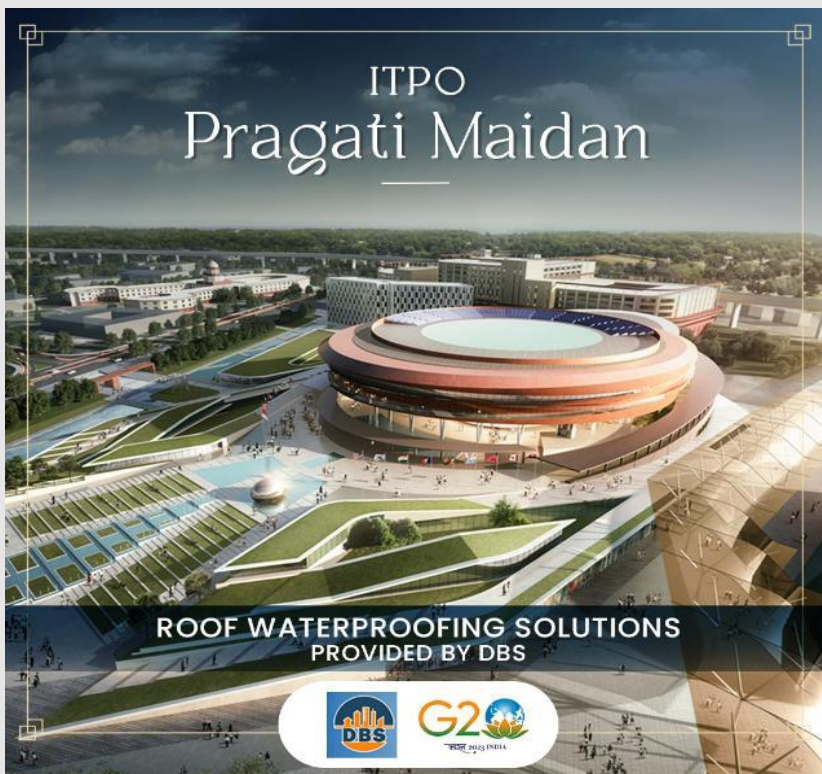


ITPO Convention Center – Pragati Maidan

Roof Waterproofing



It's bigger and better!

The ITPO complex is **India's largest MICE (Meetings, Incentives, Conferences, and Exhibitions)** destination, with a campus size of about 123 acres. The project has a total built-up area of 4.2 million sq. ft. There is a huge sitting capacity of 7,000 persons. This makes it bigger than the iconic Sydney Opera House in Australia which has a seating capacity of approximately 5500.

The exhibition halls also feature seven cutting-edge venues for presenting products, ideas, and innovations, giving exhibitors and businesses a chance to interact with their target markets and create networking opportunities.

The IECC has an extravagant amphitheatre with 3,000 seats, which serves as the venue for performances, cultural events, and entertainment activities, among other outstanding characteristics. More than 5,500 parking places for cars are also available. Visitors may easily access the location thanks to the signal-free roads, which make getting there hassle-free.

Firestone EPDM roofing system was installed for waterproofing the ITPO complex spread over an area of 45000 sqm. Shapoorji Pallonji & Co Pvt. Ltd., an authorized firestone contractor was chosen to carry out the installation.

Quick Facts

Project Scope:

- ❖ Redevelopment of pragati maidan into integrated exhibition cum convention center (IECC)
- ❖ 31000 sqm of roof waterproofing carried out with 1.1 mm Firestone EPDM
- ❖ High visibility and prestigious project
- ❖ To deliver an excellent waterproofing to preserve water for seeping into the building
- ❖ **Client:** ITPO
- ❖ **PMC:** NBCC
- ❖ **Architect:** ARCOP
- ❖ **General Contractor:** Shapoorji Pallonji and Company

Challenges Faced:

- ❖ Tight time frame
- ❖ Accommodation for significant design changes

Features of EPDM Membrane:

- ❖ Waterproofing membrane High elasticity (>300%)
- ❖ Long-term durability
- ❖ Fewer Seams
- ❖ Excellent fire rating. LFSR (Low Slope Fire Retardant)
- ❖ Fast and easy installation
- ❖ High flexibility (at high and low temperatures, as a result adapts to irregular shapes)
- ❖ High puncture resistance
- ❖ Low environmental impact
- ❖ Outstanding UV resistance to UV radiation, ozone and heat ageing

