

## Product Technical Information

ITA/ATEXP/431

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# GEONAP 7.5 m

## HDPE geomembrane



### PRESENTATION

**GEONAP** is a black high density polyethylene (HDPE) geomembrane produced from virgin polyethylene resin.

**GEONAP** contains approximately 97.5 % polyethylene, 2.5 % carbon black and trace amounts of antioxidants and heat stabilisers.

**GEONAP** has an excellent resistance to UV radiation and is suitable for exposed applications. **GEONAP** meet or exceed GRI GM 13.

**GEONAP** has outstanding chemical resistance and environmental stress crack resistance.

**GEONAP 1.5 mm and GEONAP 2 mm are certified by ASQUAL.**



### PHYSICAL AND MECHANICAL CHARACTERISTICS

Tested property	Unit	Standard	Nominal Values*			
Thickness	mm	EN ISO 2286-3	1	1.5	2	2.5
Density	g/cm <sup>3</sup>	EN ISO 1183-1/A	≥ 0.94	≥ 0.94	≥ 0.94	≥ 0.94
Tensile properties (MD and CMD):						
- Stress at yield	MPa	EN ISO 527-3	17 (16)	17 (16)	17 (16)	17 (16)
- Elongation at yield	%	(Type 5, 100	10 (9)	11 (10)	11 (10)	11 (10)
- Stress at break	MPa	mm/min., lo = 50	35 (26)	35 (26)	35 (26)	35 (26)
- Elongation at break	%	mm)	800 (700)	800 (700)	800 (700)	800 (700)
Tear resistance	N	ISO 34-1/B	145 (130)	225 (210)	300 (280)	375 (350)
Puncture resistance	N	ASTM D 4833	420 (320)	560 (480)	690 (640)	830 (800)
Carbon black content	%	ASTM D 1603	2.0-3.0	2.0-3.0	2.0-3.0	2.0-3.0
Carbon black dispersion	Category	ASTM D 5596	1 / 2	1 / 2	1 / 2	1 / 2
Melt flow index	g/10 min	EN ISO 1133				
		(190 °C / 5 kg)	≤ 3	≤ 3	≤ 3	≤ 3
		(190 °C / 2.16 kg)	≤ 1	≤ 1	≤ 1	≤ 1
Stress crack resistance (NCTL)	h	ASTM D 5397	≥ 400	≥ 400	≥ 400	≥ 400
Low temperature brittleness	°C	ASTM D 746	- 77	- 77	- 77	- 77
Oxidative induction time (OIT)	min	ASTM D 3895				
		(200 °C, pure O <sub>2</sub> , 1 atm)	≥ 100	≥ 100	≥ 100	≥ 100
UV resistance	%	GRI-GM 11				
HP-OIT retained after 1600 hours		ASTM D 5885	≥ 50	≥ 50	≥ 50	≥ 50

\* Values in brackets are minimum values within the 95 % confidence interval.

### PACKAGING

	Thickness	Width	Length	Weight/roll	Surface/roll	Rolls/truck	Surface/truck
<b>GEONAP 7.5 m</b>	<b>1 mm</b>	7.5 m	200 m	≈ 1500 kg	1500 m <sup>2</sup>	15	22 500 m <sup>2</sup>
	<b>1.5 mm</b>	7.5 m	130 m	≈ 1500 kg	975 m <sup>2</sup>	15	14 625 m <sup>2</sup>
	<b>2 mm</b>	7.5 m	100 m	≈ 1500 kg	750 m <sup>2</sup>	15	11 250 m <sup>2</sup>
	<b>2.5 mm</b>	7.5 m	80 m	≈ 1500 kg	600 m <sup>2</sup>	15	9 000 m <sup>2</sup>

The mandrel diameter is 15 cm and the external roll diameter is approximately 65 cm.