

BARRIERTA® IS-; I MI-; I EL-; O-; OL-FLUID

High-temperature lubricating fluids



Description:

BARRIERTA IS-; I MI-; I EL-; O-; OL-FLUID are synthetic high-temperature lubricating fluids based on perfluorinated polyether oils and PTFE. They can be used for temperatures between – 60 °C and 260 °C.

BARRIERTA FLUIDS are non-flammable and resistant to chemicals and aggressive media such as concentrated acids, alkaline solutions and organic solvents (except for fluorinated hydrocarbon solvents, strong bases, earth/alkali metals and Lewis acids). They are neutral to elastomers and plastics.

Application:

BARRIERTA FLUIDS are suitable for rolling and plain bearings as well as slideways subject to extreme temperatures and aggressive chemicals and fluids. They can also be used for long-term and lifetime lubrication of sintered metal bearings up to 260 °C.

BARRIERTA FLUIDS offer a long-lasting film protecting against wear on electric contacts, especially those made of hard gold and gold alloys.

Due to the low vapor pressures, BARRIERTA FLUIDS can also be used for high-vacuum applications.

BARRIERTA FLUIDS provide excellent lubricity and anti-friction protection for plastic sliding material combinations and in particular for materials commonly attacked by mineral or synthetic lubricants or those susceptible to stress cracking.

Application notes:

BARRIERTA lubricants are not miscible with mineral lubricants or other synthetic lubricants. Full efficiency is only ensured if the

friction points are bright and free from contaminating particles such as oil, grease, anticorrosion substances etc. Cleanliness of the lubrication systems is important too.

Minimum shelf life:

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

Pack sizes:

10 l canister (**only** BARRIERTA I EL and I EL Fluid)
500 ml canister

BARRIERTA IS-; I MI-; I EL-; O-; OL-FLUID

- Lubricating fluids for rolling and plain bearings
- Long-lasting protection of electric contacts made of hard gold and gold alloys
- Resistant to most chemicals
- Neutral to most elastomers and plastics
- Non-flammable lubricating fluids

Product data:

	BARRIERTA IS-FLUID	BARRIERTA I MI-FLUID	BARRIERTA I EL-FLUID	BARRIERTA O-FLUID	BARRIERTA OL-FLUID
Base	fluorinated polyether oil, PTFE				
Service temperature range*, °C, approx.	– 25 to 260	– 25 to 220	– 40 to 180	– 60 to 100	– 40 to 100
Colour	colourless, clear				
Density, DIN 51 757 g/ml, approx.	1.90			1.88	1.90
Kinematic viscosity DIN 51 562 pt 1, Ubbelohde at 40 °C, mm ² /s, approx. at 100 °C, mm ² /s, approx.	380 – 420 35 – 41	190 – 220 22	90 – 100 11 – 13.5	26 – 30	430 6.5
Viscosity index, DIN ISO 2909, VI, approx.	120	120	> 100	75	100
Flash point	non-flammable				
Pour point, DIN ISO 3016, °C, approx.	– 30		– 45	– 60	– 45
Copper corrosion, DIN EN ISO 2160, 24 h/100 °C, corrosion rating	1 – 100				

* 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.

