

UNIMOLY® RAP

Black multi-purpose lubricating paste



Description:

UNIMOLY RAP is a black, highly concentrated solid lubricating paste consisting of paraffinic mineral oil, silicate and a solid lubricant mixture (MoS₂ and graphite).

The materials used in the manufacture of this product contain no lead, cadmium, nickel or halogens.

This paste prevents running-in damage in plain bearings, gears and bushings, as well as scoring marks in interference and snug fits.

Pack sizes:

0.7 kg grease cartridge
0.75 kg can
25 kg drum

UNIMOLY RAP

- Free of metals
- Protects against running-in damage and prevents seizure
- Prevents stick slip
- Ensures low friction under low and high loads
- Approved by Ford (SM1C-4505-A)

Application:

For easy sliding movements when pressing in pins, bolts and bushings, and for the lubrication of slideways, cam plates, dovetail guides, and pivoting bearings.

Application notes:

Apply a thin layer to the clean metal surface. Rubbing in is not required since highly active ingredients ensure immediate adhesion of MoS₂.

Minimum shelf life:

The minimum shelf life is approx. 24 months if the product is stored in the original closed container in a dry place.

Product data:

Colour	black
Texture	homogeneous, short-fibred
Density, DIN 51 757, at 20 °C, g/cm ³ , approx.	1.60
Worked penetration, at 25 °C, DIN ISO 2137, (ASTM D 217); 0.1 mm	250 to 270
Service temperature range*, °C, approx. dry lubrication from approx.	– 10 to 450 160
Base oil viscosity, DIN 51 561, at 40 °C, mm ² /s, approx.	70
Four-ball test, welding force, DIN 51 350 Pt 4, N	> 2400
Friction coefficient Pressfit test at 25 °C Tannert sliding indicator at 25 °C 50 N 200 N	0.07 0.07 0.054

* 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 mechanical loads, time, pressure and temperature. These changes in product characteristics may affect the function of a component.

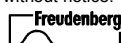
UNIMOLY® RAP

Safety Data Sheet

1.1 Product name: UNIMOLY RAP Code-No.: 011 064 23.11.2000
1.2 Klüber Lubrication München KG Geisenhausenerstraße 7 D-81379 München Tel. ++49 - 89 78 76 - 0 telephone exchange Fax: ++49 - 89 78 76 - 333 Emergency telephone no.: ++49 - 89 7876 - 0
2. Composition / information on ingredients Chemical characterization (preparation): Paraffinic mineral oil, silicate, solid lubricants (graphite, MoS ₂)
3. Hazards identification No particular hazards known
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
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: 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
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
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

9. Physical and chemical properties Form: paste Colour: black Odour: characteristic Drop point: none, 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. 1.60 g/cm ³ , 20 °C Water solubility: insoluble pH value: not applicable Kinematic viscosity: not applicable Further information: none
10. Stability and reactivity Conditions to avoid: None 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
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: not applicable ADN / ADN: not applicable IMDG-Code: not applicable ICAO / IATA-DGR: not applicable Further information: Not classified as dangerous in the meaning of transport regulations
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
16. Other information 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