

## **Wevo potting compounds for fans facilitate state-of-the-art ventilation technology**

**Ostfildern-Kemnat, Germany. Rising energy prices mean that not only efficient heating and cooling of buildings but also good ventilation is becoming an ever more important issue. In industrial environments, in agriculture and increasingly in private homes, too, ventilation systems provide the necessary circulation and temperature control of indoor air. Fans are one of the key features of these systems, but their electronic components are at risk from dust, insects and corrosive environments. In operation, their built-in motors also have to withstand the generated heat. To meet these challenges, WEVO-CHEMIE GmbH has developed potting compounds based on polyurethane and epoxy that are specifically tailored to use with fans and ensure individual protection and a long service life.**

The range of scenarios where targeted ventilation is required is wide: electronic systems need air cooling to protect them from overheating, while refrigerated warehouses extend the shelf life of many goods. In industrial buildings it may be necessary to extract waste air, in addition to controlling temperature – as is the case in car tunnels, for example, too. For some medical devices it is vital to supply fresh air at an appropriate temperature, for instance when patients are scanned in an MRI machine. At the same time, air exchangers and air purifiers for work spaces and recreation rooms ensure that the proper air quality is provided – particularly important since the start of the COVID pandemic. And in stables and cowsheds, ventilation systems make sure that fresh air is supplied at the right flow rate, the correct temperature and moisture level in summer, and that air circulates as needed. What all these applications have in common is that they need fans, which contain electronics and motors for which Wevo potting compounds provide protection and efficient thermal management.

### **Potting of electronics**

The control unit of fan motors is considered one of the sensitive electronic components. The closely packed PCBs need to be protected against complex ambient conditions, such as dust, insects, gases, vapours, moisture or vibrations and shocks. This is the only way to prevent potential short circuits. To make sure that no such damage occurs, Wevo has optimised potting compounds based on polyurethane and epoxy in terms of their chemical resistance and hydrophobic properties. In addition, the viscosity can be adjusted and hence also the flowability can be selectively controlled so that gaps

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and interior spaces can be completely filled. This ensures both electrical insulation and reliable copy protection.

In agricultural installations, for example stables or cowsheds, corrosion protection has a crucial part to play. This is because ammonia and hydrogen sulphide in the air can cause considerable chemical attack and corrosion to the materials. The Wevo products developed for these purposes have been optimised for their resistance to these media through the choice of specific raw materials and fillers. As well as this, Wevo has adjusted the reactivity and the flow characteristics of the products to speed up processing of the materials in the production process. Optimising the composition and using suitable catalysts also makes it possible to carry out fast hardening in convection ovens, using infrared radiators or through induction.

### **Wevo solutions for stators**

In addition, Wevo has developed thermally conductive polyurethanes and epoxy resin-based solutions for the potting of stators. They ensure reliable heat dissipation thanks to the use of special fillers. The high temperature resistance of the materials, up to 180 °C, also enables them to be used in motors of insulation classes F and H. Furthermore, the low viscosity and vacuum potting ensure full impregnation of the laminated cores and windings with no air bubbles or cavities. This protects motors against partial discharge and electrical breakdowns.

### **About Wevo**

*WEVO-CHEMIE GMBH is an international, independent, family-run chemicals company headquartered in Germany and with further companies in Asia, China and the USA. Wevo develops and manufactures innovative potting applications as well as special bonding and sealing applications based on polyurethane, epoxy and silicone – primarily for applications in electrical and electronic components. Wevo products protect sensitive components against chemicals, vibration, foreign bodies, dust, moisture and high temperatures.*

## Press information

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