



Mapeplan® UG



Synthetic waterproofing membrane for basement and underground structures

DESCRIPTION

Mapeplan® UG is a PVC-P synthetic waterproofing membrane produced in one **multi-extrusion process**, with high quality raw material.

Mapeplan® UG is a single layer unreinforced membrane with an orange signal layer.

Mapeplan® UG is conform to EN 13967 and EN 13491 standards.

APPLICATION FIELD

Basement and underground structures waterproofing with the following systems:

- Single layer
- Single layer with injection
- Double layer vacuum, sectorized, testable and repairable system.

NORMS AND CERTIFICATIONS

CE conformity marking according to EN 13967 and EN 13491 standards.

ISO 9001 quality system certification.

ISO 14001 environmental system certification.

Mapeplan® UG can contribute in the collection of LEED (Leadership in Energy and Environmental Design) credits.



TECHNICAL CHARACTERISTICS

Mapeplan® UG is a high standard quality product; it performs very good mechanical properties, best workability as well as excellent welding characteristics.

- Signal layer (orange/black) which allows to highlight any holes or tearing of the membrane during the placing phase;
- Long life expectancy;
- High mechanical characteristics;
- High workability and weldability;
- Excellent resistance to ageing;
- Resistance to permanent water pressure;
- Root-resistant;
- Excellent flexibility at low temperature;
- Fire reaction classification: class E according to EN 13501-1;
- Loose laid to act independently of the structural movement;
- Loose laid, excellent ability to bridge the cracks (crack bridging)
- Formulation without dangerous or harmful substances for human health and for the environment;
- Possibility to test the welding realized with double seam system;
- Possibility to realize sectorized/testable/repairable systems with the Mapeplan® accessories line.

PACKAGING

PALLET	14 rolls per pallet
ROLL LENGTH	20 m 15 m according to the thickness
ROLL WIDTH	2,00 m 2,10 m

STORAGE AND WASTE DISPOSAL

Store horizontally, shelter from sun and bad weather in a dry place.

Mapeplan® UG is stable in ordinary storage conditions. It is advised to store the product at the site in its original sealed packaging. According to current norms regarding waste disposal, the product may be disposed of in an authorized waste tip, a recycling plant for plastics or an authorized thermo-reducing plant.

SAFETY INSTRUCTIONS FOR PREPARATION AND APPLICATION

Mapeplan® UG is an article that, according to current European Regulations (Reg. (EC) 1906/2007 - REACH), does not require a Material Safety Data sheet.

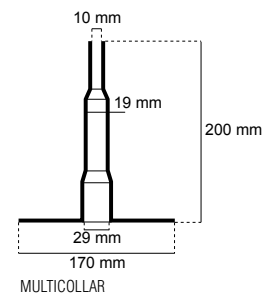
Precaution during use: ensure a proper change of air if the application is made in closed working environments.

TECHNICAL DATA				
PRODUCT IDENTITY				
Raw material		PVC-P		
Colour		Orange/black		
European standard		EN 13967		
CHARACTERISTICS STANDARDS - M.U.		Mapeplan® UG 15	Mapeplan® UG 20	Mapeplan® UG 30
Visible defects (m)	EN 1850-2	None	None	None
Thickness (mm)	EN 1849-2	1,5 (-5/+10%)	2,0 (-5/+10%)	3,0 (-5/+10%)
Standard roll length (m)	EN 1848-2	20 (-0/+5%)	20 (-0/+5%)	15 (-0/+5%)
Width (m)	EN 1848-2	2,00/2,10 (-0,5/+1%)	2,00/2,10 (-0,5/+1%)	2,00/2,10 (-0,5/+1%)
Straightness (mm)	EN 1848-2	≤75/10m	≤75/10m	≤75/10m
Mass per unit area (g/m²)	EN 1849-2	2055 (-5/+10%)	2740 (-5/+10%)	4110 (-5/+10%)
TECHNICAL CHARACTERISTICS		Mapeplan® UG 15	Mapeplan® UG 20	Mapeplan® UG 30
Tensile strength at break (EN 12311-2) (N/mm²)		≥15	≥15	≥15
Elongation at break (EN 12311-2) (%)		≥280	≥280	≥280
Resistance to tearing (EN 12310-1) (N)		≥300	≥500	≥800
Resistance to static load (EN 12730) (kg)		≥25	≥25	≥25
Watertightness to liquid water (EN 1928 B, 24 h / 60 kPa)		pass	pass	pass
Durability of watertightness against artificial ageing (EN 1296, 12 weeks and EN 1928 B, 24 h / 60 kPa)		pass	pass	pass
Durability of watertightness against chemicals (EN 1847, 28 days / +23°C and EN 1928 B, 24 h / 60 kPa)		pass	pass	pass
Resistance to alkali (EN 12311-2 annex C, 24 weeks / +90°C)		pass	pass	pass
Impact resistance (EN 12691) (mm)		≥500	≥750	≥1200
Joint strength (EN 12317-2) (N/50mm)		≥800	≥1100	≥1500
Fire reaction classification (EN 13501-1)		Class E	Class E	Class E
Water vapour transmission (EN 1931) (μ)		15000	15000	15000
Compatibility with bitumen (EN 1548, 28 days / +70°C):		NPD	NPD	NPD

The membrane is also available with embossed surface (MAPEPLAN TU ST) for use in the Vacuum system.

