Dow Performance Silicones

London, United Kingdom

DOWSIL™

Case Study: British Airways London Eye

City and Country
London, United Kingdom

Products*
- DOWSIL™ 3-0117 Silicone Insulating Glass Sealant
- DOWSIL™ 993 Structural Glazing Sealant
- DOWSIL™ FIRESTOP 700 Sealant

Key Participants
- **Architect**
  David Marks
- **Curtainwall**
  Sigma

*Prior to February 2018, products listed were branded as Dow Corning.

The Project
- The British Airways London Eye is one of London's newest and tallest landmarks, and is the biggest observation wheel in the world. It consists of 32 glazed capsules each of which can carry up to 25 people on a rotating, 135 meter diameter wheel.
- Each oval shaped capsule is completely enclosed by curved glass, calculated to withstand a windforce of about 280 km/h (174 mph) and to be strong enough to take the weight of 25 people standing on it.
- Sigma, the contractor for the capsules, chose to work with Dow for the assembly of the 1600 m2 of curved glass, using three products. They needed strong, durable sealants to hold the capsule glazing in place.
- DOWSIL™ 3-0117 Silicone Insulating Glass Sealant was used for its high strength, durability, hardness and fire resistance. DOWSIL™ 993 Structural Glazing Sealant, was used to bond the glass and its bomb proof characteristics; DOWSIL™ FIRESTOP 700 Sealant, which exhibits exceptional fire resistance, was used in all the cabins for internal weatherproofing.
- Dow also trained Sigma's own operatives to use the specialist products and developed a special bi-component repair kit to replace a damaged glass panel on a capsule.

The Project

The British Airways London Eye is one of London's newest landmarks. At 137 meters, it is also one of the tallest structures in London, and is the biggest observation wheel in the world. Three DOWSIL™ sealants played a major role in the construction of its glazed capsules.

The BA London Eye, also known as the Millennium Wheel, consists of 32 glazed capsules each of which can carry up to 25 people on a rotating, 135 meter diameter wheel.

50+ YEARS PROVEN PERFORMANCE

The half hour ride offers visitors the chance to enjoy views across the whole of Greater London, from Canary Wharf in the east, to Windsor Castle in the west.

Each oval shaped capsule is completely enclosed by curved glass. The design was calculated to withstand a wind force of about 280 km/h (174 mph) and the glass had to be strong enough to take the weight of 25 people standing on it.

The Products

The contractor for the BA London Eye capsules was Sigma, the ski-lift cabin manufacturer, who needed to find strong, durable sealants to hold the capsule glazing in place. Sigma chose to work with Dow for the assembly of the 1600 m^2 of curved glass, using three products.

DOWSIL™ 3-0117 Silicone Insulating Glass Sealant

DOWSIL™ 3-0117 Silicone Insulating Glass Sealant, was chosen for use where high strength, high durability, hardness and good fire resistance were needed.

DOWSIL™ 993 Structural Glazing Sealant

DOWSIL™ 993 Structural Glazing Sealant, was used to bond the glass and again was chosen for its durability, fire resistance and its bomb proof characteristics.

DOWSIL™ FIRESTOP 700 Sealant

DOWSIL™ FIRESTOP 700 Sealant, which exhibits exceptional fire resistance, was used in all the cabins for internal weatherproofing.

Application Training

Due to the tight time scale of the Eye's construction, Dow was also asked to help train Sigma's own operatives to use the specialist products. The customer, who was unaware of the advantages that silicones offer versus organic products until they started working with Dow in 1999, is very satisfied with the success of the project.

The Repair Kit

Dow also developed a special bi-component repair kit which will be used for the first time to replace a damaged glass panel on one capsule, saving Sigma the cost and effort of sending their bi-component machine to London.

"We are now looking at more opportunities to transfer the technical experience from structural glazing to new applications in the construction OEM segment for non-traditional supports, like for the project with Sigma or the high-speed train in France and Germany," says Laurent, "especially in the residential windows market."

The BA London Eye was designed by architect David Marks, and developed by British Airways and the Tussaud's Group. In November 2000, 3 million had experienced the London Eye since its opening in February 2000.

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Dow is collaborating with industry professionals around the world to develop solutions to improve the energy efficiency of buildings for a more comfortable environment. Learn more about Dow's full range of High Performance Building solutions by visiting us online at **consumer.dow.com/construction**.

Dow has sales offices, manufacturing sites and science and technology laboratories around the globe. Find local contact information at **consumer.dow.com/ContactUs**.

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