

Case Study:

Helaba Main-Tower Frankfurt am Main, Germany



The Project

- Hamburg-based architects Schweger and Partners based the basic premise of the designs for the main tower on the most basic shapes – circle and square.
- Since being completed in 2000, the **Helaba Main-Tower** has been one of the landmark sights in Frankfurt - and one of the most popular.
- The 54-storey structure, modelled on the old 'sky scraper' tradition, has become a true symbol of Frankfurt.

The Challenge

- The first high-rise building in Europe with a fully glazed façade. This was designed by the architects to make an important contribution to providing the offices with natural light and ventilation.
- The 2,550 windows can be opened outwards parallel to the façade.
- The building's insulating glass units have their edge seals fully exposed to the weather, making this an extremely challenging project for *Dow Corning's* technical team. Extreme variations in

temperature, humidity, infrared and ultra-violet radiation require a sealant which can handle the most arduous of conditions.

- The entrance area has been designed to combine a structure full of light with a very lean and light outer skin made mainly of glass.

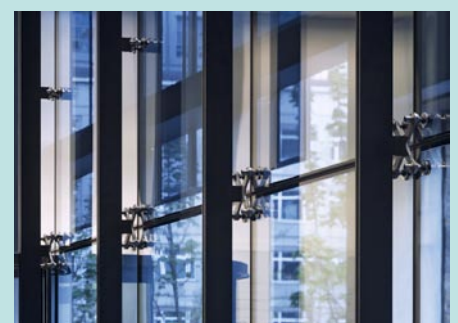
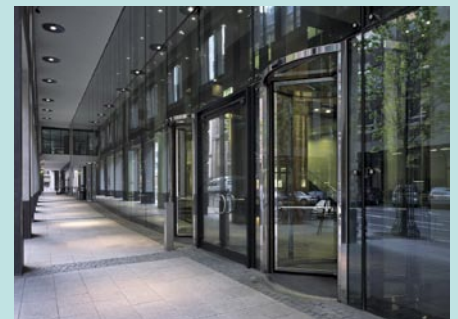
The Solution

- The unusual and striking structurally glazed entrance area has been realized with the Planar System.
- The architectural team specified *Dow Corning* 993 for bonding the glass to the aluminium frames. *Dow Corning* 993 is a two-part, neutral curing silicone sealant specifically developed to structurally bond glass and metal to other construction materials. *Dow Corning* 993 meets all the requirements according to ETAG 0002 and has a European Technical Approval (ETA 01/0005) to be used as a structural glazing sealant. It is extremely stable under even extreme environmental conditions making it perfect for this project where the edge seals are exposed.
- The edge sealing for the IG units was carried out with *Dow Corning* 3362 – is a two component neutral curing silicone sealant specially designed for high performance insulated glazing units. When correctly used *Dow Corning* 3362 exceeds BS and DIN performance specifications and fulfils the requirements for use as a secondary glazing sealant as laid down in the EN1279 as well as for argon-gas filling. It also meets the requirements according to pr EN13022 and ETAG 0002 and owns an official European Technical Approval (ETA 03/0003).

City:	Frankfurt
Country:	Germany
Product:	<i>Dow Corning</i> [®] 3362 <i>Insulating Glass Sealant</i> <i>Dow Corning</i> [®] 993 <i>Structural Glazing Sealant</i> <i>Dow Corning</i> [®] 797 <i>Silicone Weatherproofing Sealant (now known as</i> <i>Dow Corning</i> [®] 791)
Architect:	Schweger and Partners
Façade Designer:	IFFT Institut für Fassadentechnik

The Project:

- Hamburg-based architects Schweger and Partners based the basic premise of the designs for the 54-storey main tower on the most basic shapes – circle and square
- This was the first high-rise building in Europe with a fully glazed façade with 2,550 windows which can be opened outwards parallel to the façade
- The architectural team specified *Dow Corning* 993 for bonding the glass to the aluminium frames
- The edge sealing for the insulating glass units was carried out with *Dow Corning* 3362
- *Dow Corning* 797 (now known as *Dow Corning* 791) was selected for the building's movement joints thanks to its high movement capability (+/- 50%).



- *Dow Corning 797* (now known as *Dow Corning 791*) was selected for the building's movement joints thanks to its high movement capability (+/-50%). It is ideally suited for expansion, connection, perimeter and all other types of movement joints and is compatible with all *Dow Corning* structural sealants.

Contact Dow Corning...

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