

ECMASHIELD APP

APP Modified Bituminous Waterproofing Membrane

Description

ECMASHIELD APP (Atactic Polypropylene) membranes are factory-fabricated waterproof sheets of predetermined thickness, consisting of a specially formulated bituminous compound of distilled asphalt modified with selected high-grade viscoelastic polymers (APP), stabilizers, and inert fillers, reinforced with a robust, nonwoven polyester reinforcement. The top surface of the membranes is covered with a thin layer of PF film, sand, or mineral protection. The bottom surface is covered with Flam-O-Lene (Flammable PE Film).

For exposed applications, the top surface is covered with a layer of natural slate flakes (mineral) to protect the membrane from UV rays and physical damage. The material withstands temperature fluctuations and high mechanical loads providing long-term, reliable and effective waterproofing. APP polymer provides additional flow resistance that makes it possible to use the material in a very hot climate.

Areas of Application

- Flat or sloped concrete roofs
- Podiums, UG Car parking
- Tunnels, Bridges, Lining of sewerage canals
- Basements Raft slabs

Advantages

- Reinforced to have high tensile strength and puncture resistance
- Good flow resistance, can be used in hot climates
- High resistance to acids, alkalis, and other contaminations
- Excellent flexibility
- Economical and faster installation

Technical Specifications

Appearance	Black
Standard Thickness (Tolerance \pm 10%)	3 mm/ 4 mm
Roll Size	1 m x 10 m
Reinforcement Type	Polyester
Top Finish	Plain/ Mineral
Tensile Strength, Longitudinal, ASTM D5147-M-18	600 \pm 100 N/5cm
Tensile Strength, Transversal, ASTM D5147-M-18	450 \pm 100 N/5cm
Elongation % ASTM D5147-M-18	40 \pm 10
Low-Temperature Flexibility (0°C), ASTM D5147-M-18	No Cracks
Softening Point, ASTM D 36	150 \pm 10°C
Resistance to Hydrostatic Pressure, 8 Bar BSEN:12390	No leakage
Peel Adhesion to Primed Concrete ASTM D 1000	>1 N/mm
Water Absorption, ASTM D5147-M-18	<1%
Heat resistance, UEAtc	\geq 120°C
Puncture Resistance, ASTM E 154	\geq 750 N
Dimensional Stability, ASTM D5147-M-18	\leq 3%

Application Instructions

Surface Preparation: Surfaces should be cleaned properly, remove all deposits, dust, loose particles, fungus, contaminations, etc. and make the surface free from oil, grease, etc., and sharp edges. Concrete surfaces shall be fully cured and free from mold release agents and curing compounds. This can be done by scarifying, grinding, water jet, sand-blasting, or using any other approved methods. Repair surfaces for any blow holes, cracks, honeycombs, depressions & damages using ECMAS Polymer mortar ECMAREP 502 and leave it for at least 1 day before priming.

Application of ECMAPRIME BITU: The cleaned surface must be primed with ECMAPRIME BITU @ 3-4 Sqm/ liter which is compatible with the membrane and provide excellent bonding with the APP membrane. The primer must be spread evenly and allowed to dry completely.

Application of ECMASHIELD APP: ECMASHIELD APP membranes are designed for the torch-on application. Waterproofing performance will depend to a significant extent on proper application. The rolls are spread over the area, to which they are to be fixed. Special care must be taken at joints, which must be overlapped. Membranes must be laid to allow side laps of 8 to 10 cm and end laps of 12 to 15 cm. The membrane is then laid out changing the given orientation. They are then rolled once again while heating the underside sufficiently to cause surface mealtime using a gas torch. Avoid excessive and uneven application of heat. The laps should be heated from the top to produce a thin head of molten bitumen at the seam, which should then be smoothed and cut with a trowel ensuring a properly welded joint. A heavy roller should be used to press the overlapping strip to ensure complete adhesion and continuity between the two membranes resulting in a secure joint.

Protection of Membrane: After application, the ECMASHIELD APP membrane should not be left exposed and should be protected against site abuse and physical damage, and environmental exposure by suitable means such as a protection screed laid on the slope.

Shelf Life

24 months from the date of manufacturing when stored properly

Storage & Handling

- Material should be stored in the cool, dry, and covered shade at a temperature from +5°C to 40°C
- Keep APP membrane rolls in an upright position and do not stack
- Protect rolls from direct sunlight, and UV rays and keep away from naked flames
- Handle carefully during transport.

Safety Precautions

Wear all PPEs at the time of application and handling of products like Safety boots, Safety Goggles, Hand Gloves, masks, etc. This Membrane is non-hazardous.

ECMAS CONSTRUCTION CHEMICALS PVT. LTD

7-4-124 Gaganpahad,
International Airport Road
Hyderabad, India - 500 052
Phone: +91-40-24360014, 16, 17
Email: ecmas@ecmas.co.in

