Keshun
Stock Code : 300737

Waterproof for life

# AQUAPRUFE TPO

**TPO WATERPROOF MEMBRANE**

## DESCRIPTION

Aquaprufe Thermoplastic polyolefin (TPO) membrane is a type of polymer waterproof material based on polypropylene (PP) and rubber, prepared by existing technique. It is recycling throughout its service life (from its production till the end of its service life). There is no chlorine, heavy metal nor elements harmful to the roots and it is environmentally friendly.

## PRODUCT FEATURE

- Excellent weather resistance, aging resistance, tensile strength and elongation.
- Operation can be done on wet substrate. Directly expose to the weather conditions without any protective layer. Simple construction. No contamination.
- Repeat welding is possible.
- White color TPO to increase reflection of sun rays.
- Ability of resist the growth of mould and algae.

## MAIN APPLICATION

- Mainly apply to the roof waterproofing construction of industrial, civil and public buildings.
- Membrane reinforced with mesh(TPO-P)is applied to the single ply roof waterproof system by mechanical fastening.
- Membrane with underlying layer of fabric(TPO-L)is applied to the concrete substrate by full adhesion waterproof system.
- Homogeneous membrane(TPO-H)is applied to the flashing area.

## INSTALLATION

**Substrate Preparation All Surfaces**

It is important to prepare sound and solid substrate for installation of membrane to eliminate movement during the concrete pour. Substrates must be uniform and smooth and there shall be no gaps or voids in surface greater than 12mm.

**Horizontal Concrete Blinding or PCC**

The substrate must be smooth and uniform and shall be free of all unsound aggregate and sharp lumps. Curved or rounded substrates should be avoided. For installation of Aquaprufe TPO, the surface does not need to be dry, but standing water must be removed.

**Vertical Sheet Piling**

Aquaprufe TPO can be used for blind side waterproofing after either using geniting, concrete, or plywood or other suitable material to provide uniform surface for membrane installation.

**Membrane Installation**

Aquaprufe TPO, pre-applied fully bonded HDPE Membrane should be overlapped using steel roller to ensure complete bonding and to achieve continuity. Aquaprufe TPO, pre- applied waterproofing membrane can be installed at temperatures of -5°C and above. When installing Aquaprufe TPO waterproofing membrane in cold weather, care should be taken to pre-heat the bonding edge with appropriate means such as hot air gun or other similar means.

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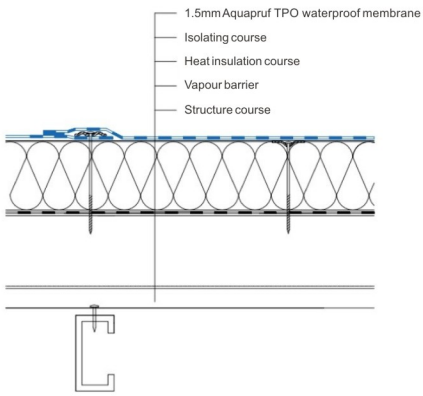
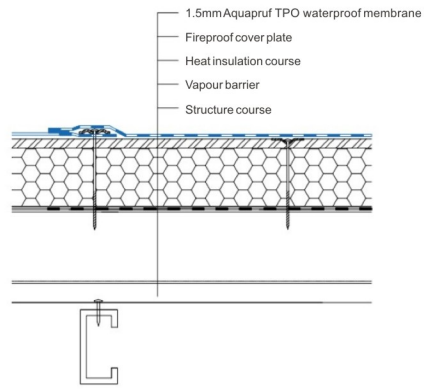
## DETAIL DRAWINGS

