

## Momentive Performance Materials

### Thermally Conductive LSR with Short Processing Time

At Fakuma, Momentive Performance Materials will be showcasing thermally conductive liquid silicone rubber (LSR) grades designed for high-temperature applications. These LSRs, known as NL9360 and



Processing of the low-temperature-cured LSR will be demonstrated at Momentive's booth © Momentive

NL9330, have a thermal conductivity that renders them ideal for dissipating heat from sensitive components. They are intended for use in, e.g., the manufacture of components found in the drive and charge-management systems of electric vehicles and for other electronic devices. Thermally conductive NL9360, which has a hardness of 60 Shore A,

is designed for injection molding and, says Momentive, combines short processing times with high stability and flexibility. It has a low compression set of just 10% and a thermal conductivity of 1.5 W/(m·K), or about five times that of conventional LSR. NL9330, which has a hardness of 30 Shore A, is said to be just as thermally conductive and has also been developed for injection molding. It has a compression set of just 9%.

Both LSRs have been specified for the production of heat-conducting pads and gaskets, as well as cooling units under the hood. Momentive claims they are resource-efficient and low-maintenance due to their low weight and longevity, compared to alternative materials.

The polymers manufacturer will also be exhibiting low-temperature-cure liquid silicone rubber (LTC-LSR). This crosslinks at just 110°C, and thus at a significantly lower temperature than hitherto available types. According to Momentive, tests showed that the mold temperature can be reduced by 30°C as a result, without the need to extend the heating time. Instead of lowering the processing temperature, there is also the possibility of reducing the crosslinking time, relative to that of a standard LSR. Apparently, it can be reduced by up to 45%.

According to the company, this also opens up new material combinations for LSR, such as a combination with heat-sensitive polymers. Downstream annealing is not required. Parts are produced faster and the risk of burns during demolding is reduced. At its booth, Momentive will be demonstrating how the material is processed on an electric All-rounder 470 A injection molding machine from Arburg.

» **Hall A4, booth 4307**

## Lehvoss

### Replacing Metals with PPA Compounds

Lehvoss will be coming to Fakuma with compounds for lightweight construction applications, including those intended to serve as metal substitutes. These include a carbon fiber-reinforced compound based on polyphthalamide (PPA) from the company's Luvocom XCF range. It is said to have a strength of 425 MPa, a stiffness of 47 GPa, a tensile elongation of 1.4% and an impact strength of 100 kJ/m<sup>2</sup>. These properties render it an alternative to lightweight metals in many applications, according to Lehvoss. By virtue of its low density of 1.37 g/cm<sup>3</sup>, the product is notable for its high specific modulus of elasticity and high specific strength.

The XCF technology employed by Lehvoss in this compound can be transferred to all thermoplastics. The company currently offers products based on polyamide 66 (PA66), PPA, polyphenylene sulfide (PPS) and polyether ether ketone (PEEK). The manufacturer says that the compounds can be processed on standard injection molding machines and molds.

For lightweight applications that must offer a combination of high chemical resistance and good mechanical properties, Lehvoss offers the compound Luvocom 60–50097. This is based on a polypropylene (PP) matrix material and is reinforced with carbon fibers. According to the company, it represents an alternative to previously available carbon- and glass fiber-reinforced materials based on PA6 and PA66. According to manufacturer, the compound has a strength of 170 MPa, a stiffness of 18 GPa and an impact strength of 11 kJ/m<sup>2</sup>.

» **Hall B1, booth 1109**

## Albis

### All Things Sustainable

This time around, polymers distributor Albis will be focusing on sustainable products and will be presenting materials based on recycled products or renewable resources aimed at various industrial sectors. These will include materials from BASF, Covestro, Ineos Styrolution, Lanxess, LyondellBasell and Solvay. On display, for example, from Lanxess, will be Durethan Eco, which contains recycled glass fibers, and Poca Eco compounds that contain recycled post-consumer PET. Also on display will be Amodel Bios, the latest PPA from Solvay, which is based in part on sustainable raw materials and produced with 100% green electricity.

As for polymers with PCR content, Albis will be exhibiting ABS, HIPS and PP from MBA Polymers, and ABS, PP, HIPS and PC+ABS blends from MGG Polymers. The latter company also offers EvoSource PCR materials for highly demanding applications. From SK Chemicals, Albis will be showcasing Ecozen, the world's first transparent, bio-modified copolyester, and Ecotran, a PPS. The distributor says that this product is unique in its field because it is chlorine-free.

Also on display at Albis' booth will be Sipolprene S and Technipol Bio from Sipol. These bio-based materials are produced from vegetable-oil by-products and intended applications include footwear, textiles and components for compounding biodegradable engineering polymers. The distributor will also be showcasing compounds from its sister company Wipag, such as carbon fiber-reinforced compounds for injection molding.

» **Hall A3, booth 3105**