

**TECHNICAL DATA SHEET**

**DELTA®-MS 20**

**Vertical Underground Application**

**MATERIAL**

Studded membrane made of special, high-density polyethylene.

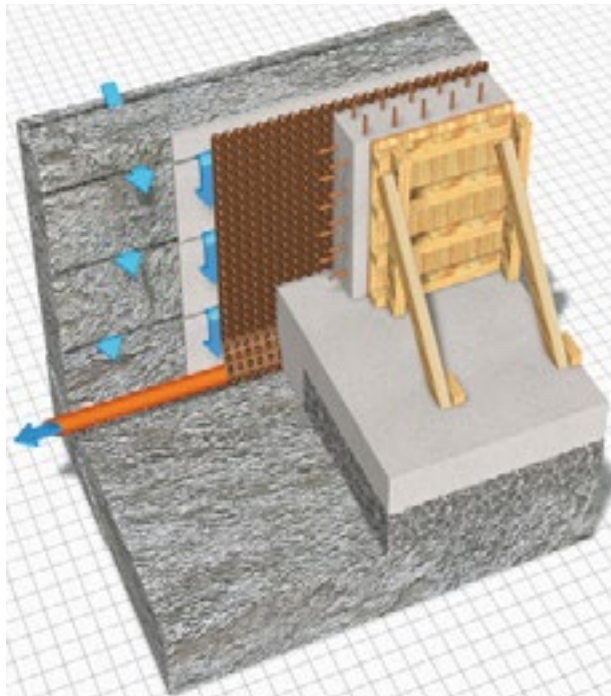
**PROPERTIES**

With its 20 mm studs and very high drainage capacity, DELTA®-MS 20 is ideally suited as a reliable high performance seepage and drainage layer in blind-side applications against shotcreted surfaces.

**APPLICATION**

DELTA®-MS 20 can be used between shotcrete installations or diaphragm walls and cast-in-place concrete walls. The shotcrete or the diaphragm wall acts like a filter and keeps the seepage layer free from ground soil particles. This procedure allows to:

- Deliberately deflect and drain away water during the construction phase so as not to obstruct the process of setting and curing of the concrete.
- Drain away water to eliminated build-up of hydrostatic pressure on completed structures.
- Bring the groundwater level around the building to a common low level and maintain a low hydrostatic load against waterproofing layers subjected to water pressure.



**Technical Data**

Product name	DELTA®-MS 20	
Color	brown	
Material	Recycled high-density polyethylene, encapsulated between two layers of special virgin HDPE	
Dimple height	0.79 in (20 mm)	ASTM D6364-06
Compressive Strength	4,160 psf (200 kN/m <sup>2</sup> )	ASTM D6364-06
Drain capacity between dimples (Flow rate @ Hydr. grad. 0.1; 5 kPa)	13 gal/min/ft (161 l/min/m)	ASTM D4716-08
Drain capacity between dimples (Flow rate @ Hydr. grad. 0.02; 5 kPa)	5.7 gal/min/ft (71 l/min/m)	ASTM D4716-08
Volume of air between dimples	43.98 fl. oz / ft <sup>2</sup> (14 l/m <sup>2</sup> )	ASTM D4716-08
Chemical properties	Resistant to chemicals Root-penetration resistant Does not rot when in contact with soil	
Toxicity	Non-toxic, non-polluting	
Temperature range	-22°F to +176°F (-30°C to +80°C)	
Chemical properties	Excellent chemical resistance, resistant to root-penetration, rot-proof	
Toxicity	non-toxic, non-polluting	
Roll dimensions	6.6' x 65.6' (2 x 20 m)	
Service life expectancy	> 25 years (at pH between 4 and 9, and temperature below 25°C). The membrane should not be exposed to UV light for more than 30 days.	

DELTA® products support sustainable and energy-efficient building practices, including efforts toward achieving LEED® certification (LEED® for New Construction & Major Renovations, LEED® for Core and Shell, LEED® for Existing Buildings and LEED® for Homes).

For technical support, call our technical support team at 1-888-4DELTA4 (1-888-433-5824) extension 326, or visit [www.cosella-dorcken.com](http://www.cosella-dorcken.com).