

How can we help billions move safely?

Explore innovative prototypes at K 2019

Modern transport brings people, goods and ideas closer together. To ensure this happens more efficiently, the automotive industry must keep collaborating with creativity and purpose.

At K 2019, you can explore how we're working with a wide range of partners to develop sustainable and energy-efficient solutions.

We'll be showcasing over 140 prototypes at our stand (Hall 8A, K48). Below you'll find a list of those connected to our **MOVE** domain.

While you can get a general overview of our prototypes on this page, K 2019 will provide a perfect platform to explore them. Here you can meet our experts and ask challenging questions, exchange ideas and visions and forge new relationships. We'll be there to listen, learn, discuss and be inspired. What challenges will you explore with us at K 2019?

Move

Prototype	Description
NORDEL™ EPDM for automotive applications	Designed to help meet OEM requirements in lightweighting, passenger comfort and aesthetics, NORDEL™ EPDM grades enable faster processing, Class A surfaces and superior mechanical performance. NORDEL™ EPDM produced using advanced molecular catalyst (AMC) technology outperforms traditional Ziegler-Natta grades with ~50% less environmental impact. On display: sealing systems, hoses and belts.
Oil bleed Si Elastomers for connector seals	Oil bleed LRSs, such as SILASTIC™ 9202-50 LSR, are specifically developed for connectors in automotive applications. Silicone connectors need to work perfectly throughout the vehicle's lifetime. In the engine compartment, high temperatures, dirt, moisture and fuel vapors negatively affect power cables and connectors. Thanks to the oil bleed LSR, silicone connector seals have a microscopic film of water-repellent silicone fluid that additionally serves as lubricant during assembly.
Moldable optical silicones	Moldable optical silicones are designed for automotive and general lighting applications. Their viscosity and curing speed are optimized for the injection molding process of silicone rubber. This enables the production of optics with various hardness, including designs with negative draft angles. Their high light transmittance, together with low attenuation coefficient and low haze, enables lighting companies to design optics for luminaires with high lumen efficiency. Their high photothermal stability ensures the retaining of stable optical performances – even in harsh environments and with high power LED light sources. Highly white reflecting moldable optical silicones are also available for the design of reflectors and light mixing chambers.
Fluorosilicone elastomers for turbocharger hose	Turbocharger Hoses (TCH) typically consist of a multilayer structure of textile reinforced silicone rubber with an oil-resistant fluorinated-rubber inner liner. A key property requirement for TCHs is high temperature resistance combined with acid resistance, due to exhaust gas recirculation (EGR). This technology is mainly used in diesel engine production. FSR TCHs are also an enabler to the petrol hybrid drive train where lower engine size is required to reduce weight but a need for increased power still exists – which is why the turbocharger is needed.

Move

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Acoustic solutions for mobility	BETAFOAM™ and SPECFLEX™ technologies offer superior acoustic solutions for best-in-class interior, cavities and powertrain sound thermal insulation. These sound insulating materials and components have a broad density range and stiffness, with excellent fire resistance and ease of processing.
TPO automotive parts for interior and exterior applications	On display, you will find a range of interior/exterior automotive parts based on ENGAGE™ Polyolefin Elastomers (POE), including bumper fascia, rear closures and airbag covers. Our next generation ENGAGE™ POE grades are enabling further vehicle lightweighting and improved manufacturing efficiencies.
Fluorosilicone elastomers seals and gaskets	Fluorosilicone rubber compounds made with SILASTIC™ are effectively applied in o-rings and gaskets. These compounds enable products which are fuel resistant and flexible in both heat and cold. They provide good compression set resistance and stress relaxation properties. In addition, they create products with low swell and high tear strength.
Precision pouring AdBlue pouch	Durable and flexible PacXpert™ packaging, delivering AdBlue automotive solution. Providing optimal storage efficiency, PacXpert™ packaging reduces storage costs. Efficient handling and precision pouring ensure the AdBlue product empties faster.
Reusable windshield cleaner kit	Automotive windshield cleaner kit using reusable PacXpert™ flexible packaging. The consumer fills the pouch with fresh water, adds the supplied windshield tablets and shakes it to create the cleaning solution. The durability of PacXpert™ ensures the pouch can be reused multiple times without losing its strength. Lightweight and compact, the durability of PacXpert™ ensures it stores easily in any vehicle's glove box.
Lightweight interior solutions	Automotive seats and instrument panels utilizing SPECFLEX™, DOWLEX™, ENGAGE™ and NORDEL™ interior solutions improve fuel efficiency leading to lower CO ₂ emissions. This technology creates thinner and lighter foams with high dynamic comfort and low VOC/FOG and odor emissions, achieving healthier vehicle interiors through the reduction of volatile and odor pollutants.
TPO SUV tailgate	SUVs are increasingly becoming the consumers' vehicle of choice due to comfort and space. With this trend, comes the opportunity to lightweight the tailgate. By developing a TPO tailgate module to replace metal tailgates, the overall vehicle weight can be reduced, which contributes to improved fuel efficiency in ICE vehicles and driving range in EVs.
High heat resistant hose	Higher heat resistance is critical for the under-the-hood parts, such as coolant hose, due to higher engine temperature. Longer service life and higher heat aging specification can be expected by using high temperature base resin solution. Dow NORDEL™ EPDM's value propositions include better long-term heat resistance in today's smaller, more powerful engine compartments, along with superior low temperature flexibility, longer hose lifetime, and balanced processability and physical properties.
Air filter	Air filters are cleaning devices that capture unwanted, sometimes harmful particles, such as dust, bacteria, molds and odors from the air. It promotes cleaner air circulating in buildings, cars and our home. Hot melt adhesives are widely used to fix the pleats in the air filter in order to increase the surface area contained within a given volume of space.
Nylon cable tie	Polyamide (PA) thermoplastic resins offer an excellent balance of processability and performance properties. Dow offers a strong product portfolio including multiple technologies, addressing various PA impact modification needs.

Move

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Nylon fastener	Polyamide (PA) thermoplastic resins offer an excellent balance of processability and performance properties. Dow offers a strong product portfolio including multiple technologies, addressing various PA impact modification needs.
Foam integrated OBC bicycle tires	The integrated OBC foamed tire is designed for the bike sharing industry. Its features include lightweighting, (20–30% lighter vs. PU tire and 30–40% lighter vs. pneumatic tire), good toughness/elasticity and heat resistance, puncture free, brilliant color, cost effectiveness, environmental friendly (FDA) and production efficiency.
TPO foam for automotive applications	Whether it's a conventional ICE vehicle or an EV, vehicle lightweighting will continue to be one of the key priorities to continue improving fuel efficiency and driving range. Foaming technology enable material lightweighting by incorporating air bubbles into the polymer matrix reducing the overall amount of material used while maintaining the performance required for the application.
RTM lite technology	VORAFORCE™ technology offers more than 50% weight reduction at possible cost equivalence to steel, coupled with reduced fuel consumption and emissions, while increasing the vehicles' load capacity. This higher strength durable technology enables excellent cycling loading performance, which combined with media resistance enables a prolonged lifetime and a reduced maintenance or repair interval.

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