

VX Guardian TPO 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

## FEATURES

- 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.

## 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.

## TYPICAL PROPERTIES

Items	Requirement	Test Method
Tear Strength	150N	EN 12310-2:2000
Shear Strength	400N/50mm	EN 12317-2:2010
Peel strength	200N/50mm	EN 12316-2:2013
Flexibility at low temperature	-40°C no crack on the tested face	EN 13956:2012 & EN 495-5:2013
Tensile Strength (MD)	8N/mm	EN 12311-2 1999 clients requirement
Tensile Strain at Break	450%	EN 12311-2 1999 clients requirement
Stitch Tear Strength (CD)	SOON	EN 12310-1:1999

## PACKAGING

2m x 20m (40m<sup>2</sup>/roll)

## TECHNICAL DATA

Items		Index		
		H	L	P
Tear Strength		-		0.40
Tensile Performance	Max Tensile strength, (N/cm) ~	-	200	250
	Tensile Strength, Mpa~	12	-	-
	Elongation at max. tensile strength. %~	-	-	15
	Elongation at break, % ~	500	250	0.5
Dimensional change after heat treatment		2.0	1.0	0.5
Flexibility at low temperature		-40°C, no cracking		
Water tightness		0.3MPa, 2h, water tight		
Puncture Resistance		0.5kg/m, impermeable		
Hydrostatic Resistance		-	-	20kg, impermeable
Lap seam peeling strength		4.0 or membrane breakage	-	
Right-angled tear strength		60	-	-

## 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 VX Guardian TPO, the surface does not need to be dry, but standing water must be removed.

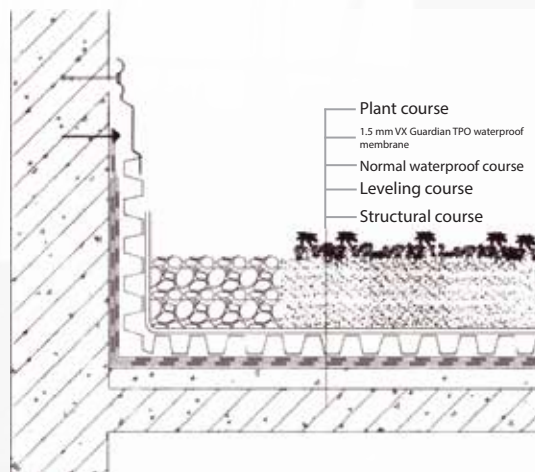
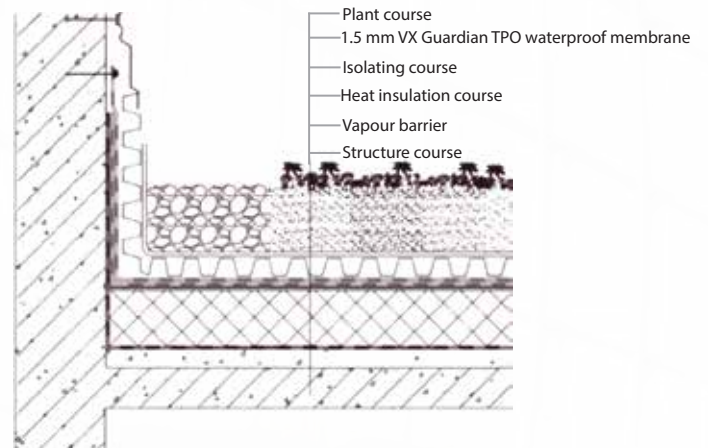
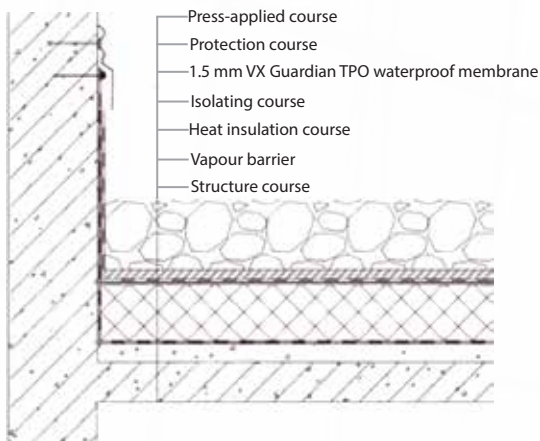
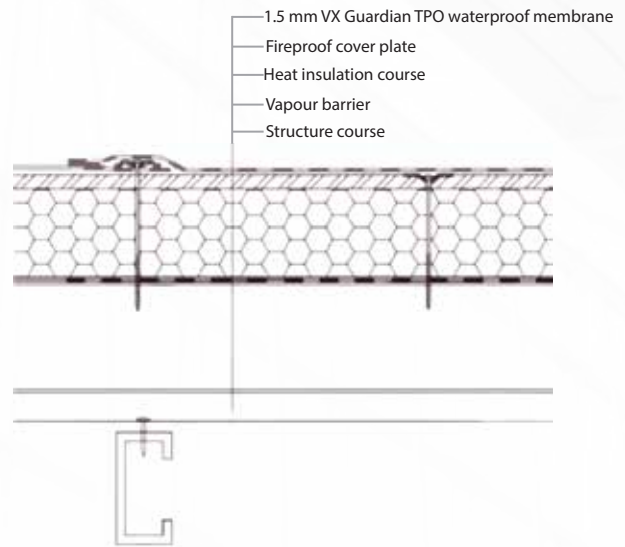
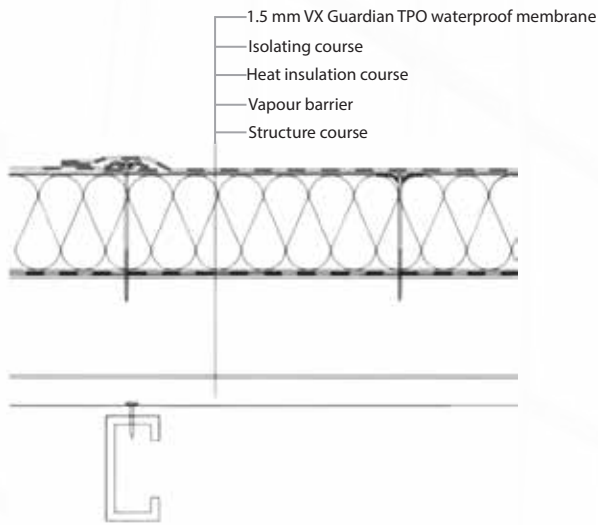
### Vertical Sheet Piling