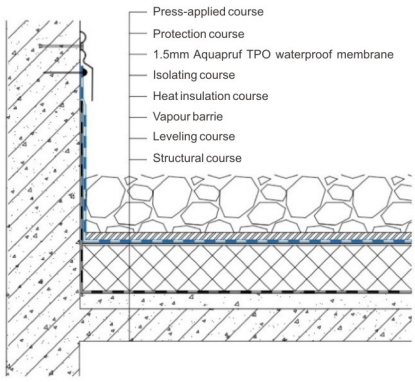



**Metal Roof (A grade combustion performance of heat insulation course material)**

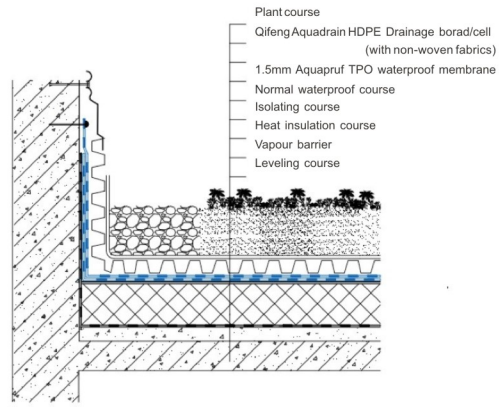



**Metal Roof (B1 grade combustion performance of heat insulation course material)**

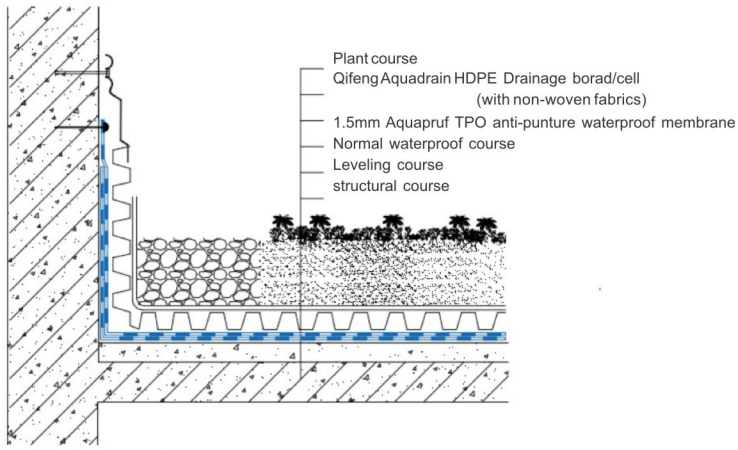
**Construction technology: border aahesion**




**Roof without plant**




**Roof with plant**




**Roof with plant(without insulation course)**

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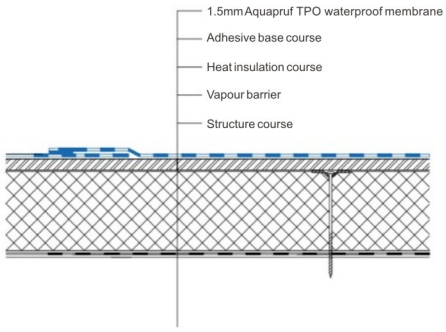
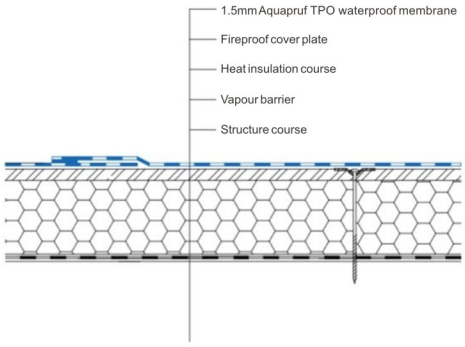
**Construction technology: full-adhesion**

