

Aquathene APF-5000Y

Non-bituminous Polymer Waterproof Membrane with Cross-Laminated Film



Product Description

Aquathene APF-5000Y consists of a red non-bituminous polymer self-adhesive layer, combined with a cross-laminated film, a red protective layer, and a release liner. This new type of self-adhesive pre-applied waterproof membrane has been developed using the water resistance, durability, and self-healing properties of the non-bituminous adhesive layer. The membrane exhibits excellent tensile strength, high elongation, and tear resistance. After applying the waterproof membrane, concrete can be directly poured, forming a permanent bond between the membrane and the concrete structure during the curing process, achieving a reliable full bonding performance.

Where To Use

Suitable for used on the slabs of underground construction projects, basement side walls with limited construction spaces, tunnels, and other pre-applied waterproofing areas.

Product Features

- Excellent tear resistance and dimensional stability, and strong resistance to structural deformation.
- With self-developed "non-bituminous polymer self-adhesive layer" it can be bonded to the concrete structure firmly to achieve skin type waterproof performance.
- The non-bituminous polymer self-adhesive layer exhibits excellent water resistance and durability, suitable for long-term use in complex below ground conditions.
- Pre-applied fully bonded membrane with self-adhesive overlap joints, requiring no protective layer. Once the waterproof layer is applied, reinforcement can be directly laid and concrete poured on the slab, forming a full bond with the concrete, ensuring reliable and leak-free performance.

Packaging

Width (m)	1m
Length (m)	20m
Thickness (mm)	1.5mm
Area (m²/roll)	20m ²
overlap joint	Self-adhesive
Type	FL

Application Procedures

- Substrate preparation
- Snap line position
- Details treatment
- Application of the membranes on large areas
- Sealing and bonding of overoverlap joints
- Inspection
- Installation of reinforcement

Technical Data Based For Reference

Implemented Standard: Q/SDKS 132-2024

No.	Item		Index
1	Tensile property	Tension/(N/50mm) $\geq$	600
		Elongation at break % $\geq$	150
		Stretching phenomenon	No separation between adhesive layer and polymer film
2	Nail shank tear strength/N $\geq$		300
3	Puncture resistance/N $\geq$		220
4	Impact resistance		0.5kg.m, no seepage
5	Resistance to static loading		20kg, no seepage
6	Heat resistance(80℃,2h)		Slippage $\leq$ 2mm
7	Low temperature flexibility		-25℃, no crack
8	Oil permeability/number of sheets $\leq$		2
9	Impermeability(0.3Mpa,120min)		Impermeable for 120min at 0.6MPa
10	Anti water moving between layer (hydraulic gradient)		Impermeable for 120min at 0.8MPa/35mm
11	Peel strength between membrane&membrane (overlap edge)/(N/mm)	No treatment $\geq$	1.5
		Immersion treatment $\geq$	1.0
		Contaminated surface $\geq$	1.0
		UV treatment $\geq$	1.0
		Heat treatment $\geq$	1.0

No.	Item		Index
12	Peel strength with concrete (bottom surface)/(N/mm)	No treatment $\geq$	1.5
		Heat treatment $\geq$	1.0
13	Peel strength with concrete after immersion /(N/mm)	Top surface $\geq$	1.0
		Bottom surface $\geq$	1.0
14	Peel strength with membrane (overoverlap joint)/(N/mm)	No treatment $\geq$	1.5
		Immersion treatment $\geq$	1.0
		Heat treatment $\geq$	1.0
15	Heat aging(80°C,168h)	Tension retention rate/% $\geq$	90
		Elongation retention rate/% $\geq$	80
		Low temperature flexibility	-23°C, no crack
16	Dimensional change rate/% $\leq$		± 1.5

Storage and Transportation

- During transportation and storage, different types of products should be stored separately. Do not approach the fire, avoiding exposure to direct sunlight and rain, preventing collision, and proper ventilation should be ensured.
- The storage temperature should not exceed 45° C. When storing the membrane flatwise, the stacking height should not exceed 5 layers, and when storing it upright, it should be stacked in single layers.
- During transportation, prevent tilting or side pressure, and cover with tarpaulin if necessary.
- The product has a shelf life of 12 months from the date of production if stored properly in original, unopened and undamaged sealed packaging.