VX Guardian 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.

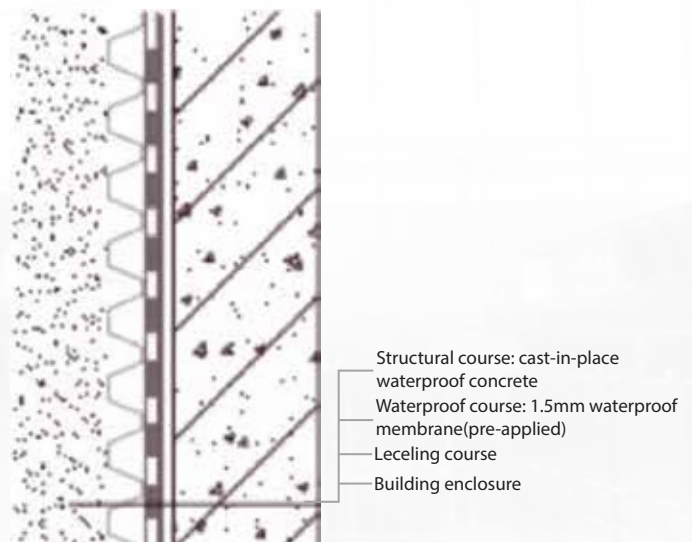
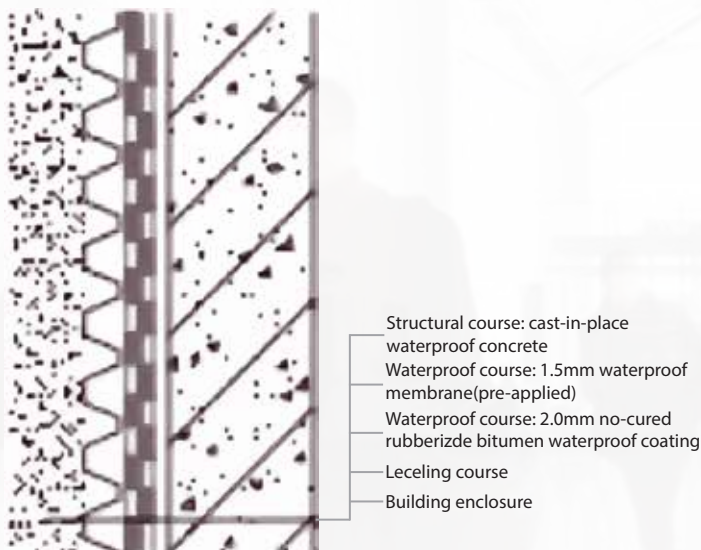
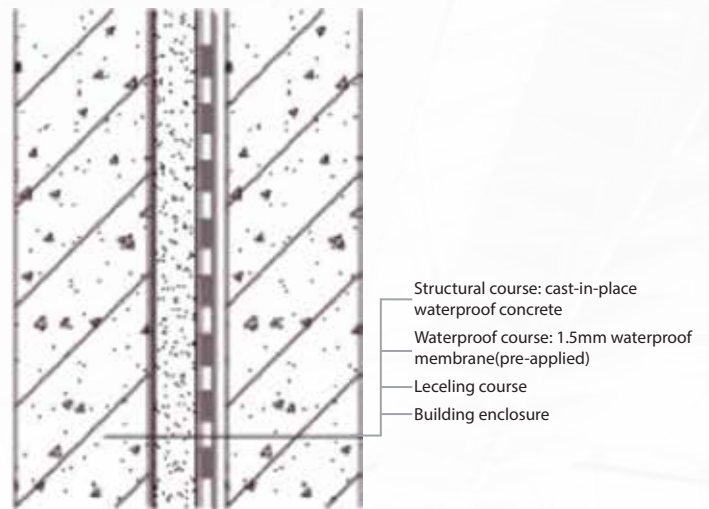
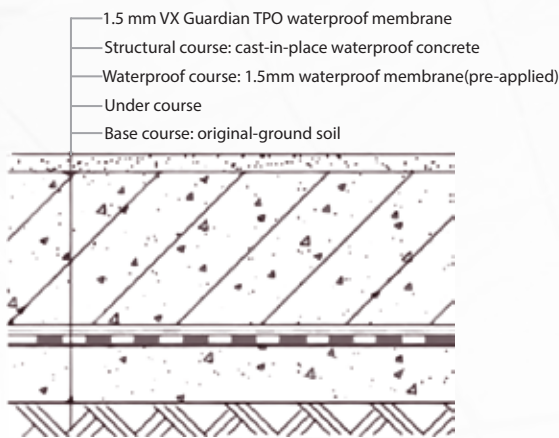
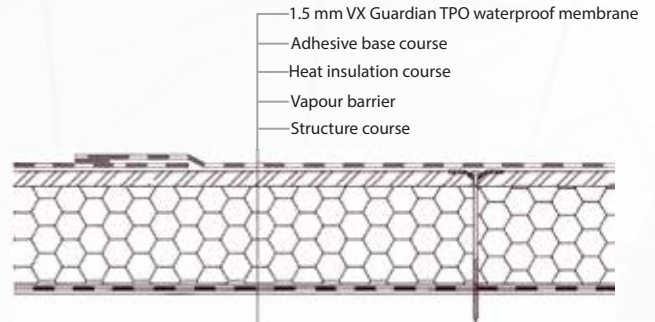
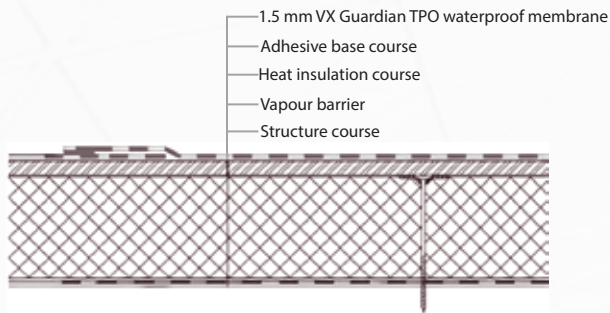
### Membrane Installation

VX Guardian TPO, pre-applied fully bonded HDPE Membrane should be overlapped using steel roller to ensure complete bonding and to achieve continuity. VX Guardian TPO, pre-applied waterproofing membrane can be installed at temperatures of -5°C and above. When installing VX Guardian 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.

## DETAIL DRAWING



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