

Case Study:

Main Airport Center (MAC) Frankfurt am Main, Germany



The Project

Main Airport Centre (MAC) is a state-of-the-art, multi-purpose business centre located next to Frankfurt International Airport. The eleven-storey structure encompasses 51,000m² of grade-A office space in a multiplicity of layouts, giving the building the ultimate in flexibility, matched by a 1,450 space, eight-storey car park.

The Challenge

Dow Corning silicone sealants have met a challenging array of aesthetic, environmental and technical requirements for the demanding glass façade. As well as helping to fulfil the architects' specific requirements of visual impact for the MAC's façade glazing, Dow Corning sealants have enabled the argon-filled insulating glass units to meet the stringent environmental and insulation demands of EN 1279.

The Vision

Designed by architects ABB / Architekturbüro Wellbergen to fit in perfectly with its surroundings, the three wings of the MAC development echo the contours of an aircraft. The 20,000m² glass façade has an aesthetically smooth

appearance, that affords extensive views out over the surrounding forest, reflecting the arboreal ambience into the office space and creating a fluid transition between the building and its environment.

The Team

Curtain walling company Bug AluTechnic, glass supplier BGT and façade consultant Rusch Diem Schuler worked closely with the Dow Corning Technical Team to develop a silicone edge seal system, which actually exceeds the requirements of the European standard EN 1279 and allows the insulating glass unit's seals to be exposed to the elements to avoid spoiling the facades even appearance with metal frames.

The Products

Dow Corning 3362 was selected for the secondary seal of the insulating glass units as well as the structural seal between the outer and inner glass panes. Dow Corning 993 was specified for bonding the enamelled glass to the anodised aluminium frames, to achieve this innovative two-sided structural glazing design.

City:	Frankfurt
Country:	Germany
Product:	Dow Corning® 3362 Dow Corning® 993
Architect:	Architects ABB / Architekturbüro Wellbergen
Consultant / field surveyor:	Façade Consultant a.t.f./ Petar Reich Frankfurt am Main (architektur technik fassade)
CW contractor:	Bug AluTechnic

The Project:

- Dow Corning silicone sealants met a challenging array of aesthetic, environmental and technical requirements at the Main Airport Centre (MAC), a new state of the art business park situated next to Frankfurt International Airport
- The unique 20,000 m² glass façade, which maximises the transparency of the building through minimising the need for mechanical fixings, echoes the three wings of an aircraft
- The innovative two sided structurally glazed facade was made possible through the utilisation of Dow Corning 993 Structural Glazing Sealant for bonding the impressive enamelled glass panels to the anodised aluminium frames
- Dow Corning 3362 Insulating Glass Sealant was specified to enable the argon filled IG units to exceed the stringent environmental demands of EN 1279, for maximum energy efficiency - an incredible feat given that the units' seals are exposed to the elements in order to maintain the aesthetic appearance of the glass façade.
- The MAC project is an excellent demonstration of a technically challenging project, only realised through the high level of co-operation between Dow Corning technical experts and other members of the construction project team

Dow Corning 993 Silicone Structural Glazing Sealant

A two part, neutral curing silicone sealant specifically developed for the structural bonding of glass and metal including coated, enamelled, and reflective glass, 993 has excellent weathering properties and high resistance to ultra-violet radiation, heat, and humidity once cured.

Dow Corning 3362 Silicone Insulating Glass Sealant

A two-part, neutral curing silicone sealant specifically formulated for use as a secondary seal in the manufacture of dual sealed insulating glass units. With outstanding adhesion to a wide range of substrates including coated, enamelled and reflective glass, 3362 has excellent temperature stability, UV resistance and has structural capability when used as a secondary sealant for insulating glass units used in structural glazing.

Contact Dow Corning...

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