

AQUATHENE APF-405

SELF-ADHESIVE POLYMER MODIFIED BITUMEN WATERPROOF MEMBRANE



DESCRIPTION

APF-405 (PET-AI) Waterproof membrane utilized aluminized Mylar film as surface reinforcing material, covered with asphalt adhesive material which contains active agent rubber. APF-405 can be used directly with polymer cement mortar in the construction (wet applied method), but also can be used according to the traditional construction method (dry applied), so as to meet the different needs of projects. This product is especially suitable for the continuous construction of waterproof engineering design, when the construction period is long, and the exposure time of the membrane also is long, the component of APF-405 can function to reduce fold and the drum phenomenon of the materials.

PRODUCT FEATURE

- Strong bonding property.
- Good tensile strength.
- Excellent waterproof performance.
- High reflectivity of sunshine.
- Can prolong the service life of membrane.
- Can reduce the indoor temperature of the building.

MAIN APPLICATION

- Roofing, underground waterproof engineering.
- Concealed waterproof project with protective covering.

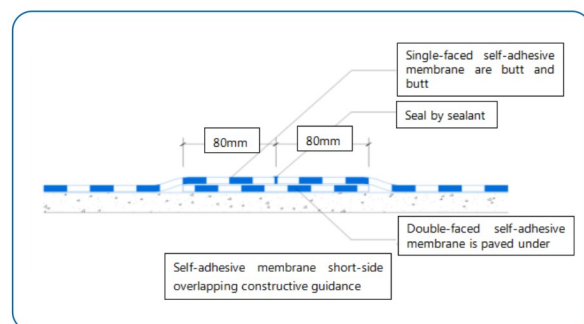
INSTALLATION

Wet apply Substrate Preparation

The substrate should be strong, tight, smooth, clean and flat without flaws like bulge, looseness, sands, pitted face and rebar; The joints like internal & external corner, pipe root etc. should be plastered to be arc by cement mortar; The substrate needs to be moisture but without water flow. Spray some water if the substrate is too dry.

Application:

- Wet the substrate if the it is too dry.
- Prepare the cement slurry.
- Before widespread paving, make reinforce sheet on the internal & external corners, pipe root and outfall etc.
- Roll the membrane forward while coating the cement mortar.
- Pave the first membrane: cut the release film lightly by paper-knife. Lift up the film and make it be at an angle of 30 degree with the membrane.
- For the second membrane: pre-apply the membrane and overlap it with the previous membrane's lapping guide line. Make sure the lap seam is not less than 80mm.
- Overlap the long end of the membrane: Press the border by the rollers to vent the air from the lap seam.
- Overlap the short end of the membrane: the width of the lap seam is 80mm.



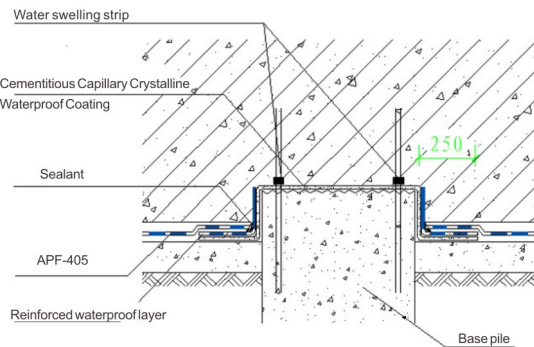
Dry apply Substrate Preparation

The substrate should be strong, smooth, clean without bulge, looseness, sand, pitted face and rebar; The substrate should be dry and the moisture content is less than 9%.

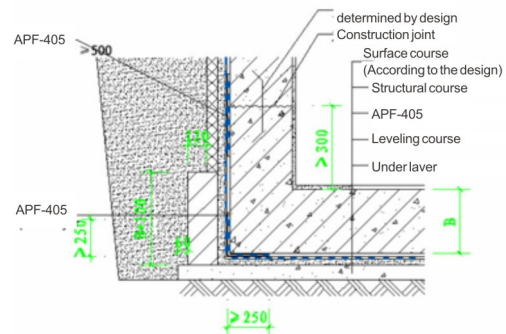
Application:

- Pour the substrate treating agent onto the substrate, coat the treating agent evenly by brush or roller without any omission and accumulation.
- Set the datum line according to the shape of the operating site and specification of the membrane. Unfold the membrane and make the adhesive side facing the substrate. Stretch the membrane from both ends to make it flat. Adjust the position according to the datum line then fold the membrane from both ends to the center and prepare to pave.
- The following procedure is the same as the wet-applied application.

