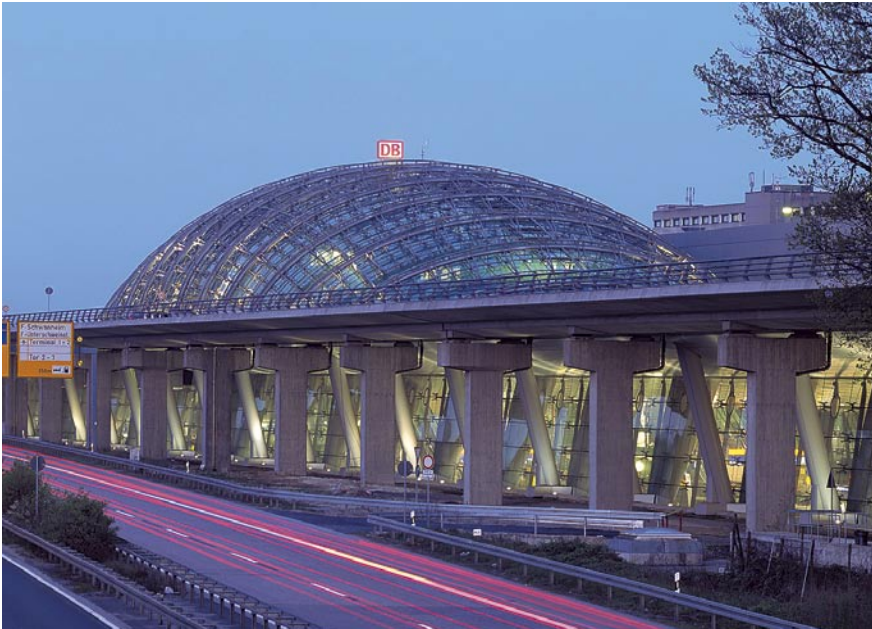


Case Study:

ICE-Bahnhof Frankfurt Airport Frankfurt am Main, Germany



The Project

- Designed like a huge glass bubble, this station provides high-speed rail links from one of Europe's busiest airports to every major city on the continent.
- Transparency, comfort and modernity are the hallmarks of the building with its glass dome, arching above the concourse.
- Extensive glass facades to the Platform level below allow daylight to enter the building, creating a friendly and spacious atmosphere.
- As well as the station concourse, the building houses a lounge, travel centre, and retail outlets over 38,155 square metres.

The Challenge

- The building's insulating glass (IG) 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 ultraviolet radiation require a sealant which can handle the most arduous of conditions.
- This environmental requirements were a vital consideration as the building is exposed to pollution from planes, trains and road traffic.
- The building's point-loaded structural glazing required a sealant which could contend with extremely high movement and vibration between the glass units.

The Solution

- 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).
- *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. It demonstrates excellent weatherability being UV stable and maintaining high performance across a wide temperature range, making it an extremely versatile sealant that can be used on a wide variety of substrates.
- The high movement capability required at Frankfurt Airport was accomplished with a combination of *Dow Corning 797* wet sealant and a pre-formed silicone gasket.

| | |
|-------------------------------|---|
| City: | Frankfurt |
| Country: | Germany |
| Product: | <i>Dow Corning</i> [®] 3362 Insulating Glass Sealant, <i>Dow Corning</i> [®] 797 Silicone Weatherproofing Sealant |
| Architect: | Bothe, Richter, Teherani/ Hamburg - Germany |
| Roof Construction/ Design: | MERO/ Würzburg - Germany |
| IG-Fabricator: | Okalux/ Marktheidenfeld - Germany |
| Applicator of the sealant: | Glasbau Schmidt/ Weilburg - Germany |

The Project:

- Extensive glass facades and an innovative bubble design make this a landmark building
- IG units with exposed edge seals and a harsh environment placed extreme demands on the sealants
- Point-loaded structural glazing required a sealant which could contend with extremely high movement and vibration between the glass units
- Dow Corning's technical team recommended *Dow Corning 3362* for edge sealing
- The high movement capability required was accomplished with a combination of *Dow Corning 797* wet sealant and a pre-formed silicone gasket



Contact Dow Corning...

Dow Corning has sales offices, manufacturing sites, as well as science and technology laboratories around the globe. Telephone numbers of locations near you are available on the world wide web at www.dowcorning.com, or by calling one of our primary locations listed below.

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