

# Solutions for Metalworking in E-Mobility

MOVING YOUR WORLD



## FUCHS meets the Challenge of E-Mobility

The automotive industry agrees that climate targets cannot be achieved without electrification. The vehicle manufacturers invest heavily: more and more hybrid, battery and fuel cell vehicles are being announced.

So, the electromobility redefines the whole automotive industry and the requirements for the fluids which are used in the production and operation of the vehicles. In addition to the existing aspirations, there are further ones, which also pose new challenges for the component manufacturers. Changes in the used materials, their machining and their compatibility are particularly evident.

As a full-range supplier, FUCHS offers its customers the entire portfolio of metalworking media, cleaners and corrosion protection through to operating lubricants. Fluids which ensure efficient and environmentally friendly production and operation. By knowing the formulations, FUCHS can offer matched systems to ensure compatibility and maximum performance.



# Changes in Production Technologies

Today it is already certain, that the increasing electrification of the powertrain will result in a change of the conventional machining operations. This includes, among other things, the machining production processes of drilling, turning, milling and grinding. In addition, the striven lightweight construction requires the use of new materials.

Besides the known steel materials, light metals such as aluminium and magnesium as well as the composite materials GRP and CFRP will gain in importance in the future.

In addition, new materials such as combinations of light metal and steel or light metal and GRP/CFRP are used more and more.

But also, nonferrous metals, especially copper, and other active materials have to be increasingly processed. The aforementioned changes in the production technologies also affect the used metal working fluids.

## ECOCOOL EV Series

FUCHS developed the ECOCOOL EV series to meet the new challenges posed by electromobility. With these water-miscible cooling lubricants, the company offers its customers products which meet the new technical and legal requirements.



Electric motors component: rotor

### ECOCOOL EV BM

- optimized for nonferrous machining
- high emulsion stability
- good copper compatibility
- reduced copper redemption

### ECOCOOL EV C

- suitable for composites machining
- enables a good filtration of ultra-fine particles
- excellent foam behaviour
- prevents delamination
- prevents ultra-fine particles in the machine

### ECOCOOL EV G

- multifunctional use for cast, aluminium and steel
- optimum wetting, cooling and flushing performance
- low misting
- good filterability
- good lubrication effect

### ECOCOOL EV MG

- optimized for magnesium machining
- high emulsion lifetime and stability
- inhibit sustainably magnesium deposition
- reduced hydrogen formation
- inhibit magnesium soaps

Please refer to the product information for more details to the respective products.  
If you have any further questions, please do not hesitate to contact our application engineers.

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#### Note

The information contained in this product information is based on the experience and know-how of FUCHS LUBRICANTS GERMANY GmbH in the development and manufacturing of lubricants and represents the current state-of-the-art. The performance of our products can be influenced by a series of factors, especially the specific use, the method of application, the operational environment, component pre-treatment, possible external contamination, etc. For this reason, universally-valid statements about the function of our products are not possible. Our products must not be used in aircraft or spacecraft. Our products may be used in the manufacture of components for aircraft or spacecraft if they are removed without residue from the components prior to assembly into the aircraft or spacecraft. The information given in this product information represents general, non-binding guidelines. No warranty expressed or implied is given concerning the properties of the product or its suitability for any given application. We therefore recommend that you consult a FUCHS LUBRICANTS GERMANY GmbH application engineer to discuss application conditions and the performance criteria of the products before the product is used. It is the responsibility of the user to test the functional suitability of the product and to use it with the corresponding care. Our products undergo continuous improvement. We therefore retain the right to change our product program, the products, and their manufacturing processes as well as all details of our product information sheets at any time and without warning, unless otherwise provided in customer-specific agreements. With the publication of this product information, all previous editions cease to be valid. Any form of reproduction requires express prior written permission from FUCHS LUBRICANTS GERMANY GmbH.  
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