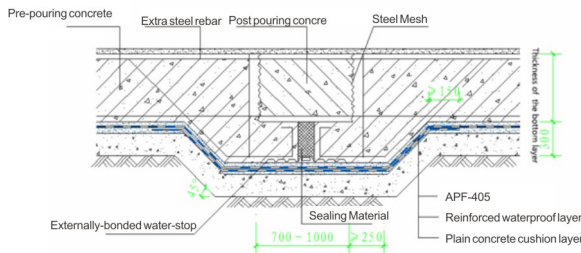
INSTALLATION



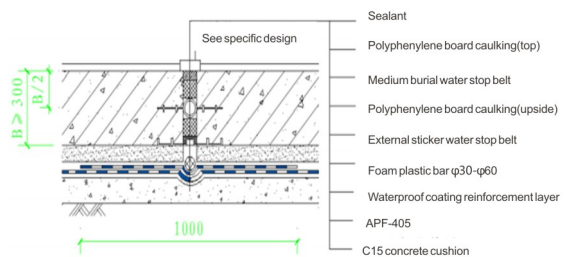
The Waterproof structure of pipe head



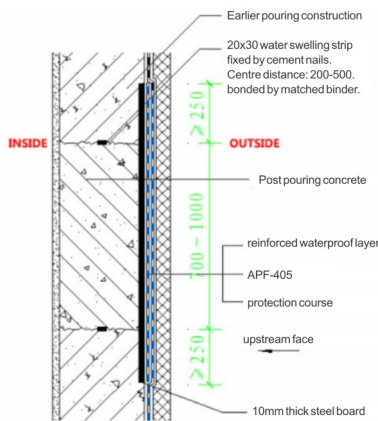
The Waterproof structure of the side wall corner of the bottom plate



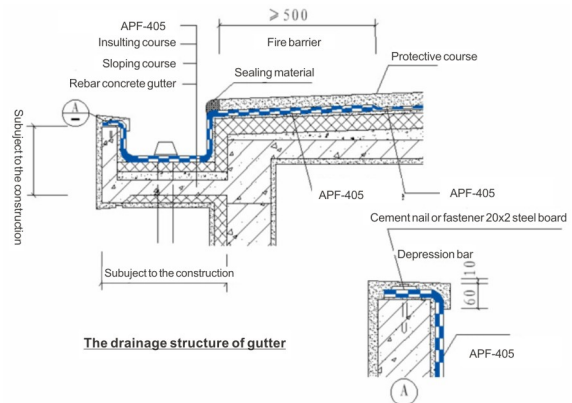
The Waterproof structure of Post-cast Strip of the bottom



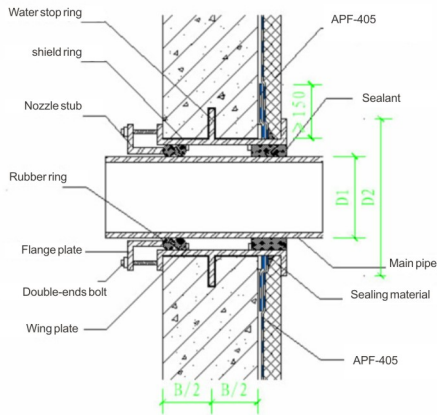
The Waterproof structure of baseplate deformation joint



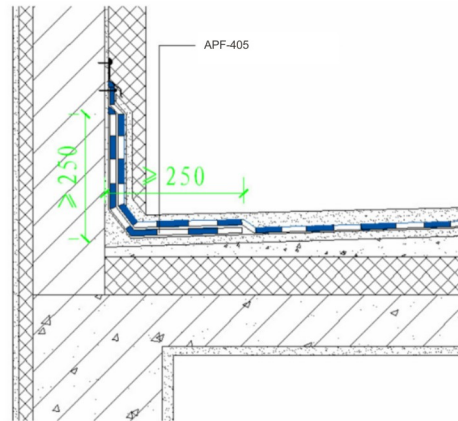
Waterproof structure of post-cast strip of side wall



