

# ECMASHIELD PVC

## Twin Color Geo Membrane With Signal Layer

### *Description and Characteristics*

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Flexible synthetic waterproofing membrane in polyvinyl chloride, obtained through a co-extrusion process. Single layer membrane in two-colour version (signal-layer). The different colours on the two sides, light on the exposed surface and dark behind, make it possible to immediately identify any damage to the membrane during installation. This geomembrane is not suitable for permanent exposure to UV radiation.

### **Areas of application**

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- Heavy duty waterproofing of basements (raft & retaining walls)
- Podium slabs
- UG structures such as UG metro station buildings
- Tunnels
- Lining of sewage canals, STP Tanks, water reservoirs, etc.

### **Advantages**

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- Signal layer
- Hardly combustible (B2-ON B 3800/1, B2-DIN 4102,IV.2-SIA 280,CLASS E-EN 15085)
- Resistant to swelling, rotting and ageing
- Very high level of water tightness, even with permanent deformation
- High capacity for adaptation to irregularities or deformation of support due to its high deformability and weld strength
- High resistance to puncturing
- Root resistance in accordance with En14416

### **Surface Preparation**

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It is important to remove/clean loose particles, dirt, grease from the surface by chipping and washing with suitable equipment such as high-pressure air, water, or wire brush.

### **Application (Hot welding)**

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Hot air or hot welding achieves correct assembly of the geomembrane. The weldability and the quality of the welding done on site can be influenced by atmospheric conditions and also by the state of surface of the geomembrane (clean and dry) and must be adapted in consequence.

An anti-puncturing geotextile or a composite (protective membrane with laminated fleece) should be placed onto the support of the waterproofing. In case the geomembrane will be covered with sand, gravel or concrete a geotextile or a protection membrane of nonreinforced ECMASHIELD PVC should be placed in between. The geomembrane can be used on a bituminous support after the insertion of a suitable separate.

## Technical Specification

Characteristics	Norms	Units	Specifications
Thickness	EN 1849-2	mm	2.0 ± 5 %
Tensile Strength	EN ISO 527	N/m,m <sup>2</sup>	≥ 15
Elongation at failure	EN ISO 527	% ≥	270
Tear Strength	EN ISO 34	KN/m ≥	42
Dimensional stability after accelerated ageing(6h/80 °C)	EN ISO 1107-2	%	< 2%
Puncture Resistance ( CBR)	EN ISO 12236	N	> 2400
Height of fall without perforation	DIN 16726	mm	>1100
Cold folding resistance	EN 495-5		No cracks at - 20° C
Resistant under water pressure	DIN 16726		waterproof at 10 bar/10 hr. waterproof at 6 bar/72 hr.
Behavior after storage in hot water (8 months/50°C)	SIA V 280		
Mass variation			< 4 %
variation at Elongation at failure			< 20 %
variation of tensile strength			< 20 %
Behavior after long-term ageing 80° C/70 days	DIN 16726		
General appearance			No blister
dimensional Stability		%	< 2%
variation of tensile strength		%	≤ 10 %
variation at Elongation at failure		%	≤ 10 %
Folding at a temperature of - 20 °C			No cracks at - 20° C
Behavior after storage in acid and / or alkaline solutions (56 d / 50 °C)	EN 14416		
Variation of tensile strength,			≤ 10 %
Variation at Elongation at failure			≤ 10 %
Folding at a temperature of - 20 °C			No cracks at - 20° C
Root Resistance	EN 14416		Resistant
Oxidation resistance	EN 14575		Conform
Behavior in fire	B2 ON B 3800/1 SIA 280 5.2 DIN 4102 B2 EN ISO 11925		B2  Class E
Packing	2.5 x 20m (width x length)		

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