MAPEPLAN® ACCESSORIES:

- Polydren PP
- **Mapeplan®** Protection
- **Mapeplan®** injection valve
- Injection tube 6-8mm and quick fitting connector
- **Mapeplan®** waterstop
- **Mapeplan®** disk
- **Mapeplan®** metal sheet
- **Mapeplan®** Cleaner



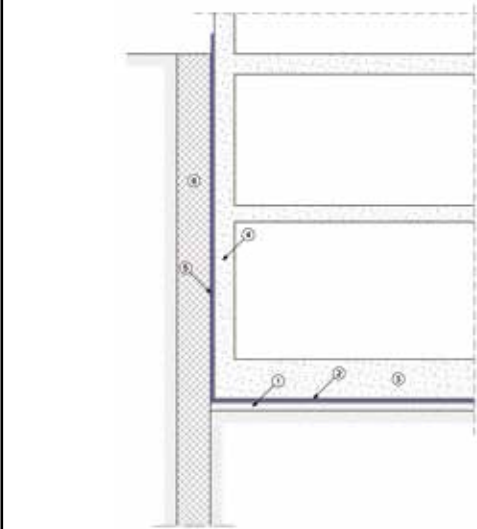
MULTICOLLAR

N.B. FOR PROFESSIONAL USE ONLY

WARNING

Although the technical details and recommendations contained in this technical data sheet correspond to the best of our knowledge and experience, all the above information must, in every case, be taken as merely indicative and subject to confirmation after long-term practical applications: for this reason, anyone who intends to use the product must ensure before handling that is suitable for the envisaged application: in every case, the user alone is fully responsible for any consequence deriving from the use of the product.

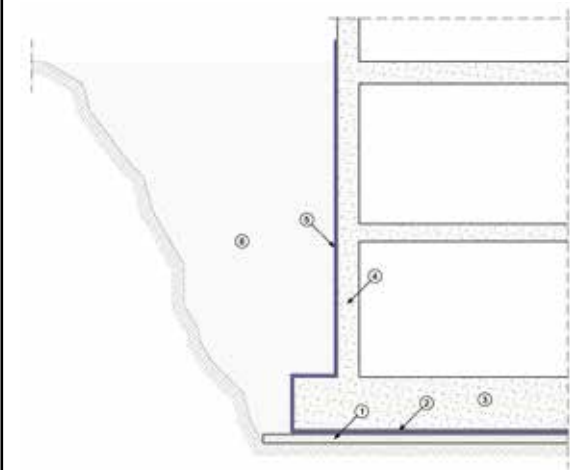
FOUNDATION WITH BULKHEADS OR BAFFLES



LEGEND

- 1 - Lean concrete
- 2 - Complete waterproofing system MAPEPLAN® (foundation slab)
- 3 - Foundation slab
- 4 - Foundation wall
- 5 - Complete waterproofing system MAPEPLAN® (bulkhead/baffles)
- 6 - Bulkhead/baffles

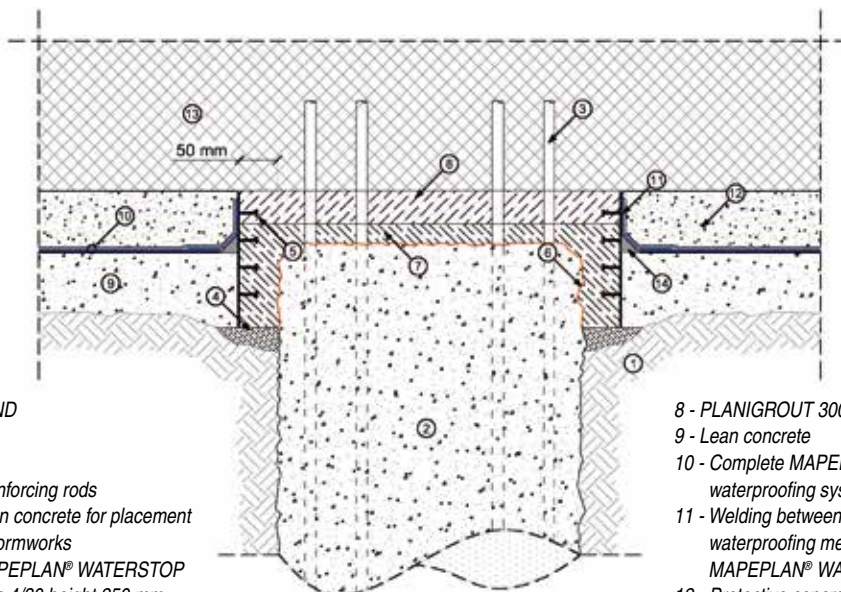
FOUNDATION WALL



LEGEND

- 1 - Lean concrete
- 22 - Complete waterproofing system MAPEPLAN® (foundation slab)
- 3 - Foundation slab
- 4 - Foundation wall
- 5 - Complete waterproofing system MAPEPLAN® (wall)
- 6 - Refill

PILE HEAD DETAIL



LEGEND

- 1 - Soil
- 2 - Pile
- 3 - Reinforcing rods
- 4 - Lean concrete for placement of formworks
- 5 - MAPEPLAN® WATERSTOP type 4/30 height 250 mm
- 6 - Rough and clean surface + EPORIP
- 7 - MAPEGROUT ME 05 (min. 25 mm)

- 8 - PLANIGROUT 300 (min. 20 mm)
- 9 - Lean concrete
- 10 - Complete MAPEPLAN® waterproofing system
- 11 - Welding between MAPEPLAN® waterproofing membrane and MAPEPLAN® WATERSTOP
- 12 - Protective concrete screed
- 13 - Basement
- 14 - Mortar fillet



www.mapei.com

MAPEPLAN range is produced by:



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