

Structural silicone bonds lightweight facade

Case Study: Espace Petrusse



City
City of Luxemburg

Country
Luxemburg

Products
Dow Corning® 993
Silicone Structural Glazing Sealant
Dow Corning® 791
Silicone Weatherproofing Sealant

Architect
Bureau d'Architects Werner SA

Curtain Wall Contractor /
Structural Glazing Fabricator
Groven +

Technical Distributor
Castelein Sealants

The Project

- Located between the central business district and main town of Luxemburg, the magnificent Espace Petrusse building features two towers which contain over 20,000 m² of floor space spread over six storeys above ground and three storeys underground
- This office building is part of a larger urban complex which includes hotels and apartments and is within walking distance of the historic UNESCO World Heritage area and near the train station served by the new high-speed TGV train Est Européen
- The Espace Petrusse office building is now the worldwide headquarters of the largest steel company, Arcelor Mittal
- Dow Corning® 993 Silicone Structural Glazing Sealant and Dow Corning® 791 Silicone Weatherproofing Sealant were not only specified due to their proven track record, but also thanks to Dow Corning's leading industry quality assurance initiative, *Quality Bond*™

The Challenge

The curtain wall facade was the first to be constructed from a new thermally broken facade stick system, manufactured by Schüco. The SFC 85 system permits the opening units to be integrated and flush with the façade, allowing the fixed lights and opening units appear identical, both on the outside and on the inside. With half of the windows being opening units on this 7000m² lightweight facade, it was important to specify a proven system of fixation for the insulating glass units.

The Solution

The selection of a silicone structural bonding solution increases the rigidity of the facade and allows the overall weight to be reduced when compared to the use of mechanical fasteners. Dow Corning structural bonding and weathersealing silicone sealants were specified for use in conjunction with the SFC 85 system due to their compatibility, longevity and safety record.

Dow Corning silicones were applied by curtain wall contractor and specialist applicator Groven +, who are certified members of *Dow Corning*® Quality Bond. This recent initiative provides additional reassurance by ensuring that standards of best practice in quality management and silicone application are followed through an annual programme of world-class training and auditing.

Dow Corning 993 Silicone Structural Glazing Sealant

Certified by European Technical Approval ETA 01/0005, *Dow Corning* 993 exhibits excellent weathering properties and high resistance to ultra-violet radiation, heat and humidity once cured. It is ideal for structural bonding of glass and metal, including coated, enamelled and reflective glass.

Dow Corning 791 Silicone Weatherproofing Sealant

A premium performance weatherproofing sealant, *Dow Corning* 791 is suitable for the weathersealing of structurally glazed facades, bolted glass systems and general glazing and building facades constructed of brick, stone and traditional building products. With excellent weatherability and UV resistance, it is ideal for expansion, connection, perimeter and all other types of movement joints.

About Quality Bond™

Quality Bond lifts silicone sealing and bonding to the highest level through the instigation of standards of best practices in quality control, quality assurance and product application by specialist silicone fabricators and applicators. Quality Bond allows customers and specifiers to share in Dow Corning's industry-leading expertise and benefit from our proven global performance track record.

For more information, please visit www.qualitybond.com.

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