Discover the new dimension of anti-friction coatings

The new dimension of anti-friction coating technology

A perfect solution
Anti-friction coatings are touch dry lubricant solutions which, in their formulation resemble common industrial varnishes. They contain solid lubricants as pigments and resins as bonding agents. With the anti-friction coatings of the Berucoat MC product series a new era of anti-friction coating technology has started.

For these new products an innovative microcapsule technology is used. Ball type containers, which are visible by microscope only, are filled with a special lubricant and embedded in a varnish layer.

Lubrication on demand
The microcapsules of this new type of anti-friction coating release the lubricant at the friction or lubrication point only when load is applied. From this moment an extremely powerful lubricating film between the friction partners is formed.

Highest performance
The new lubricant product excels above all by its outstanding product lifetime. Comparative examinations on the vibrational wear test rig (see graph “Performance – Berucoat MC”) have shown that the BECHEM anti-friction coating with microcapsule technology achieves a three times longer lifetime compared to conventional high-performance anti-friction coatings.

Easy handling, versatile use
Embedded in a water-based lacquer system the microcapsules can be applied at the point to be lubricated. As is the case for conventional anti-friction coatings application is also possible by dipping, spraying or in bulk.

In view of the low drying temperature the product is well suited as a coating agent for temperature-sensitive plastic materials. Further advantage: the anti-friction coating offers the possibility of colour adjustment.

Innovative technology for your application
Provides high performance (Benchmark) in various applications. The plastic microcapsules are embedded in a varnish for the automotive industry, chemical engineering and machinery manufacturing.

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Possible fields of application of Berucoat MC are e.g. users in the automotive industry, chemical engineering and machinery manufacturing.

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Berucoat MC

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In view of the fact that the temperature at which the product is used is an influencing factor for the formation of the friction protecting layer, BECHEM has also developed a new technology for their application. Thanks to the innovative microcapsule technology the friction or lubrication points can be treated in situ.

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Innovative technology for your application

Possible fields of application of Berucoat MC are, e.g., in the automotive industry, construction engineering and setting manufacturers.

Lubrication Solutions for Industry

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Thank you for your interest in our products. For further information, please contact BECHEM.

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Berucoat MC

Thanks to the innovative microcapsule technology the frictions or lubricating parts remain touch dry. Although a liquid lubricant is used, there will be no contamination of the lubricating point.

Easy handling, versatile use

Easily handled, this new type of anti-friction coating can be applied at the point to be lubricated. As in the case of conventional anti-friction coatings, application is also possible by dipping, spraying or in bulk.

In view of the low drying temperature the product is well suitable as a coating agent (the temperature-sensitive plastic material). An added advantage of the anti-friction coating is the possibility of colour adjustment.

Innovative technology for your application

The microcapsules of the Berucoat MC product series are a standard in the automotive industry, chemical engineering and fitting manufacturers.

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For these new products an innovative microcapsule technology is used. Ball type containers, which are only visible by microscope only, are filled with a special lubricant and embedded in a varnish matrix.

Lubrication on demand

The microcapsules of this new type of anti-friction coating release the lubricant at the friction or lubrication point only when load is applied. From this moment an extremely powerful lubricating film between the friction partners is formed.

High performance

The new lubricant product excels above all by its outstanding product lifetime. Comparative examinations on the vibrational wear test rig (see graph "Performance – Berucoat MC") have shown that the BECHEM anti-friction coating with microcapsule technology achieves a three times longer product lifetime compared to conventional high-performance anti-friction coatings.

Easy handling, versatile use

As with conventional anti-friction coatings, Berucoat MC can be applied by dipping, spraying or in bulk.

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PHASE 1:
Component coated with Berucoat MC anti-friction coating prior to contact with a friction partner.

FUNCTIONALITY – Microcapsule technology

Cross section: closed microcapsule anti-friction coating layer coated component microcapsules lubricant Berucoat MC / water-based MoS2 anti-friction coating / solvent-based

PERFORMANCE – Berucoat MC vs. MoS2 anti-friction coating

A comparative vibrational wear test between a conventional, solvent-based MoS2 coating and a water-based anti-friction coating of the Berucoat MC series clearly shows the differences in the course of the friction coefficient. The friction values of the new Berucoat MC remain constant whereas the course of the MoS2 coating is relatively inconsistent.

TEST:
Comparative vibrational wear test with Berucoat MC and a conventional MoS2 anti-friction coating

The application of innovative microcapsule technology allows a three times higher lifetime of the new anti-friction coating compared to conventional coatings. Only after a few hours the MoS2 reference coating will break down, permitting metal-to-metal contact leading to scuffing wear. In practice this would mean that the lubricated parts can hardly be moved and there will be damages to the materials. In contrary, Berucoat MC offers a considerably extended lifetime.

PHASE 2:
Component coated with Berucoat MC anti-friction coating during the contact [fig. 2a] and after the contact [fig. 2b] with a friction partner.

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Comparative vibrational wear test with Berucoat MC and a conventional MoS2 anti-friction coating

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- material protecting thanks to long lifetime
- lubricating points remain touch dry
- no contamination of the lubrication point
- low drying temperature
- colour adjustments possible

Consistent friction value

Touch dry

Lubrication on demand

Up to three times higher lifetime

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**PHASE 1:** Component coated with Berucoat MC anti-friction coating prior to contact with a friction partner.

**FUNCTIONALITY – Microcapsule technology**
- Component coated with Berucoat MC anti-friction coating
- Microcapsule technology

**PERFORMANCE – Berucoat MC vs. MoS2 anti-friction coating**
- Comparison of vibrational wear test between Berucoat MC and conventional MoS2 coating
- Berucoat MC coating offers up to three times higher lifetime
- Material protecting thanks to long lifetime
- Lubricating points remain touch dry
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- Low drying temperature
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**PHASE 2:** Component coated with Berucoat MC anti-friction coating during the contact [fig. 2a] and after the contact [fig. 2b] with a friction partner.

**TEST:** Comparative vibrational wear test with Berucoat MC and a conventional MoS2 anti-friction coating

- Cross section: open microcapsule
- Lubricant layer
- Friction partner
- Coated component
- Touch dry
- Consistent friction value
- Lubrication on demand

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