

ISOFLEX® LDS 18 SPECIAL A

Dynamically light lubricating grease for plain and rolling bearings



Description:

ISOFLEX LDS 18 SPECIAL A is a dynamically light long-term and low-noise grease for plain and rolling bearings. It consists of ester oil, mineral oil and lithium soap. The product is resistant to ageing, oxidation and water, and it protects reliably against corrosion. Based on the CEC-L-33-A-93 test, biodegradability after 21 days is > 70%.

Application:

ISOFLEX LDS 18 SPECIAL A is suitable for plain and rolling bearings operating at low temperatures and/or high speeds, for example in grinding spindles, machine tool spindles, spindle bearings, textile spindles, bearings in OE-spinning turbines, low-noise bearings in precision and optical equipment.

Application notes:

The lubricant is applied by brush, spatula, grease gun or grease cartridge. Owing to the different compositions of elastomers and plastic materials, compatibility tests are indispensable before series application.

Minimum shelf life:

The minimum shelf life is approx. 36 months if the product is stored in the original closed container in a dry place.

Pack sizes:

45 g PE tube
400 g cartridge
1 kg can
25 kg bucket

ISOFLEX LDS 18 SPECIAL A

- Dynamically light lubricating grease
- For high speeds
- Low-noise grease for rolling bearings
- Good corrosion protection
- Resistant to oxidation and ageing
- Biodegradability acc. to CEC-L-33-A-93 > 70% by weight

Product data:

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|---|---------------------------|
| Colour | yellow |
| Texture | homogeneous, short-fibred |
| Service temperature range*, °C, approx. | - 50 to 120 |
| Density, DIN 51 757, at 20 °C, g/cm ³ , approx. | 0.88 |
| Drop point, DIN ISO 2176, °C | > 190 |
| Worked penetration, DIN ISO 2137, (ASTM D 217); 0.1 mm | 265 to 295 |
| Corrosion protection (Emcor test), DIN 51 802, 1 week, distilled water, corrosion rating | 0/1 |
| Base oil viscosity, DIN 51 562/1, at 40 °C, mm ² /s, approx. at 100 °C, mm ² /s, approx. | 15 4 |
| Speed factor** (n x d _m), mm x min ⁻¹ , approx. | 1,000,000 |
| Apparent dynamic viscosity, Klüber viscosity grade*** | L |

* 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.

** 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.

*** 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

ISOFLEX® LDS 18 SPECIAL A

Safety Data Sheet

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| <p>1.1 Product name: ISOFLEX LDS 18 SPECIAL A Code-No.: 004 013 08.03.2000</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>2. Composition / information on ingredients Chemical characterization (preparation): Mineral oil, ester oil, lithium soap</p> |
| <p>3. Hazards identification No particular hazards known</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</p> |
| <p>5. Fire-fighting measures Suitable extinguishing media: Water spray, foam, dry powder, carbon dioxide (CO₂) Unsuitable extinguishing media: High volume water jet Special Hazards: In case of fire the following can be released: Carbon monoxide, hydrocarbons 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>6. Accidental release measures Personal precautions: Not required Environmental precautions: Do not flush into surface water or sanitary sewer system Methods for cleaning up / taking up: Use mechanical handling equipment. Dispose of absorbed material in accordance with the regulations Additional information: None</p> |
| <p>7. Handling and storage Advice on safe handling: No special handling advice required Advice on protection against fire and explosion: No special precautions required Requirements on storage rooms and vessels: No special storage conditions required Incompatible materials: Incompatible with oxidizing agents. Do not store together with food Further information on storage conditions: Store at room temperature in the original container</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. Remove soiled or soaked clothing immediately. Clean skin thoroughly after work; apply skin cream</p> |

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| <p>9. Physical and chemical properties Form: paste Colour: yellow Odour: characteristic Drop point: > 190 °C, DIN ISO 2176 Flash point: > 200 °C (base oil) 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: approx. 0.88 g/cm³, 20 °C Water solubility: insoluble pH value: not applicable Kinematic viscosity: not applicable Further information: none</p> |
| <p>10. Stability and reactivity Conditions to avoid: None Materials to avoid: Strong oxidizing agents Hazardous decomposition products: None under normal use Additional information: None</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>12. Ecological information Information on elimination (persistence and degradability): Readily biodegradable (> 70%). Test method: CEC-L-33-A-93 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: Do not discharge product unmonitored into the environment</p> |
| <p>13. Advice on Disposal Disposal: Can be incinerated when in compliance with local, state and federal regulations Dispose of contaminated packaging and recommended cleaning: Offer rinsed packaging material to local recycling facilities</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>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: Labelling according to the Swiss regulations: No toxicological class, BAGT-no. 611 500</p> |
| <p>16. Other information Issue-department of Safety Data Sheet: Chemical Documentation, Tel.: ++49 - 89 7876 - 564</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