

# Klüberail ALO 32-250

Speciality lubricant for railway overhead lines



## Your benefits at a glance

- Lower friction between wire and contact strip reduces overhead line wear
- Very good adhesion enables trouble-free operation over a wide temperature range - no lubricant dropping off the overhead line
- Good resistance to water washout enables longer relubrication intervals
- Less overhead line vibration and significantly lower noise caused by moving trains
- Better contact between wire and contact strip leading to higher transmission rate
- Better contact reduces generation of sparks and electric arcs
- Eco-friendly as base oil is rapidly biodegradable

## Your requirements - our solution

Do your overhead lines require lubrication? Is wear on your wires too high? Then you might want to test our speciality lubricant Klüberail ALO 32-250, which was specifically developed for the lubrication of overhead lines. This lubricant enables a lower friction coefficient between the wire and the contact strip and hence lower wear. Furthermore, it leads to a better electrical contact, reducing spark generation and enhancing the transmission rate. You will see that Klüberail ALO 32-250 adheres well to the wire and does not drop off. This and the lubricant's good resistance to water washout result in expected lubricant consumption and maintenance times being reduced considerably. Further strong points of our lubricant are lower noise caused by moving trains as well as a vibration-reducing effect on the overhead line.

Your outdoor-mounted overhead lines are exposed to UV radiation. Our speciality lubricant is highly resistant to UV radiation and thus to gumming even in intense sunlight over long time periods. As its base oil is rapidly biodegradable, Klüberail ALO 32-250 is an eco-friendly product.

## Application

Railway and tramway overhead lines.

## Application notes

Klüberail ALO 32-250 was especially developed for countries with a hot climate. For colder climates, Klüberbio LO 32-2500 is preferable.

The lubricant is applied by means of automatic immersion bath / brush systems.

## Material safety data sheets

Material safety data sheets can be requested via our website [www.klueber.com](http://www.klueber.com). You may also obtain them through your contact person at Klüber Lubrication.

Pack sizes	Klüberail ALO 32-250
Bucket 25 kg	+
Drum 180 kg	+

Product data	Klüberail ALO 32-250
Article number	009040
Lower service temperature	-25 °C / -13 °F
Upper service temperature	80 °C / 176 °F
Colour space	black
Texture	homogeneous
Texture	short-fibred



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Product data	Klüberail ALO 32-250
Density at 20 °C	approx. 0.94 g/cm <sup>3</sup>
Worked penetration, DIN ISO 2137, 25 °C, lower limit value	355 x 0.1 mm
Worked penetration, DIN ISO 2137, 25 °C, upper limit value	385 x 0.1 mm
Flow pressure of lubricating greases, DIN 51805, test temperature: -25 °C	<= 1 400 mbar
Drop point, DIN ISO 2176	>= 120 °C
Four-ball tester, wear factor, DIN 51350 pt. 05, 1 h/400 N, wear scar diameter	<= 0.8 mm
Minimum shelf life from the date of manufacture - in a dry, frost-free place and in the unopened original container, approx.	24 months

## Klüber Lubrication – your global specialist

Innovative tribological solutions are our passion. Through personal contact and consultation, we help our customers to be successful worldwide, in all industries and markets. With our ambitious technical concepts and experienced, competent staff we have been fulfilling increasingly demanding requirements by manufacturing efficient high-performance lubricants for more than 80 years.

**Klüber Lubrication München SE & Co. KG /  
Geisenhausenerstraße 7 / 81379 München / Germany /  
phone +49 89 7876-0 / fax +49 89 7876-333.**

The data in this document is based on our general experience and knowledge at the time of publication 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 field tests with the product selected for a specific application. All data are guide values which depend on the lubricant's composition, the intended use and the application method. The technical values of lubricants change depending on the mechanical, dynamical, chemical and thermal loads, time and pressure. These changes may affect the function of a component. We recommend contacting us to discuss your specific application. If possible we will be pleased to provide a sample for testing on request. Klüber products are continually improved. Therefore, Klüber Lubrication reserves the right to change all the technical data in this document at any time without notice.

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