

BARRIERTA L 55 series

High-temperature long-term greases



Benefits for your application

- **Higher machine availability and less need for maintenance**
 - **at very high operating temperatures up to 260 °C**
 - **under the influence of aggressive media and vapours**
 - **where other lubricants might affect sensitive plastic components**
- **Tried and tested over many years in numerous industries and component types**
 - **thanks to BARRIERTA base oils, which are made specifically to enable long-term stability**
 - **backed by a large number of approvals and references for various applications**
 - **four consistency classes to suit different applications**

Description

BARRIERTA is Europe's oldest high-quality brand of high-temperature lubricants based on perfluorinated polyether oil (PFPE). Today the name of BARRIERTA is widely regarded as synonymous with long-term stability and thermal resistance. Specifically made raw materials and continued development have made BARRIERTA products the first choice of lubrication experts in many sectors worldwide.

BARRIERTA L 55/0-3 series long-term greases offer excellent resistance to high temperature and aggressive media and at the same time compatibility with plastics and elastomers.

BARRIERTA L 55/0-3 are NSF H1 registered and therefore comply with FDA 21 CFR § 178.3570. The lubricants were developed for incidental contact with products and packaging materials in the food-processing, cosmetics, pharmaceutical or animal feed industries. The use of BARRIERTA L 55/0-3 can contribute to increase reliability of your production processes. We nevertheless recommend conducting an additional risk analysis, e.g. HACCP.

Application

Rolling and plain bearings subject to high temperatures

One of the well-known strengths of the BARRIERTA L 55 series is the products' suitability for the lubrication of bearings and guides operating under extreme temperatures. A low evaporation rate enables longest grease lives and hence longest relubrication intervals.

Typical applications include:

- conveyors (load and turn rollers)
- kiln cart wheel bearings
- calender bearings

- fan bearings
- chain bearings in film stretching stenters

BARRIERTA L 55/2 is most frequently used for initial and long-term lubrication.

For relubrication softer grades of NLGI class 1 or lower are recommended.

Friction points under the influence of media

BARRIERTA L 55 greases offer exceptionally long service lifetimes even when exposed to any of a large number of aggressive media such as concentrated acids, lyes, organic solvents or gases.

In addition to their resistance to media, BARRIERTA L 55/2 and BARRIERTA L 55/3 offer also good adhesion and a sealing effect, which makes them suitable for application in

- valves, fittings and installations e.g. in the chemical industry
- pneumatic components
- level gauges, e.g. for fuels or chemicals
- seals (static, dynamic)
- extraction systems

Food-processing and pharmaceutical industries

All BARRIERTA L 55 greases are registered as NSF-H1 and are therefore in compliance with FDA 21 CFR § 178.3570.

The additional certification according to ISO 21469 supports the compliance with the hygienic requirements in your production plant. You will find further information on ISO Standard 21469 on our website www.klueber.com.

White-coloured BARRIERTA L 55 special lubricants can therefore also be used on friction points where incidental contact with food products cannot be ruled out for technical reasons, e.g. in rolling

BARRIERTA L 55 series

High-temperature long-term greases

and plain bearings and guides operating under high thermal loads in

- automatic baking ovens
- cooking or frying lines
- conveyor systems

Plastic-plastic friction points

BARRIERTA L 55 greases – irrespective of NLGI grade - are neutral towards the majority of plastic materials. Results of pertinent tests with fluoroelastomers can be found overleaf.

We recommend testing lubricant compatibility with the materials in question prior to series application.

Application notes

For optimum results we recommend cleaning all friction points with white spirit 180/210 and then with Klüberalfa XZ 3-1 prior to

initial lubrication. Subsequently, the friction points should be dried with clean dry compressed air or hot air to remove all solvent residues.

The friction point must be free from oil, grease, perspiration and contamination particles before initial lubrication.

Please contact our technical sales staff for details of "best practice" with BARRIERTA L 55 lubricants to ensure longest lifetimes and highest performance outcomes are achieved.

Material safety data sheets

Material safety data sheets can be requested via our website www.klueber.com. You may also obtain them through your contact person at Klüber Lubrication.

| Pack sizes | BARRIERTA L 55/0 | BARRIERTA L 55/1 | BARRIERTA L 55/2 | BARRIERTA L 55/3 |
|-----------------|------------------|------------------|------------------|------------------|
| Can 1 kg | + | + | + | + |
| Cartridge 800 g | + | + | + | + |
| Bucket 10 kg | + | + | + | + |



