

What can we build today that will be valued tomorrow?

Explore innovative prototypes at K 2019

From the smallest communities to the largest cities, quality of life will come from finding better ways to build, adapt and improve our environment.

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 **BUILD** domain.

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?

While you can get a general overview of our prototypes on this page, K 2019 will provide a perfect platform to explore them.

Build

Prototype

Description

PE-RT enabled pipes

PE-RT pipes powered by DOWLEX™ can be used in all hot water and heat distribution applications. Easy to install, durable, cost efficient: pipe producers, plumbers, engineers and building owners have been relying on DOWLEX™ enabled PE-RT pipes to deliver excellent performance in pipe applications for more than 35 years.

Halogen-free flame retardant cables

Wires and cables used in enclosed spaces must usually be flame retardant but formulating polyolefins to achieve this can require high levels of additives. Through smart manipulation of additive and polymer technology, we've developed ENGAGE™ polyolefin elastomers which form high-quality halogen-free flame retardant (HFFR) polyolefin compounds.

Fiber optic cables

We're passionate about helping people stay connected. And that's exactly what fiber optic cables infused with AXELERON™ telecom cable compound do; whether buried underground, run through conduits or in cell towers. These cables combine high line speeds and production efficiency with excellent strength, durability, flexibility and consistency in the field to keep us connected.

Extra-high voltage cable

Customers require years of reliable, consistent service from their power transmission utilities. For transmission infrastructure, quality high voltage, extra high voltage, and high voltage discontinued current cables are paramount to achieving the reliability and longevity that utilities and customers demand. To meet these demands, talk to us about ENDURANCE™, our high-quality compounds for underground transmission cable systems.

Artificial turf

Dow solutions enable long-lasting and high-performance artificial turf systems, offering compatible combinations of raw materials for yarn, infill, backing and shock absorption, whether you require playing surfaces for football/soccer, golf, rugby, hockey, a multi-purpose school sports field or a town recreation ground.

Build

Prototype	Description
All-polyolefin-based turf system	Integrated artificial turf system with enhanced performance and recyclability attributes: polyethylene-based yarn resins offering the right combination of softness, resilience and mechanical durability; HYPOD™ polyolefin backing technology, for a sustainable solution that combines polyolefin performance with the benefits of water-based dispersion; an innovative and sustainable PE shockpad technology.
Turf system featuring PU backing and enhanced tuft lock	Functionalized polyethylene-based yarn combined with polyurethane-based elastomer backing for artificial turf systems, offering strong tuft lock and dimensional stability. Together, these factors extend pitch durability while creating a highly stable, predictable playing surface. Designed to enhance the productivity, facilitate the installation and improve the playing experience, even during the most intense gameplay.
Washing machine gasket	NORDEL™ EPDM provides improved yield, scrap reduction and unparalleled polymer cleanliness. Our expanded offering of NORDEL™ EPDM grades enables fast mixing and processing, faster curing, increased filler acceptance and high-quality Class A surfaces. NORDEL™ EPDM produced using Advanced Molecular Catalyst (AMC) technology not only outperforms traditional Ziegler-Natta grades, but is also produced more efficiently using 20–25% less energy.
Carpet backing tiles	With high-performing and recyclable raw materials for carpet backing, Dow offers an array of solutions for carpet manufacturing – enabling the formulation of ‘free-form’ flooring, helping reducing VOC levels, allowing reprocessability and ensuring durability and stability.
Masking tape for painter’s grade	Paper-masking tape is enabled by ROBOND™ PS-9006 adhesive, a ready-to-use aqueous acrylic pressure sensitive adhesive. It’s designed to have good qualitative tack, excellent UV resistance and clean removability after 14 days – all highly desirable attributes of a painter’s tape application.
Tapes for automotive and construction	With its low content of volatile compounds, ROBOND™ PS-6550 enables tapes for automotive and construction industries to be used on strictly regulated applications such as automotive interiors. Talk to us about ROBOND™ PS-6550 acrylic water-borne adhesive, which enables a distinct balance of peel adhesion, tack and shear resistance.
Exhibition carpet	The design, pattern and beauty of exhibition carpets can offer a great welcome that makes a real impact. With HYPOD™ polyolefin dispersions, carpet manufacturers can now develop a complete olefins-based components system, allowing for next-level sustainability. HYPOD™ enables mono-material carpet design, making it easier to recycle.
Aluminum composite panel	PE-aluminum adhesive performance is one of the most important requirements for aluminum composite building panels to remain attractive and trouble-free after installation. Dow offers several specially developed grades of BYNEL™ adhesive resins for use in laminating building panels. BYNEL™ resins are offered in high-performance grades that can be tailored to each manufacturer’s processing requirements.
Composite building panel	Dow offers a complete system for halogen-free flame retardant (HFFR) composite panel core layers including EVALOY™ AC base polymer, a technology license that can help protect your innovation, and complete technical support to tailor the composition to specific requirements.