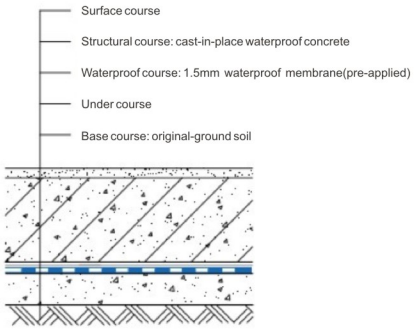



**A grade combustion performance of heat insulation course material**

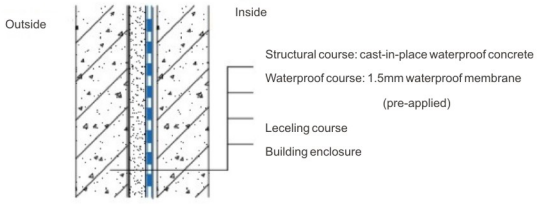



**Roof (B1 grade combustion performance of heat insulation course material)**

**Construction technology: pre-applied upward-adhesion**

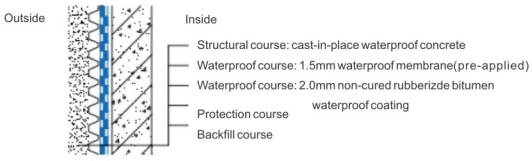



**Waterproof structure of basement bottom plate**

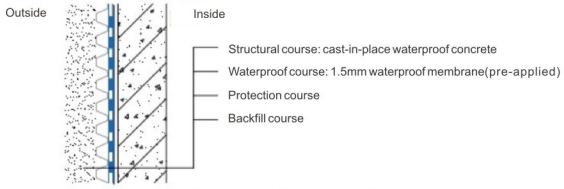



**Waterproof structure of basement side wall**

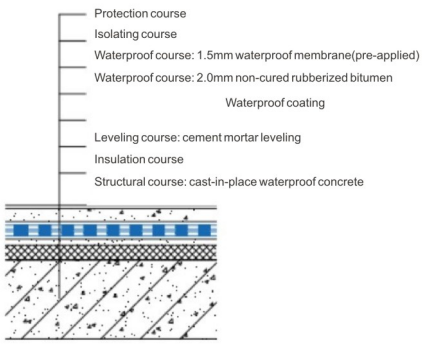
**Construction technology: Self-adhesion**



