

# BARRIERTA I Series

High-temperature greases with good long-term characteristics



## Benefits for your application

- **Long-term availability and service life of components**
  - over a wide service temperature range up to 260°C
  - when exposed to aggressive chemical agents and vapours
  - when using sensitive plastic materials
- **Tried and tested over many years in numerous industries and component types**
  - due to BARRIERTA base oils, which are made specifically to enable long-term stability
  - backed by a large number of approvals and references
  - due to availability in 4 different viscosity grades to suit various applications

## Description

BARRIERTA is Europe's oldest high-quality brand of high-temperature lubricants based on perfluorinated polyether oil (PFPE).

BARRIERTA products are among the most widely used PFPE lubricants today.

High-temperature greases of the BARRIERTA I series are made using particularly fine PTFE thickeners and have an oil content that is unusually high for this type of grease.

To suit various application purposes, BARRIERTA I greases are available in four different viscosities.

## Application

### Rolling and plain bearings operating at elevated temperature

BARRIERTA I greases attain long service lives when used in rolling and plain bearings operating under high thermal stress.

The fine thickener and the high oil content enable smooth running of bearings also at high speeds and ensure a long life of the lubricated components.

Typical fields of application are in

- film stretchers
- textile stenter frames
- precision engineering
- clean-room engineering (e.g. microchip manufacture)

The low vapour pressures of BARRIERTA I greases make them also recommendable for use in fine to ultra-high vacuum.

### Electrical contacts

BARRIERTA I EL-102 and BARRIERTA I MI-202 have proven successful for the long-term lubrication of electrical contacts in high and medium-voltage switchboards. Component tests have shown that plug and unplug forces are consistent without unduly influencing transition resistance. There are no known decomposition products that would have an insulating effect on the contacts.

### Behaviour towards plastics and elastomers

BARRIERTA I greases of all viscosity grades are widely neutral towards elastomers and plastics (possible exception: highly fluorinated rubber). Nevertheless, compatibility with the materials should be tested, especially prior to series application.

## Application notes

For optimum lubrication results, we recommend cleaning the friction points with white spirit 180/210 and then Klüberalfa XZ 3-1. For initial lubrication, the friction point must be clean and bright and free from particles.

To ensure maximum service life, please contact our technical sales staff.

Barrierta I EL - 102 has been tested and approved for contact-free minimum-quantity greasing starting with 0,1 mg by electro-pneumatic jet valves.

## Material safety data sheets

Material safety data sheets can be requested via our website [www.klueber.com](http://www.klueber.com). You may also obtain them through your contact person at Klüber Lubrication.

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Pack sizes	BARRIERTA I EL-102	BARRIERTA I L-162	BARRIERTA I MI-202	BARRIERTA I S-402
Can 1 kg	+	+	+	+
Cartridge 800 g	-	-	-	+

Product data	BARRIERTA I EL-102	BARRIERTA I L-162	BARRIERTA I MI-202	BARRIERTA I S-402
Article number	090008	090007	090006	090005
Chemical composition, solid lubricant	PTFE	PTFE	PTFE	PTFE
Chemical composition, type of oil	PFPE	PFPE	PFPE	PFPE
Lower service temperature	-50 °C / -58 °F	-45 °C / -49 °F	-45 °C / -49 °F	-40 °C / -40 °F
Upper service temperature	180 °C / 356 °F	200 °C / 392 °F	240 °C / 464 °F	260 °C / 500 °F
Colour space	white	white	white	white
Density at 20 °C	approx. 1.92 g/ cm <sup>3</sup>	approx. 1.92 g/ cm <sup>3</sup>	approx. 1.95 g/ cm <sup>3</sup>	approx. 1.95 g/ cm <sup>3</sup>
NLGI grade, DIN 51818	2	2	2	2
Kinematic viscosity of the base oil, DIN 51562 pt. 01/ ASTM D-445/ASTM D 7042, 40 °C	approx. 100 mm <sup>2</sup> /s	approx. 160 mm <sup>2</sup> /s	approx. 200 mm <sup>2</sup> /s	approx. 420 mm <sup>2</sup> /s
Kinematic viscosity of the base oil, DIN 51562 pt. 01/ ASTM D-445/ASTM D 7042, 100 °C	approx. 12 mm <sup>2</sup> / s	approx. 18 mm <sup>2</sup> / s	approx. 22 mm <sup>2</sup> / s	approx. 40 mm <sup>2</sup> / s
Shear viscosity at 25 °C, shear rate 300 s-1, equipment: rotational viscometer, lower limit value	3 000 mPas	4 000 mPas	4 000 mPas	7 000 mPas
Shear viscosity at 25 °C, shear rate 300 s-1, equipment: rotational viscometer, upper limit value	5 600 mPas	8 000 mPas	7 000 mPas	10 000 mPas
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	<= 1 corrosion degree
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	<= 1 corrosion degree
Flow pressure of lubricating greases, DIN 51805, test temperature: -40 °C				<= 1 400 mbar
Flow pressure of lubricating greases, DIN 51805, test temperature: -45 °C		<= 1 400 mbar	<= 1 400 mbar	
Flow pressure of lubricating greases, DIN 51805-2, test temperature: -50 °C	<= 1 400 mbar			
Four-ball tester, welding load, DIN 51350 pt. 04	approx. 4 800 N	approx. 5 000 N	approx. 5 000 N	approx. 5 000 N
Speed factor (n x dm)	500 000 mm/min	500 000 mm/min	approx. 600 000 mm/min	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





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### **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.

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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.

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