

Dow Corning News

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Dow Corning Launches Crystal-clear Silicone Technologies for Exterior/Interior Structural Bonding/Assembly at glasstec 2016

Company Also Spotlights Award-Nominated Silicone Sealant for Energy-efficient Glass Façades, Shares Research Findings on Exceptional Longevity of its Silicone Materials

DÜSSELDORF, Germany: Dow Corning, a global leader in silicones, silicon-based technology and innovation, introduced here today at glasstec 2016 (stand B59, Hall 11), two new high-performance additions to its family of crystal-clear bonding products. The first is its new *Dow Corning*® TSSL for interior glazing applications that will be featured on a glass staircase at the Dow Corning stand. The second product is *Dow Corning*® 2400 Silicone Assembly Sealant, a new leading-edge material that provides a nearly invisible bond for assembly, bonding and sealing of crystal-clear applications.

The new Dow Corning technologies complement the company's recently introduced Dow Corning® Transparent Structural Silicone Adhesive (TSSA) for fixed-point exterior glass façades, and Dow Corning® 3363 Insulating Glass Sealant for energy-efficient applications, such as gas-filled double- and triple-glazed panels. Importantly, Dow Corning 3363 Insulating Glass Sealant, which delivers approximately 50 percent higher dynamic design strength than conventional materials, is a finalist in the 2016 IChemE Global Awards in the Energy category. Click here for more about this nomination. Both products are on display at the Dow Corning stand.

In addition, Dow Corning is underscoring its thought leadership in structural glass façades by highlighting a track record of successful structural glazing projects and revealing the results of two studies recently conducted to assess and confirm the longevity of the company's structural glazing silicones. The studies concluded that the potential lifespan for these materials exceeds 50 years^(*).

"Dow Corning's growing portfolio of crystal-clear silicone adhesives, laminates and sealants delivers superior performance versus competitive products to give designers significantly greater freedom to create distinctive and impressive structural glazing," said Markus Plettau, regional market leader, Europe, for Dow Corning. "Building on our long-standing leadership in durable silicone solutions, Dow Corning continues to invest in new technologies that target our customers' changing architectural, design and construction needs."

New Silicone Laminate and Sealant Offer Clear Advantages

Dow Corning Transparent Structural Silicone Laminate (TSSL), a crystal-clear film for lamination, is specifically engineered for interior glass façades and structures including staircases and railings, shower surrounds and even sculptures. Its exceptional strength and flexibility accommodate the movements and vibrations generated by walking on glass stairs and grasping glass railings. This new laminate allows designers to avoid unsightly drilling when joining glass pieces. Dow Corning is showcasing the strength and flexibility of Dow Corning TSSL in a glass staircase and glass façades at its stand, while Glas Trösch AG is highlighting its SWISSTEP BOND using Dow Corning TSSL in a larger and more-complex staircase at Glass Technology Live. SWISSSTEP BOND enables a structurally strong yet filigree joint between glass and stainless steel without holes in the glass.

Glass Technology Live is a special show within glasstec 2016 that features the latest product developments and innovations from research and practice, the theme of which is "glass of the future." In addition to the glass staircase, Dow Corning is showing a smart glazing application featuring switchable silicone liquid crystal technology in Glass Technology Live.

Dow Corning® 2400 Silicone Assembly Sealant is a one-part, moisture-curing, hot melt silicone for assembly, bonding and sealing. It delivers excellent resistance to ultraviolet (UV) light, high and low temperatures and weather. This product provides immediate grip and strength upon cooldown, and requires no primer for the majority of non-porous substrates. Its optical transparency, combined with flexibility, strength and durability, makes it suitable for specific structural glazing applications, insulating glass designs with two-sided crystal-clear edges, and general sealing applications. Dow Corning 2400 Silicone Assembly Sealant can be applied manually with a heated

gun in a cartridge for convenient, on-site assembly, or with a heated pail and a hot melt pump in a manufacturing facility. Applications include window bonding and weather sealing.

Insulating Glass Sealant Boosts Productivity

Dow Corning® 3363 Insulating Glass Sealant meets the European standards EN 1279 and ETAG 002, and can deliver up to 50 percent higher dynamic design strength compared to standard Dow Corning structural silicones. The extreme strength of *Dow Corning* 3363 Insulating Glass Sealant limits the stress placed on the primary sealant, reducing gas loss from the insulating glass unit and contributing to energy efficiency and durability of the façade. This technology allows architects to design innovative glass façades while optimizing thermal performance of their buildings.

Silicones Deliver 50+ Years of Durability

Beside the company's extensive real-life project experience starting in the 1960s, Dow Corning is providing the results of two European studies that reported its structural glazing silicones offer a longevity potential of more than 50 years ^(*). Rigorous testing conducted by Germany's Federal Institute for Materials Research and Testing (BAM), and the University of Regensburg in Bavaria indicates that Dow Corning's structural glazing silicones can provide exceptional long-term durability to give customers a strong competitive advantage for a higher return on investment.

Bringing in the Light with Light Guides

In addition, Dow Corning is exhibiting its current research in the field of optical light guide development. Light guides are extremely thin silicone films that are crystal clear and flexible. Thanks to their high purity and specific formulation, light is traveling over large distances with limited attenuation, making it possible to illuminate walls, ceilings, windows and other flat or free flowing surfaces.

Dow Corning management and technical experts are available at the company's stand for the duration of glasstec 2016 to provide technical expertise and advice and to discuss the company's capabilities for advanced window design and fabrication. For more information, go to www.dowcorning.com/glasstec.

About Dow Corning

Dow Corning (dowcorning.com), a wholly owned subsidiary of The Dow Chemical Company, provides performance-enhancing solutions to serve the diverse needs of more than 25,000 customers worldwide. A global leader in silicones, silicon-based technology and innovation, Dow Corning offers more than 7,000 products and services via the company's *Dow Corning*® and XIAMETER® brands. More than half of Dow Corning's annual sales are outside the United States. Dow Corning's global operations adhere to the American Chemistry Council's Responsible Care® initiative, a stringent set of standards designed to advance the safe and secure management of chemical products and processes.

About High Performance Building Solutions

Dow Corning is collaborating with industry professionals around the world to develop solutions to improve the energy efficiency of buildings, offer long lasting solutions and excellent technical support. Taking a holistic approach, Dow Corning brings together expertise from across the company to help customers find solutions to a wide range of high performance building challenges. Dow Corning High Performance Building Solutions include proven materials for structural and protective glazing, weatherproofing, insulating glass, window and door fabrication, and building materials protection, as well as innovations for high-efficiency insulation, LED lighting, thermal management systems, and the incorporation of photovoltaic cells and solar panels into building design.

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About Durability

(*) Durability provisions and/or associated "50years+" logos contained herein are forward-looking statements and may be materially impacted by elements such as, but not limited to, application conditions, excessive movements of the structures, substrates failure, exposure to environmental contaminants and natural deteriorating causes or phenomena. These elements may cause actual durability of our silicones to be materially different from said forward-looking statements.

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PHOTOS: The *Dow Corning®* TSSL Technology Can be used for Interior Glazing Applications such as Glass Staircase Railings (left), Staircases (middle) and Walls (right)

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