

PM 20



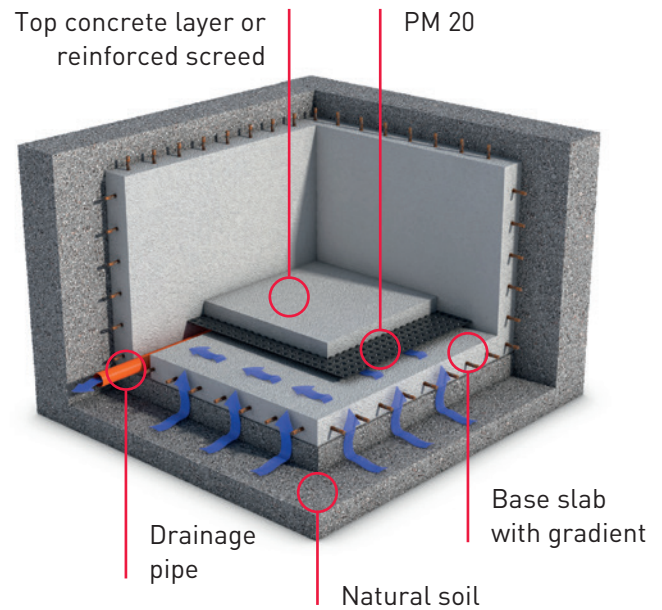
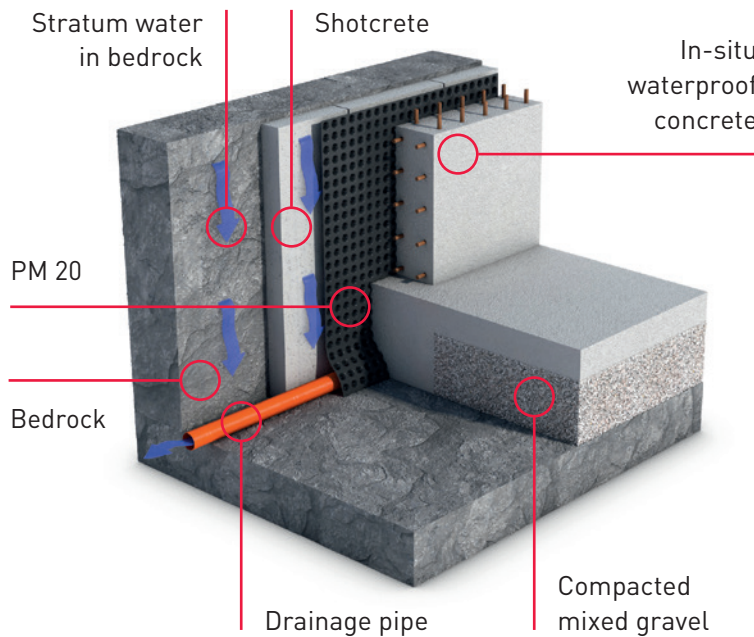
PM 20 is a high-performance drainage membrane and represents the ideal solution for the drainage of rising water, seepage water and back-water. It offers the drainage capacity of conventional dimpled membranes many times over. PM 20 is used in civil engineering, e.g. as permanent formwork between shoring and concrete structural wall. Accumulated water can then already be drained in the shell construction phase. The dimple height of 20 mm offers an enormous drainage capacity of approx. 9 l/s·m. The pressure resistance of approx. 180 kN/m² ensures a high level of security and corresponds to a compressive strength of 18 t per m². In tunnel construction too, PM 20 offers major advantages. When installed horizontally, it takes up large quantities of mountain water and securely drains it into the drainage line at the base. The large drainage cross-section creates secure reserves for potential cross-section constrictions due to sintering. For flood protection, PM 20 is laid horizontally between the base slab and the top concrete layer or reinforced screed. This way, any water that accumulates as the groundwater level rises is securely discharged into the drainage line, where it can be pumped out.

Technical Data

Material	HDPE approx. 1,000 g/m ²
Dimple height	20 mm
Compressive strength	approx. 180 kN/m ²
Drainage capacity	approx. 9 l/s·m
Air volume between the dimples	approx. 14 l/m ²
Temperature resistance	-30 °C to +80 °C
Fire behaviour	class E; B1 acc. to class A possible for special structural requirements
Roll length	20 m (Additional lengths on request)
Roll width	0.5 m / 1.0 m / 1.5 m / 2.0 m
Chem. properties	chemical-resistant
Biolog. properties	resistant to bacteria and fungi, rot-resistant, root-resistant
Physiolog. properties	safe for drinking water

For more information, visit www.pmi-plast.de

INSTALLATION INSTRUCTIONS



Vertical installation

PM 20 is mechanically fixed on excavation shoring or the outer shell in a tunnel construction. Protruding sharp-edged parts should be removed. The 20 mm dimples always point towards the outer shell. The PM 20 dimpled membrane can be mounted on the entire surface of the outer shell in one go. For very high excavation pits, it is advisable to roll PM 20 in 2 m width horizontally on the wall and mount it only up to the height of the respective concreting section. This way, the next wall sections can be processed from each floor slab. The laid dimpled membranes should overlap 15–20 cm at the edges. Horizontal overlaps ideally occur in the direction of the water flow, with the upper membrane reaching behind the lower membrane.

On vertical walls, approx. 1 fixing point per m² is required. If the surface is very uneven, a denser fixing grid may be necessary. In this case, the overlap area in particular should be fixed repeatedly. In a tunnel vault, 3–4 fixing points per m² are required. Here too, a denser fixing grid is advisable for very uneven surfaces. The unevenness of the surface may not go below a diameter-to-depth ratio of 10:1. Fixing is

achieved by means of power-actuated fasteners with pre-assembled washers or plastic insulation anchors.

Horizontal installation

PM 20 is laid horizontally with the dimples to the surface by rolling it out on a smooth, stable and pressure-resistant surface. The dimpled membranes overlap by 10 cm (two rows of dimples). Then cut the membrane to the required length. If the laid membranes have to be extended, the connecting membrane is pushed under at least 20 cm from below. The horizontal overlaps are shingle-like in the direction of the water flow. On rising components, the PM 20 dimpled membrane should be raised at least 10 cm (2 rows of dimples). The concrete inner shell is usually made of in-situ concrete, with the dimpled membrane being filled directly with fresh concrete. The dimpled membrane acts as a permanent formwork and forms a cavity in which water can be drained.

Accessories:

PM MOUNTING BUTTON with specially hardened steel nails | PM EDGE FINISHING PROFILE made of black metal (in 20 mm) | PM BUTYL ADHESIVE TAPE | PM POWER FIX cartridge adhesive