BARRIERTA® IS-; I MI-; I EL-; O-; OL-FLUID

Safety Data Sheet

<p>1.1 Product name: BARRIERTA a) IS-; b) I MI-; c) I EL-; d) O-; e) OL-Fluid Code-No.: a) 090 004 b) 090 003 c) 090 002 d) 090 001 e) 090 034 23.12.1999</p>	<p>9. Physical and chemical properties Form liquid Colour colourless Odour none Pour point a), b) ~ - 30 °C; c), e) < - 45 °C, d) < - 60 °C, DIN ISO 3016 Flash point none °C, DIN ISO 2592 Flammability not applicable Ignition temperature not applicable Autoflammability not applicable Lower explosion limit not applicable Upper explosion limit not applicable Vapour pressure-first not applicable Density a), b), c), e) approx. 1.90 g/cm³, d) 1.88 g/cm³, 20 °C, DIN 51 757 Water solubility insoluble pH value not applicable Kinematic viscosity, mm²/s a) approx. 415, b) 205, c) 95, d) 28, e) 40, 40 °C, DIN 51 562 Further information None</p>
<p>1.2 Klüber Lubrication München KG Emergency telephone no.: Geisenhausenerstraße 7 ++49 - 89 - 7876 - 0 D-81379 München Tel. ++49 - 89 - 78 76 - 0 telephone exchange Fax: ++49 - 89 - 78 76 - 333</p>	<p>10. Stability and reactivity Conditions to avoid: None Materials to avoid: Strong bases, alkali metals, alkaline earth metals, Lewis acids Hazardous decomposition products: > 260 °C traces of fluorinated products Additional information: Some materials (e.g. titanium, aluminium or alloys of these materials) may cause lower decomposition temperatures</p>
<p>2. Composition / information on ingredients Chemical characterization (preparation): Fluorinated polyether oil Additional information: No hazardous ingredients</p>	<p>11. Toxicological information The toxicological data has been taken from products of similar composition Acute toxicity: LD₅₀/oral/rat = > 2 g/kg (literature data) Chronic toxicity: None Human experience: Prolonged skin contact may cause skin irritation and/or dermatitis</p>
<p>3. Hazards identification No particular hazards known</p>	<p>12. Ecological information Information on elimination (persistence and degradability): Product is insoluble in water. May be separated out mechanically in purification plants Behaviour in environmental compartments: Ecological injuries are not known or expected under normal use Ecotoxic effects: Aquatic toxicity is unlikely due to low solubility Additional information: Should not be released into the environment</p>
<p>4. First aid measures After inhalation: Not applicable After contact with skin: Wash off with soap and plenty of water After contact with eyes: Rinse with plenty of water After ingestion: Do not induce vomiting. Obtain medical attention Advice to doctor: Treat symptomatically. If swallowed or in the event of vomiting, risk of product entering the lungs</p>	<p>13. Advice on Disposal Disposal: Can be incinerated, when in compliance with the national regulations. Contains halogene Dispose of contaminated packaging and recommended cleaning: Offer rinsed packaging material to local recycling facilities</p>
<p>5. Fire-fighting measures Suitable extinguishing media: The product itself does not burn. Use extinguishing measures that are appropriate to the environment Special Hazards: In case of fire the following can be released: Traces of fluorinated products Special protective equipment for firefighters: Standard procedure for chemical fires Additional information: Water mist may be used to cool closed containers. In the event of fire and/or explosion do not breathe fumes</p>	<p>14. Transport information GGVS / GGVE: not applicable ADN / ADNR: not applicable IMDG-Code: not applicable ICAO / IATA-DGR: not applicable Further information: Not classified as dangerous in the meaning of transport regulations</p>
<p>6. Accidental release measures Personal precautions: Risk of slipping due to leakage / spillage of product Environmental precautions: Do not flush into surface water or sanitary sewer system Methods for cleaning up / taking up: Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Dispose of absorbed material in accordance with the regulations Additional information: None</p>	<p>15. Regulatory information Labelling according to EU-guidelines: The product does not require a hazard warning label in accordance with EC-directives/German regulations on dangerous substances National regulations</p>
<p>7. Handling and storage Advice on safe handling: Avoid formation of aerosol Advice on protection against fire and explosion: No special precautions required Requirements on storage rooms and vessels: No special storage conditions required Incompatible materials: Do not store together with food Further information on storage conditions: Store at room temperature in the original container</p>	<p>16. Other information Issue-department of Safety Data Sheet: Chemical Documentation, Tel.: ++49 - 89 - 7876 - 564</p>
<p>8. Exposure controls / personal protection Additional advice on system design: Not applicable Ingredients and specific control parameters: None Respiratory protection: No special protective equipment required Hand protection: No special protective equipment required Eye protection: No special protective equipment required Body protection: No special protective equipment required Other protection measures: No special protective equipment required General protection and hygiene measures: Avoid prolonged and/or repeated contact with skin. Clean skin thoroughly after work; apply skin cream. Remove soiled or soaked clothing immediately. Do not inhale aerosol. Keep away from tobacco products</p>	

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.



Klüber Lubrication München KG, a member of the Freudenberg group