Klübertop® KB 118
Oil- and grease-soluble anticorrosive lacquer

Description:

Klübertop KB 118 is a ready-to-use, air-drying, single-component lacquer with outstanding anticorrosive properties.

Developed specifically to have minimum environmental impact, Klübertop KB 118 meets the stringent OSHA requirements (U.S. Occupational Safety and Health Administration).

Klübertop KB 118 is free from CHC, CFC and heavy metals.

Application:

Klübertop KB 118 is a reliable anti-corrosive agent for use on all machined and nonmachined parts made of iron, steel or nonferrous metals.

Klübertop KB 118 is especially suitable to preserve the flanks of pinions and gear-wheels of open drives, as are used in rotary kilns, tube mills and similar machines especially in the cement and chemical industries. It is also suitable for the external preservation of chains and cables.

It is not necessary to remove the Klübertop KB 118 coating prior to assembly and operation of the components since it is soluble in oil and grease, and will be rubbed off by mechanical contact.

Klübertop KB 118 has good emergency lubrication properties and is also suitable as an assembly aid for girth gear and pinion drives because the alignment control surfaces are clearly visible during the aligning process.

Application notes:

Klübertop KB 118 is ready to use and can be applied with a brush, a spatula or an airless spray system. The surfaces to be protected must be free from oil, grease, water and rust. If Klübertop KB 118 is applied by means of a spray gun, we recommend to dilute it with Klüber Solution C 8.

The coating thickness depends on the required anticorrosive properties. We recommend the following coating thicknesses:

1. Storage in covered area : ≥ 60 µm
2. Storage in the open: ≥ 120 µm
3. Storage under influence of salt water: ≥ 300 µm

With a thickness of 60 µm and at room temperature (20 – 25 °C), the coating will be surface-dry after approximately 2 hours and ready to handle after 24 hours.

Since Klübertop KB 118 is soluble in oils and greases it is not necessary to remove the lacqueur from the coated parts prior to their assembly or installation, unless required by assembly or design conditions.

Klübertop KB 118 dissolves in oil leaving residues, so in oil circulation lube systems - especially in closed gears - its use depends on the type of oil pump and filters (risk of clogging). For further information, please consult our technical department Klüber Lubrication München KG/MA-LSS.

All environmentally friendly commercial detergents, such as Shellsol A, as well as oils or naphtha solvents can be used for cleaning purposes.

The time required by Klübertop KB 118 to dissolve on surfaces, which have to be cleaned prior to start-up, depends on the curing time, the film thickness as well as the solvent or cleaner used. Use a spatula and a cloth to clean surfaces.

Minimum shelf life:

The minimum shelf life is approx. 12 months if the product is stored in the original closed container in a dry place.

Do not expose Klübertop KB 118 to direct heat (sunlight, radiator, open fire).

Klübertop KB 118

- Single-component lacquer with excellent anticorrosive properties
- Especially suitable for the protection of pinions and girth gears of open drives
- Thoroughly dry and ready to handle after 24 h (with a coating thickness of 60 µm and at room temperature)
- Does not have to be removed prior to the installation and operation of the coated parts because it is soluble in oil and grease
- Suitability in oil circulation systems and closed gears to be checked individually

Pack sizes:

5 kg bucket
20 kg bucket

Product characteristics:

Color	brown
Texture	highly viscous
Density, DIN 51 757, at 20 °C, g/ml, approx.	1.19
Solids	graphite
Apparent viscosity at 25°C shear rate = 300 s^{-1}, mPa x s, approx.	2,300
Flash point, DIN 51 755, °C, approx.	38
Ignition temperature, DIN 51 794, °C, approx.	240
Salt spray test, DIN 50 021-SS, 5% NaCl-solution at 35 °C Coating thickness 60 µm, test duration 50 h Coating thickness 120 µm, after 7 days Coating thickness 300 µm, after 14 days	Test started after 24 h drying at room temperature Corrosion rating = 0 Corrosion rating = 0 Corrosion rating = 0