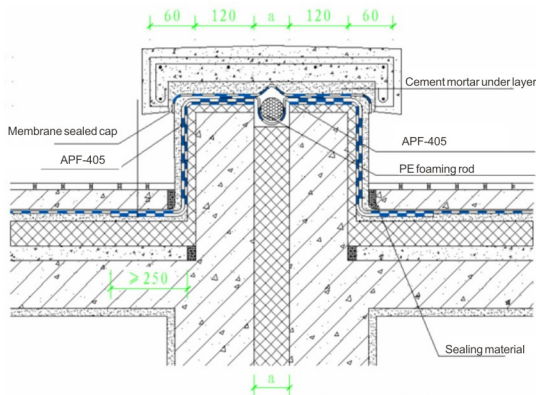
The drainage structure of gutter



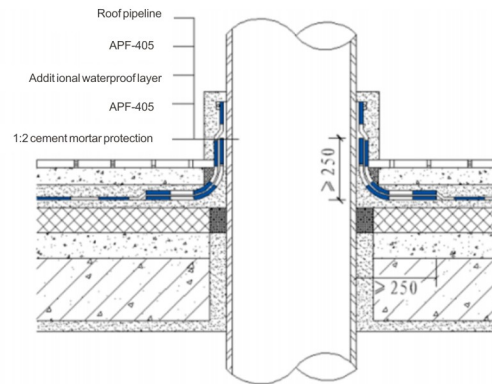
The waterproof structure of extension-type through-wall pipe



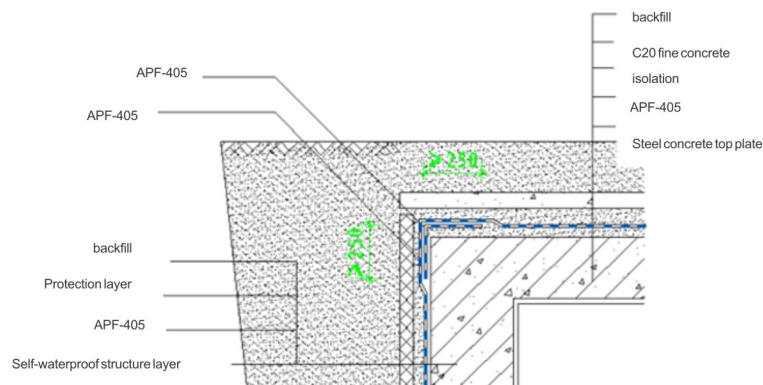
The waterproof structure of parapet



The waterproof structure of roof deformation joint



Waterproof structure of roof pipeline



Waterproof structure of exterior side wall top plate corner

SUPPLY

Packing: 1m x 20m (20m²/roll)

ATTENTION

After the complement of the waterproof course, pay attention to protect the course and avoid any damage. During the construction and before the acceptance of the project, all the personnel are prohibited to walk above the waterproof course wearing spike.

PHYSICAL PROPERTIES

Implemented Standard: GB23441-2009

No.	ITEMS	INDEX		
		PET		
		I	II	
1	Expansion rate	Tension/(N/50mm) ≥	150	200
		Elongation at maximum tension /% ≥	300	
		Elongation at break /% ≥	150	
2	Nail shank tear strength /N ≥	30	40	
3	Heat resistance	70°C sliding / flowing less than 2mm		
4	Low temperature flexibility /°C	-20	-30	
		No crack		
5	Impermeability	0.2mpa, 120min impermeable		
6	Peeling strength / (N/mm) ≥	Membrane V.S. Membrane	1	
		Membrane V.S. Aluminum board	1.5	
7	Nail shank watertight	Pass		

Implemented Standard: GB23441-2009

No.	ITEMS	INDEX		
		P		
		I	II	
1	Expansion rate	Tension/(N/50mm) ≥	150	200
		Elongation at maximum tension /% ≥	300	150
2	tear strength /N ≥	12	25	
3	Heat resistance	70°C 2h no sliding / flowing /dripping		
4	Low temperature flexibility /°C	-15	-25	
		No crack		

ASTM

No.	ITEMS	MEAN VALUE	TEST METHOD
1	Tensile Strength	2.0 MPa	ASTM D412, modified
2	Elongation at break	150%	ASTM D412, modified
3	Peel Adhesion to Concrete	2.0 N/mm	ASTM D903, modified
4	Hydrostatic pressure resistance	(18~24) °C, 0.7MPa, 1h No water leakage	ASTM D5385-1993, modified
5	Water vapor transmission ng/(m ² ·S·Pa)	(38±0.6)°C, relative humidity 0.31	ASTM E 96/E 96M 6
6	Low temperature flexibility	-30°C, 2h, 25mm diameter mandrel, no cracking	ASTM D1970-01
7	Tear Strength	12N	ASTM D624

Remark: the ASTM data is only for reference



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