

Wevo products enable modern environmental technologies

Ostfildern-Kemnat, Germany. Air quality control, water treatment and waste separation are key aspects of modern environmental technologies. Depending on the application, the increasingly smart components necessary for this purpose have to be reliably protected from challenging environmental conditions such as dust and moisture, aggressive media or mechanical stresses, for example due to vibration. WEVO-CHEMIE GmbH's specially developed potting compounds and adhesives based on polyurethane, epoxy resin and silicone offer customised solutions for a wide range of requirements and applications.

Often permanently installed under water, buried in the ground, near busy roads or on their surfaces – digitalised environmental technologies create a need for sensitive electrical and electronic components. Their job is to enable environmental parameters like temperature, pressure, pollutants or filling levels to be monitored in real time. The antennas, transponders, measuring instruments or sensors required for this purpose are reliably protected against environmental influences such as moisture, rain, salt or exhaust emissions using customised polybutadiene- or silicone-based potting compounds from Wevo. Interference-free transmission of radio waves is likewise assured.

Safe and durable components for smart water management

Digital sewer manholes send an alert if the strainer is full, helping to prevent flooding. Also, to avoid overloading the sewer systems and flooding roads or underpasses, flow meters provide timely warnings to sewage treatment plants in the event of heavy rain, storm surges or other adverse weather conditions. Waste water flows can be diverted into storm water retention basins in this way before it gets too late. Wevo potting compounds protect essential components not only from moisture but also from mechanical loads, for instance when a vehicle drives over a manhole.

Wevo materials are additionally used in irrigation and drainage pumps: silicone gels protect sensitive electronic components against moisture, for example – their high elasticity and low glass transition temperature guarantee reliable operation even at very low outdoor temperatures. Moreover, if the stator of the pump motor is fully encapsulated without voids in, heat is dissipated efficiently because the specially developed polyurethane and epoxy resin potting compounds are thermally conductive and resistant to high temperatures. The motor accordingly operates reliably over a long period.

Wevo products for air and water filters

Amongst other things, Wevo adhesives and potting compounds based on epoxy resin and polyurethane provide high chemical resistance in filtration plants for treating drinking and waste water or for seawater desalination. Their adapted flow properties and good adhesion ensure a reliable bond between the filter media – ceramic materials or polymeric hollow fibers, for example – and the filter module housing. Wevo products are therefore suitable for potting filter elements. In addition, the company has developed adhesives and potting compounds based on silicone and transparent polyurethane for manufacturing of UV water disinfection lamps. With their high resistance to UV radiation and oxidation, they also can withstand the aggressive UV-C radiation from the disinfection lamps while their low water absorption moreover is the key to a long service life.

Industrial filter systems for air quality control and pollution reduction are particularly challenging to construct. Protection against production emissions – in other words, ultra-fine particles like oil or dust – guarantees compliance with prescribed limits. Wevo materials combining good adhesion with high chemical resistance enable reliable fixation of the filter media in the filtration module or housing and hence efficient, leak-free purification of waste air.

Long-lasting components for state-of-the-art waste management

When it comes to waste treatment, Wevo products are used in magnetic and induction sorting systems that achieve efficient metal recovery from mixed waste. The polyurethane and epoxy potting compounds offer optimised adhesion and low thermal expansion here. Full potting of the sensitive coils, and in some cases even the entire housing, makes hermetic sealing possible inside the sorting system's stainless steel frame – for reliable protection. Furthermore, the fillers provide minimal heat release with low shrinkage while curing, leading to even better adhesion.

Last but not least, Wevo products can be found in smart waste containers: the specially adjusted dielectric properties of the polybutadiene and silicone potting compounds protect transponders and antennas reliably against moisture ingress as well as aggressive decomposition gases and condensates. Thanks to interference-free data transmission, the containers can be emptied as needed.

Press information

27 April 2023



Image description and source

Customised potting compounds from Wevo support smart water management technologies (Image source: © nordroden – stock.adobe.com).

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 contact

Alexandra Heißenbüttel

Dr. Neidlinger Consulting

Phone: +49 711 167 617-712

Email: press@wevo-chemie.com