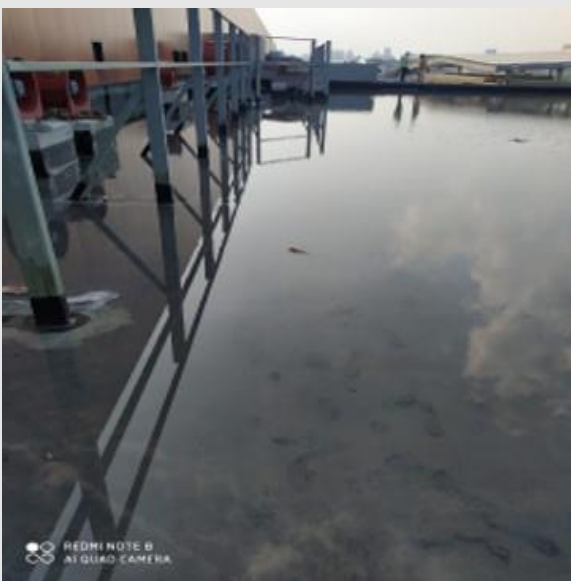
Installation Process:

The **EPDM membranes** (without stretching) was unrolled onto the substrate as close to the required final positions as possible, and allowed to relax for a minimum of 30 minutes before attachment or splicing operations (Remember the surface must be clean, dry and free of any foreign materials or contaminants which could cause damage). The EPDM membranes was positioned allowing for a sufficient overlap for splicing with the adjoining EPDM membranes at all edge. All standard seams were joined using a 76mm wide, double-sided, rubber adhesive **splice tape**, in conjunction with a solvent-based primer to shed water.

An appropriate **perimeter base tie-in** detail was installed at all locations where the EPDM membrane ends or passes through an angle change greater than 15%. Base tie-in using batten strip: The EPDM membrane was mechanically attached at the base of the angle change using **Galvalume® AZ55 batten strips** with red epoxy electro-coated, drill point **steel fasteners** of 6.98mm diameter to provide minimum penetration. A separate **EPDM flashing** was provided to the upstand to protect the installed batten strip. Then the EPDM membrane was fully adhered to all upstands and vertical faces using a **neoprene-based rubber contact adhesive**. The adhesive was applied in an even, smooth coat onto both surfaces avoiding any globs and puddles. sufficient time was allowed for the adhesive to flash off until tacky prior to mating the surfaces. Care was taken to keep the seam edges clear of adhesive. Provided with a minimum design height of at least 150 mm above the finished roof surface for all flashing terminations. The adjacent wall was terminated with **aluminium termination bar**. The EPDM flashing was fully adhered over its entire height and mechanically terminated at the top edge using a 27mm wide corrosion-resistant aluminium termination bar, fastened every 200mm with an appropriate drive rivet type fastener. Prior to installation of the termination bar, a continuous bead of **water repellent sealant** was installed between the EPDM membrane and the substrate at the top edge. Once the termination bar is securely fastened, a continuous bead of **EPDM sealant** was applied along the top edge of the bar to complete the detail.

The field EPDM membrane was installed prior to installation of the outlet insert. A circular hole over the drain position was cut and the outlet insert was installed onto a bed of water repellent sealant and secured to the structure. The flanges of the outlet insert were waterproofed using **self-adhesive, uncured EPDM strips**, ensuring that all edges of the outlet insert and fastener heads are overlapped by 75mm minimum a.

Polygrip - Bonding Adhesive was applied on the RCC retaining wall as well as on the DBS EPDM Membrane, fully adhered to RCC wall. Termination of top edge was extended to min. 300mm above the ground level. The vertical EPDM at top edge was applied with block sealant all around the periphery behind the EPDM, terminated with Aluminium termination bar and fasteners. The termination bar top edge was filled with DBS Lap sealant to make sure water should not penetrate from the top of the EPDM.





ITPO
Pragati Maidan

**ROOF WATERPROOFING SOLUTIONS
PROVIDED BY DBS**

For further information about waterproofing applications, please contact: DBS Building Products Sri Sobha Sing Building, 5286-87, Shardhanand Marg Delhi-110006 Tel: 011-66308888/23216062 Email: sales@dbsbp.com / info@dbsbp.com