| Product data | BARRIERTA L 55/0 | BARRIERTA L 55/1 | BARRIERTA L 55/2 | BARRIERTA L 55/3 |
|--|--------------------------------|--------------------------------|--------------------------------|--------------------------------|
| Article number | 090035 | 090042 | 090013 | 090014 |
| NSF-H1 registration | 129 523 | 129 561 | 129 400 | 129 562 |
| Chemical composition, type of oil | PFPE | PFPE | PFPE | PFPE |
| Chemical composition, solid lubricant | PTFE | PTFE | PTFE | PTFE |
| Lower service temperature | -40 °C / -40 °F | -40 °C / -40 °F | -40 °C / -40 °F | -30 °C / -22 °F |
| Upper service temperature | 260 °C / 500 °F | 260 °C / 500 °F | 260 °C / 500 °F | 260 °C / 500 °F |
| Colour space | white | white | white | white |
| Density at 20 °C | approx. 1.95 g/cm ³ | approx. 1.95 g/cm ³ | approx. 1.96 g/cm ³ | approx. 1.96 g/cm ³ |
| NLGI grade, DIN 51818 | 0 | 1 | 2 | 3 |
| Shear viscosity at 25 °C, shear rate 300 s ⁻¹ , equipment: rotational viscometer, lower limit value | 3 500 mPas | 4 000 mPas | 8 000 mPas | 11 000 mPas |
| Shear viscosity at 25 °C, shear rate 300 s ⁻¹ , equipment: rotational viscometer, upper limit value | 5 500 mPas | 8 000 mPas | 12 000 mPas | 17 000 mPas |
| Kinematic viscosity of the base oil, DIN 51562 pt. 01/ASTM D-445/ASTM D 7042, 40 °C | approx. 420 mm ² /s | approx. 420 mm ² /s | approx. 420 mm ² /s | approx. 420 mm ² /s |
| Kinematic viscosity, DIN 51562 pt. 01/ASTM D-445/ASTM D 7042, 100 °C | approx. 40 mm ² /s | approx. 40 mm ² /s | approx. 40 mm ² /s | approx. 40 mm ² /s |
| Corrosion inhibiting properties of lubricating greases, DIN 51802, (SKF-EMCOR), test duration: 1 week, distilled water | | <= 1 corrosion degree | <= 1 corrosion degree | <= 1 corrosion degree |
| Flow pressure of lubricating greases, DIN 51805, test temperature: -30 °C | | | | <= 1 400 mbar |
| Flow pressure of lubricating greases, DIN 51805, test temperature: -40 °C | | <= 1 400 mbar | <= 1 600 mbar | |
| Four-ball tester, welding load, DIN 51350 pt. 04 | >= 6 000 | >= 7 000 | >= 8 000 | >= 8 000 |
| Speed factor (n x dm) | approx. 300 000 mm/min | approx. 300 000 mm/min | approx. 300 000 mm/min | approx. 300 000 mm/min |
| Minimum shelf life from the date of manufacture - in a dry, frost-free place and in the unopened original container, approx. | 60 months | 60 months | 60 months | 60 months |



BARRIERTA L 55 series

High-temperature long-term greases

Additional data: resistance to fluoroelastomers

| Change | 75 FKM 585 | 80 FKM 610 | 60 FVMQ 565 |
|--|------------|------------|-------------|
| Duration [h] / temperature [°C] of exposure | 168 / 160 | 168 / 160 | 168 / 150 |
| Volume [%] | + 0,5 | +0.5 | - 0.3 |
| Hardness (Shore A) | - 1 | - 1 | - 2 |
| Tensile strength [%] | + 15 | + 15 | - 16 |
| Elongation at tear [%] | - 11 | - 11 | - 10 |

| General recommendations for use: | Static | Dynamic |
|----------------------------------|--------------|------------|
| Change in volume [%] | -5 to +15 | - 2 to + 5 |
| Change in hardness (Shore A) | - 10 to + 10 | - 5 to + 5 |

Klüber Lubrication – your global specialist

Innovative tribological solutions are our passion. Through personal contact and consultation, we help our customers to be successful worldwide, in all industries and markets. With our ambitious technical concepts and experienced, competent staff we have been fulfilling increasingly demanding requirements by manufacturing efficient high-performance lubricants for more than 80 years.

**Klüber Lubrication München SE & Co. KG /
Geisenhausenerstraße 7 / 81379 München / Germany /
phone +49 89 7876-0 / fax +49 89 7876-333.**

The data in this document is based on our general experience and knowledge at the time of publication and is intended to give information of possible applications to a reader with technical experience. It constitutes neither an assurance of product properties nor does it release the user from the obligation of performing preliminary field tests with the product selected for a specific application. All data are guide values which depend on the lubricant's composition, the intended use and the application method. The technical values of lubricants change depending on the mechanical, dynamical, chemical and thermal loads, time and pressure. These changes may affect the function of a component. We recommend contacting us to discuss your specific application. If possible we will be pleased to provide a sample for testing on request. Klüber products are continually improved. Therefore, Klüber Lubrication reserves the right to change all the technical data in this document at any time without notice.

Publisher and Copyright: Klüber Lubrication München SE & Co. KG. Reprints, total or in part, are permitted only prior consultation with Klüber Lubrication München SE & Co. KG and if source is indicated and voucher copy is forwarded.



a company of the Freudenberg Group