Build

Prototype	Description
Yarn for high-performance sports (hockey)	Dow solutions enable long-lasting and high-performance artificial turf systems, offering compatible combinations of raw materials for yarn, infill, backing and shock absorption, whether you require playing surfaces for football/soccer, golf, rugby, hockey, a multi-purpose school sports field or a town recreation ground.
Yarn for high-performance sports (football/soccer)	Designed to meet FIFA certified standards, this yarn provides the needed resiliency needed throughout busy competition schedules. With solutions developed in conjunction with our partners, this turf presents not only a resource efficient alternative to natural grass but also materials that improve processability and boost performance in terms of recycling and compatibilization.
High-performance elastomeric infill	Thermoplastic infill solutions for high-performance artificial turf systems. A more sustainable alternative to end of life tires (ELT), enabling an odorless surface and improved temperature control which contributes to an enhanced playing experience.
Polyurethane coated styrene-butadiene rubber (SBR)	The infill granules in an artificial turf system not only provide stability for the yarn but also contribute to energy absorption and have an effect on how the ball interacts with the playing surface. Effective infill is therefore fundamental in terms of achieving performance levels similar to natural turf.
Precision pouring paint pouch	PacXpert™ packaging technology offers a flexible and sustainable alternative to conventional paint containers. Lightweight, and optimized for easy handling and fast pouring, it eliminates spillage and reduces product wastage.
Photovoltaics encapsulant film	ENGAGE™ PV POE for photovoltaics encapsulant film is now widely used in bifacial modules. It could provide modules with longer service life and better reliability. ENGAGE™ PV POE can increase module power generation in the whole service lifetime, improve resistance to potential induced degradation (PID) – especially for high efficiency bifacial solar cells – and reduce the levelized cost of electricity (LCOE).
EPDM roofing membrane	Longevity, weather resistance, flexibility and low temperature toughness are the key strengths of EPDM roofing. As a longtime leader in EPDM technology, NORDEL™ resins set the pace. Now, a new generation of NORDEL™ EPDM is taking it up a notch with opportunities for improved mechanical performance, increased filler loading and better processability.
TPO roofing membrane	Our portfolio of materials for roofing membranes features advanced polymers for thermoplastic polyolefin (TPO) systems. With several advantages over incumbent materials, ENGAGE™ TR Polyolefin Elastomers (POEs) represent our current state-of-the-art for TPO-based membrane formulations.
PVC roofing membrane	To maintain the long-term flexibility and durability needed for roofing membrane, PVC-based systems require the use of a plasticizer. Unfortunately, traditional liquid plasticizers (LPs) tend to migrate out of the membrane, leading to drying and cracking over time. ELVALOY™ ketone ethylene ester (KEE) terpolymers, on the other hand, offer excellent performance as non-migrating plasticizers. By enhancing resistance to chemicals, microbials, and impact – as well as low temperature performance and service life – they help raise the bar for durability in PVC roofing.

Build**Prototype****Description**

**V PLUS PERFORM™ –
next-generation insulation
technology**

V PLUS PERFORM™ insulation technology helps create future-ready buildings by placing sustainability, energy efficiency and people at the heart of design. Developed in collaboration with panel manufacturers, architects and sustainability experts to create panels with an increased level of energy efficiency, more sustainable components and improved indoor air quality.

**DOWSIL™ Membranes
Facade System**

A choice of two new high-performance EPDM membranes act as a vapor control, according to EN 13984, making them ideal for creating interior or exterior weather and air-tight seals for facades:

- DOWSIL™ Membrane Dual
- DOWSIL™ Membrane Outside

Bonded and secured using DOWSIL™ 300 adhesive, DOWSIL™ membranes are easy to use and provide a safe, compatible and durable system package which complements the DOWSIL™ range of high-performance sealants.

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