

# BARRIERTA® L55 series

High-temperature long-term greases



## Description

BARRIERTA® is Europe's oldest high-quality brand of high-temperature lubricants based on perfluorinated polyether oil (PFPE). BARRIERTA® products have been subject to constant product development over many decades so as to exploit the latest know-how available, which has made them one of the most widely used PFPE lubricant series worldwide.

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

To enable a wide variety of uses, BARRIERTA L 55 greases are available in the four NLGI classes from 0 to 3.

## Application

*Rolling and plain bearings subject to high temperatures*

One of the well-known strengths of the BARRIERTA L55 series is the product's suitability for the lubrication of bearings and guides operating under extreme temperatures up to 260 °C.

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® L55/2 (NLGI 2) is most frequently used for initial and long-term lubrication.

For application via automatic lubricating systems, softer grades such as BARRIERTA L55/1 (NLGI 1) or BARRIERTA L55/0 (NLGI 0) are preferred.

*Friction points under the influence of media*

BARRIERTA L55 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 L55/2 and BARRIERTA L55/3 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 L55 greases meet the requirements of the "guidelines of sec. 21 CFR 178.3570 of FDA" regulations and are registered as NSF-H1.

White-coloured BARRIERTA L55 special lubricants can therefore also be used on friction points where occasional contact with food products cannot be ruled out for technical reasons, e.g. in rolling and plain bearings and guides operating under high thermal loads in

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

*Plastic-plastic friction points*

All BARRIERTA L55 greases – irrespective of viscosity – 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.

## BARRIERTA® L55/0,1,2,3

- Wide range of applications
- Wide service temperature range up to 260 °C
- Excellent resistance to chemicals and aggressive media
- Neutral towards most plastic materials and elastomers
- Low evaporation rate
- Made without raw materials containing silicone
- Registered as NSF-H1

## Application notes

For optimum results we recommend cleaning all friction points with white spirit 180/210 and then with Klüber-alfa 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 L55 lubricants to ensure longest lifetimes and highest performance outcomes are achieved.

## Minimum shelf life

The minimum shelf life is approx. 60 months if the product is stored in its original closed container in a dry, frost-free place.

## Pack sizes

- 1 kg can
- 800 g cartridge
- 10 kg bucket

# BARRIERTA® L55 series

High-temperature long-term greases

Product data	BARRIERTA L 55/0	BARRIERTA L 55/1	BARRIERTA L 55/2	BARRIERTA L 55/3
Article No.	090035	090042	090013	090014
Base	perfluorinated polyether oil, PTFE			
Service temperature range,* [°C]	- 40 to 260	- 40 to 260	- 40 to 260	- 30 to 260
Color	white			
Drop point, DIN ISO 2176**, [°C]	not measurable			
Density at 20 °C, [g/cm³], approx.	1.95	1.95	1.96	1.96
Consistency, DIN 51 818; NLGI grade	0	1	2	3
Apparent dynamic viscosity, Klüber viscosity grade***	M	M	S	S
Base oil viscosity, DIN 51 562, at 40 °C, [mm²/s], approx. at 100 °C, [mm²/s], approx.	400 40			
Anticorrosive effect of lubricating greases, DIN 51 802, (SKF-Emcor), test duration: 1 week, distilled water	not applicable	≤ 1	≤ 1	≤ 1
Flow pressure, DIN 51 805, [mbar] (testing temperature, °C)	not applicable	< 1400 (- 40°C)	< 1600 (- 40°C)	< 1400 (-30°C)
Four ball tester welding load, DIN 51 350, pt. 04 [N]	> 6000	> 7000	> 8000	> 8000
Speed factor**** (n x d <sub>m</sub> ) [mm x min <sup>-1</sup> ], approx.	300,000			
NSF-H1 certification Registration No.	129523	129561	129400	129562

\* Service temperatures are guide values which depend on the lubricant's composition, the intended use and the application method. Lubricants change their consistency, apparent dynamic viscosity or viscosity depending on the mechano-dynamical loads, time, pressure and temperature. These changes in product characteristics may affect the function of a component.

\*\* Measuring a drop point acc. to DIN 2176 is not possible for these high-temperature greases (not meltable); however, above 170°C a certain degree of separation is possible.

\*\*\* Klüber viscosity grades: EL = extra light lubricating grease; L = light lubricating grease; M = medium lubricating grease; S = heavy lubricating grease; ES = extra heavy lubricating grease

\*\*\*\* Speed factors are guide values which depend on the type and size of the rolling bearing type and the local operating conditions, which is why they have to be confirmed in tests carried out by the user in each individual case.

## Additional data\*: Resistance to fluoroelastomers

Change of	75 FKM 585	80 FKM 610	60 FVMQ 565
Exposure life [h]; exposure temp. [°C]	168 h / 160 °C	168 h / 160 °C	168 h / 150 °C
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 recommendation for use:	Static	Dynamic
Change in volume [%]	-5 to +15	- 2 to +5
Change in Shore A hardness	- 10 to +10	- 5 to +5

\* The listed values are the results of sample testing with BARRIERTA® L55/2, closely related to DIN 53521, and are not subject to regular revision. The stated values serve for orientation only and may vary according to the material used and the pretreatment it has undergone. Fixed product data cannot be derived from the test data. Owing to the many different elastomer compositions we recommend checking their compatibility on the complete component prior to series application.

The data in this product information is based on our general experience and knowledge at the time of printing 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 tests with the selected product. We recommend contacting our Technical Consulting Staff to discuss your specific application. If required and possible we will be pleased to provide a sample for testing. Klüber products are continually improved. Therefore, Klüber Lubrication reserves the right to change all the technical data in this product information at any time without notice.