

# ISOFLEX® TOPAS L 32 and ISOFLEX® TOPAS L 32 N

Special low-temperature greases



## Description

ISOFLEX TOPAS L 32 and L 32 N have been designed for extremely low temperatures. These greases consist of a synthetic hydrocarbon oil and a special lithium soap. ISOFLEX L 32 and L 32 N are resistant to ageing and oxidation and provide good corrosion protection as well as water resistance. ISOFLEX TOPAS L 32 N also contains a UV indicator, which ensures quality checking even with minimum quantity lubrication.

## Applications

ISOFLEX TOPAS L 32 and L 32 N are especially suitable for the lubrication of small gears used in automotive engineering for electrical adjustment mechanisms, e.g. window lifters, sun roofs, seats, headlamps, fan flaps.

Both products have been approved by renowned car manufacturers, such as

Volkswagen VW TL 778 A  
DaimlerChrysler DBL 6827.40 and  
DBL 6827.41.

ISOFLEX TOPAS L 32 and L 32 N can also be used for:

- Guideways, bowden cables, door locks
- Rolling bearings in small motors, fans, pumps
- Tooth flanks with plastic/plastic (e.g. POM, PA and PE) or plastic/steel material combinations.

## Application notes

The lubricant is applied by spatula, brush, grease gun or cartridge.

## 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

1 kg can  
25 kg bucket  
170 kg drum

ISOFLEX TOPAS L 32 also in  
370 g cartridges

## ISOFLEX TOPAS L 32 and ISOFLEX TOPAS L 32 N

- Synthetic low-temperature greases
- Good corrosion protection
- Resistant to ageing and oxidation
- Biodegradable acc. to CEC-L 33-A-93 (21 d) > 70 %
- Especially suitable for small gears
- L 32 N contains UV indicator

## Product data

Colour	beige
Texture	homogeneous, short-fibred
Density at 20 °C, g/cm <sup>3</sup>	approx. 0.86
Service temperature range*, °C	- 60 to 130
Drop point, DIN ISO 2176, °C	> 185
Worked penetration, DIN ISO 2137, at 25 °C, 0.1 mm	265 - 295
Consistency, NLGI grade, DIN 51818	2
Speed factor**, (n x dm)	1,000,000
Apparent dynamic viscosity, viscosity grade***	L
Corrosion protection, DIN 51802 (SKF-Emcor), testing period 1 week, distilled water	0/1
Water resistance, DIN 51807 pt.1, 3h/90 °C	1 - 90
Flow pressure, DIN 51 805, at - 35 °C, mbar	max. 450

\* 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® TOPAS L 32 and L 32 N

## Safety Data Sheet

<b>1.1 Product name:</b> ISOFLEX TOPAS a) L 32 b) L 32 N <b>Code-No.:</b> a) 004 130 b) 004 227 <b>05.09.2001</b>
<b>1.2</b> Klüber Lubrication München KG <b>Emergency telephone no.:</b> Geisenhausenerstraße 7 <b>++49 - 89 7876 - 0</b> D-81379 München Tel. ++49 - 89 78 76 - 0 telephone exchange Fax: ++49 - 89 78 76 - 333
<b>2. Composition / information on ingredients</b> Chemical characterization (preparation): a) & b) Synthetic hydrocarbon oil, lithium soap; b) UV indicator
<b>3. Hazards identification</b> No particular hazards known
<b>4. First aid measures</b> 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
<b>5. Fire-fighting measures</b> Suitable extinguishing media: Water spray, foam, dry powder, carbon dioxide (CO <sub>2</sub> ) 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
<b>6. Accidental release measures</b> 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
<b>7. Handling and storage</b> 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: Store at room temperature in the original container Incompatible materials: Incompatible with oxidizing agents. Do not store together with food Further information on storage conditions: None
<b>8. Exposure controls / personal protection</b> Additional advice on system design: Not applicable Ingredients and specific control parameters: None Respiratory protection: No special protective equipment required Hand protection: Protective gloves 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

<b>9. Physical and chemical properties</b> Form: paste Colour: beige Odour: characteristic Drop point: > 185 °C, DIN ISO 2176 Flash point: > 200 °C (base oil) Ignition temperature: not applicable Lower explosion limit: not applicable Upper explosion limit: not applicable Vapour pressure-first: not applicable Density: approx. a) 0.85 b) 0.86 g/cm <sup>3</sup> , 20 °C Water solubility: insoluble pH value: not applicable Kinematic viscosity: not applicable Further information: none
<b>10. Stability and reactivity</b> Conditions to avoid: None Materials to avoid: Strong oxidizing agents Hazardous decomposition products: None under normal use Additional information: None
<b>11. Toxicological information</b> The toxicological data has been taken from products of similar composition Acute toxicity: LD <sub>50</sub> /oral/rat = > 2 g/kg (literature data) Chronic toxicity: None Human experience: Prolonged skin contact may cause skin irritation and/or dermatitis
<b>12. Ecological information</b> Information on elimination (persistence and degradability): Readily biodegradable (> 70%). Test method: CEC-L-33-A93 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
<b>13. Advice on Disposal</b> Code of waste: 120 112, Wastes from shaping and surface treatment of metals and plastics; wastes from shaping (including forging, welding, pressing, drawing, turning, cutting and filling); spent waxes and fats Disposal: Can be incinerated when in compliance with local, state and federal regulations. The code of waste has to correspond to the Council Directive 75/442/EEC and be specific as far as the related sector and process are concerned Dispose of contaminated packaging and recommended cleaning: Offer rinsed packaging material to local recycling facilities
<b>14. Transport information</b> 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
<b>15. Regulatory information</b> 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: a) Labelling according to the Swiss regulations: No toxicological class, BAGT-no. 91491
<b>16. Other information</b> Issue-department of Safety Data Sheet: Chemical Documentation, Tel.: ++49 - 89 7876 - 564

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