

PROJECT HIGHLIGHT

CASE STUDY

ENERGY-EFFICIENT, MODERN FAÇADE & ROOFING SOLUTION FOR INTERNATIONAL TRANSPORTATION HUB

Johannesburg International Transport Interchange (JITI), one of the largest public transport nodes in Africa, is located in the central business district of the South African financial capital. The building comprises 50,000 square meters and has been designed to provide spaces for busses and more than 800 Taxi Vans serving the needs of travelers.

JITI also offers retail space for small to large enterprise outlets and has attracted the attention of local artists, such as the Johannesburg Ballet Company. The main design criteria was to combine aesthetics with specific product aspects like UV, fire and chemical resistance. LEXAN™ virtually unbreakable polycarbonate sheet was chosen as it met all the criteria.

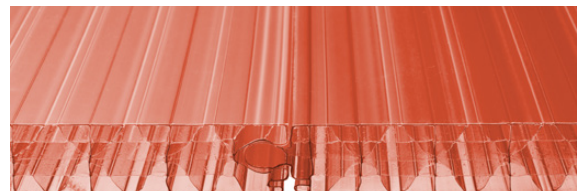
PRODUCT SOLUTIONS:

FAÇADE:

Light transmissible, weatherable, and impact resistant LEXAN™ THERMOCLICK™ polycarbonate sheets were an ideal choice for the vertical façade glazing part of the building. Eliminating the framing between the sheets, created a unique modern look to the building (red translucent color with 40 mm thickness).

ROOFING:

For the roof structure of the building (glazing part) LEXAN™ THERMOCLEAR™ sheet was chosen. This product provides an outstanding balance of light weight, high stiffness, ease of installation, excellent thermal insulation, UV and condensation resistance and long-term light transmission. These 25 mm thickness sheets have been selected for the horizontal rooflights matching the red translucent color of the Façade.



LEXAN™ THERMOCLICK™ polycarbonate sheet



LEXAN™ THERMOCLEAR™ polycarbonate sheet

PRODUCT FEATURES:

- High light transmission
- UV Protected on both sides
- Easy installation (inter-connecting system for THERMOCLICK™ Sheet)
- Energy & heat saving
- Excellent impact resistant
- Flame retardant
- Easy to clean
- Durable
- Limited 10-years warranty against loss of transparency and weatherability

“Advanced urban architecture must meet people’s demands for comfort and safety while at the same time enabling better energy efficiency and lower cost of operation. The high transmission and diffusion of natural daylight provided by SABIC’s translucent polycarbonate panels minimize the need for artificial lighting. In a large facility where daylight enters from all sides, this opens a significant potential for massive energy cost reductions”

Ray Harli

Responsible architect for the JITI project in UrbanSoup.

RESULTS

The LEXAN™ THERMOCLICK™ sheet used for vertical glazing area of almost 4,000 m² with a unique ‘X’ structure of connecting webs between 5 walls, which can maximize their rigidity and impact strength without any noteworthy reduction of light transmission. A specially designed tongue-and-groove snap-fit connection that saves installation time and costs while eliminating the need for vertical intermediate profiles. This can greatly enhance the aesthetics of representative façades. LEXAN™ THERMOCLEAR™ sheets have been used for horizontal roof lights covering a total area of 1,575 m².

The translucent red LEXAN™ THERMOCLICK™ sheet glazing of the JITI façade provides excellent protection against UV solar irradiation in regions such as South Africa. Moreover, it allows a high amount of natural daylight to enter the building, which has already attracted the attention of local artists and commercial video producers.

At night, the spectacular JITI Transport HUB with translucent red LEXAN™ sheet brings color into the city and shines like an icon of urban rejuvenation.



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