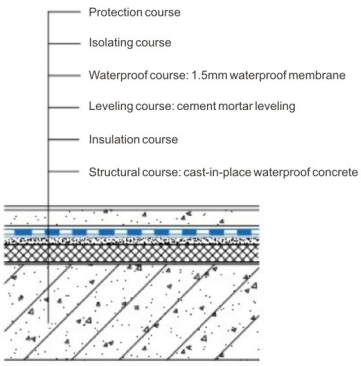

**Waterproof structure of basement side wall(I grade)**



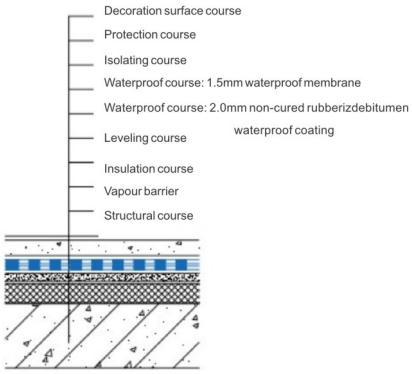

**Waterproof structure of basement side wall(II grade)**



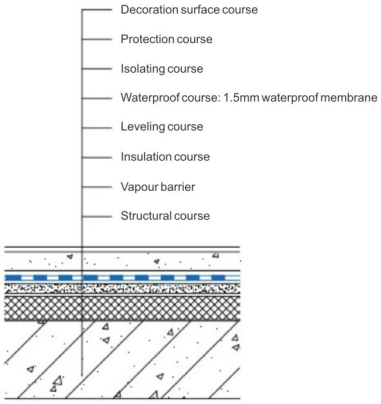

**Waterproof structure of basement top plate (I grade)**



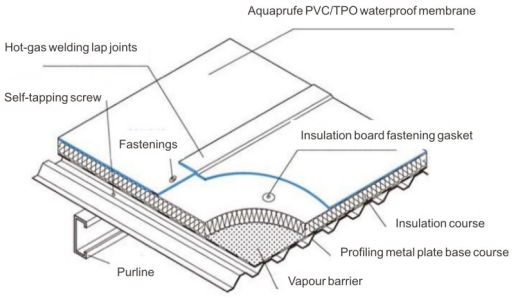

**Waterproof structure of basement top plate (II grade)**



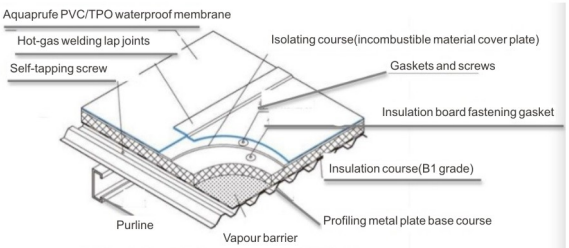

**Waterproof structure of roofing (I grade)**




**Waterproof structure of roofing (II grade)**




**Mechanical fastening roof (without fireproof cover plate)**




**Mechanical fastening roof (with fireproof cover plate)**

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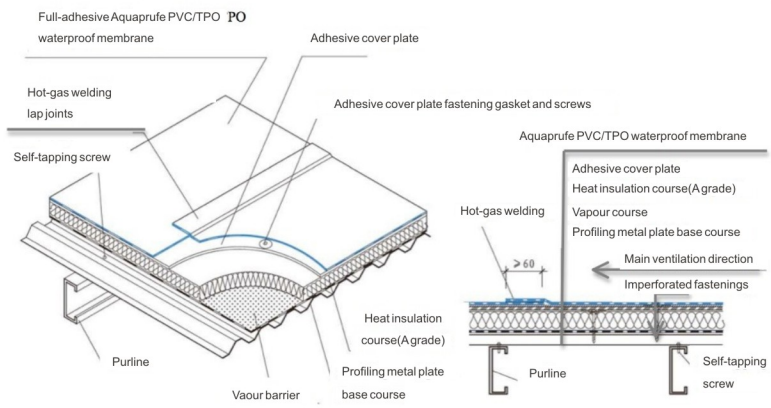


**Sketch of full-adhesive roofing** **Waterproof structure of full-adhesive roofing**

## SUPPLY

Packing: 2m x 20m (40m$^2$/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

**CE Standards**

| No. | ITEMS | REQUIREMENT | TEST METHOD |
|---|---|---|---|
| 1 | Tear Strength | ≥150N | EN 12310-2:2000 |
| 2 | Shear Strength | ≥400N/50mm | EN 12317-2:2010 |
| 3 | Peel strength | ≥200N/50mm | EN 12316-2:2013 |
| 4 | Flexibility at low temperature | -40℃no crack on the tested face | EN 13956:2012&EN 495-5:2013 |
| 5 | Tensile Strength(MD) | ≥8N/mm$^2$ | EN 12311-2 1999clientsrequirement |
| 6 | Tensile Strain at Break(CD) | ≥450% | EN 12311-1 1999clientsrequirement |
| 7 | Stitch Tear Strength(CD) | ≥500N | EN 12310-1:1999 |

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**Implemented Standard: GB27789-2011**

| No. | ITEMS | | INDEX | | |
|---|---|---|---|---|---|
| | | | H | L | P |
| 1 | Thickness Above Scrim | | — | | 0.40 |
| 2 | tensile performance | Max Tensile strength, (N/cm) ≥ | — | 200 | 250 |
| | | Tensile Strength, Mpa≥ | 12 | — | — |
| | | Elongation at max. tensile strength. %≥ | — | — | 15 |
| | | Elongation at break, %≥ | 500 | 250 | — |
| 3 | Dimensional change after heat treatment | | 2.0 | 1.0 | 0.5 |
| 4 | Flexibility at low temperature | | -40℃, no cracking | | |
| 5 | Water tightness | | 0.3MPa, 2h, water tight | | |
| 6 | Puncture Resistance | | 0.5kg·m, impermeable | | |
| 7 | Hydrostatic Resistance | | — | — | 20kg, impermeable |
| 8 | Lap seam peeling strength | | 4.0 or membrane breakage | 3.0 | |
| 9 | Right-angled tear strength | | 60 | — | — |

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