Klübertop® KB 118
Safety Data Sheet

1.1 Product name: Klübertop KB 118
Code-No.: 047 120
10.11.2000

1.2 Klüber Lubrication München KG
Geisenhausenerstraße 7
D-81379 München
Tel. ++49 - 89 78 76 - 0 telephone exchange
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Emergency telephone no.:
++49 - 89 7876 - 0

2. Composition / information on ingredients
Chemical characterization (preparation): Solid lubricants (graphite), organic binding agent, solvent (hydrocarbons)
Hazardous ingredients

CAS-No.	Components	Value	Symbols	R-phrases
64742-82-1	mineral oil distillate	~ 25%	Xn	10-65

3. Hazards identification
Xn – Harmful
R phrases: 10-65. Flammable. Harmful: may cause lung damage if swallowed. Vapours may form explosive mixture with air

4. First aid measures
After inhalation: Move to fresh air. If symptoms persist, call a physician
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

5. Fire-fighting measures
Suitable extinguishing media: Water spray, foam, dry powder, carbon dioxide (CO_2)
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

6. Accidental release measures
Personal precautions: Risk of slipping due to leakage/spillage of product. Ensure adequate ventilation. Remove all sources of ignition
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

7. Handling and storage
Advice on safe handling: Use only in well-ventilated areas
Advice on protection against fire and explosion: Keep away from sources of ignition – No smoking. Take precautionary measures against static discharges. Vapours may form explosive mixture with air
Requirements on storage rooms and vessels: Use steel or stainless steel containers
Incompatible materials: Incompatible with oxidizing agents. Do not store together with food
Further information on storage conditions: Keep in a well-ventilated place. Keep away from heat

8. Exposure controls / personal protection
Additional advice on system design: Provide appropriate exhaust ventilation at machinery
Ingredients and specific control parameters: Observe your national control parameters
Respiratory protection: No special protective equipment required
Hand protection: Protective gloves
Eye protection: Safety glasses
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 breath vapours or spray mist

9. Physical and chemical properties

Form	viscous
Colour	brown
Odour	characteristic
Boiling point	> 145 °C
Flash point	~ 35 °C, DIN ISO 1516
Flammability	flammable
Ignition temperature	approx. 240 °C, DIN 51 794
Autoflammability	no data available
Lower explosion limit	approx. 0.6 Vol.%
Upper explosion limit	approx. 8.0 Vol.%
Vapour pressure-first	approx. 4 hPa, 20 °C
Density	approx. 1.18 g/cm^3, 20 °C, DIN 51 757
Water solubility	insoluble
pH value	not applicable
Kinematic viscosity	not applicable
Further information	none

10. Stability and reactivity
Conditions to avoid: Do not heat above flash point
Materials to avoid: Strong oxidizing agents
Hazardous decomposition products: None under normal use
Additional information: None

11. Toxicological information
The toxicological data has been taken from products of similar composition
Acute toxicity: LD_{50}/oral/rat = > 2 g/kg (literature data)
Chronic toxicity: None
Human experience: Prolonged skin contact may cause skin irritation and/or dermatitis. Solvents may degrease the skin

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

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

14. Transport information
GGVS / GGVE: Cl. 3, no. 31c
Name: Turpentine substitute solution
ADN / ADNR: not classified
IMDG-Code: Class 3.3 UN number: 1300 UN packaging group: III
EMS: 3-07 MFAG: 311. No Marine-pollutant
Name: Turpentine-substitute solution
ICAO / IATA-DGR: Class 3 UN/ID number: 1300 ICAO-packaging group: III
Name: Turpentine-substitute solution
Further information: None

15. Regulatory information
Labelling according to EU-guidelines: The product is classified and labelled in accordance with EC-directives/German regulations on dangerous substances
Hazards: Xn – Harmful
Hazardous component(s) to be indicated on label: Mineral oil distillate
R phrases: 10-65. Flammable. Harmful: May cause lung damage if swallowed
S phrases: 23-51-62. Do not breathe vapour / spray. Use only in well-ventilated areas. If swallowed, do not induce vomiting: Seek medical advice immediately and show this container or label
National regulations

16. Other information
Changes: 25.02.97: Labelling according to directive 96/54/EEC (22. ATP)
Issue-department of Safety Data Sheet:
Chemical Documentation, Tel.: ++49 - 89 7876 - 564

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