub®DL150 in a spherical roller bearing

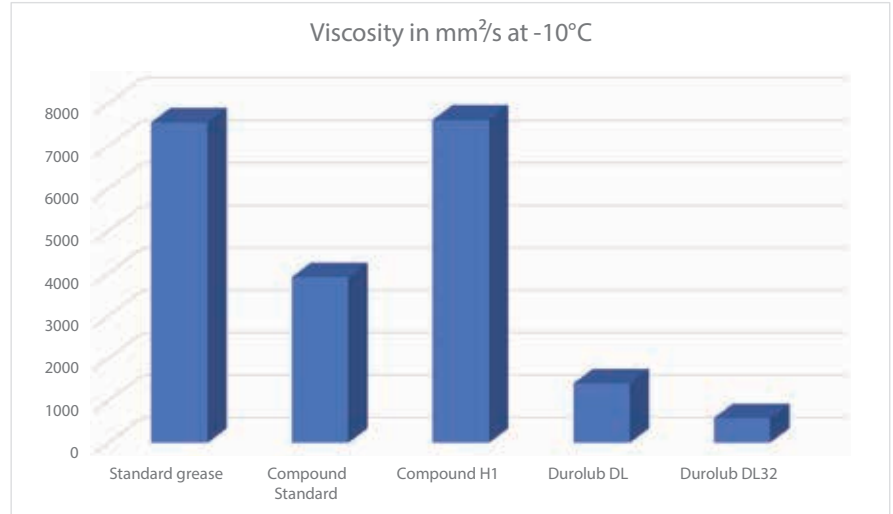


– Durolub®SLC in a ball bearing

COLD PROCESSING

Operating temperatures around and less than 0°C increase the viscosity of the lubricant significantly. Standard lubricants often reach a critical high viscosity already at +10°C, the lubricant is getting „too thick“ and doesn't lubricate the bearings properly. Mixed friction causes wear and high friction torques, energy costs for operation are high, bearings will fail prematurely.

Durolub® DL32 contains a special low viscosity base-oil which is suitable for operating bearings at very low temperatures. Starting temperatures, as low as -50°C, can be realized.



FOOD GRADE SOLUTION / ANTIMICROBIAL OPTION

Durolub® DL / DL32 / DL150 are certified H1 for incidental contact with food. Furthermore they are Halal and Kosher certified.

Durolub® DL series is optional available with antimicrobial additives to prevent microbial growth. There will be no microbial contamination of the end-product just in case of incidental contact.

Durolub® SLC is not supposed to get in contact with food.



MAINTENANCE COST/ ENVIRONMENTAL IMPACT

Bearings lubricated with Durolub® contain up to 5 times more oil than greased bearings. Highest quality synthetic oils, which cannot be washed and the support of integrated seals offer the maximum grease life time. The bearings are practically maintenance free. There is no regular regreasing necessary, no excessive grease is around your applications. This all saves lots of time, money and is the best solution for the environment.



For any further details just contact:

