

# TechGeo PRO HDPE SMOOTH 1.00 mm – GM13

**TechGeo PRO HDPE SMOOTH** Geomembrane series is manufactured by a Blown Film process which uses resins produced under world class quality controls and international standards. The formulation of this geomembrane is composed of high molecular weight virgin resins and stabilized with the best additives on the market. As a result, it guarantees high durability and excellent mechanical properties and chemical compatibility.

**TechGeo PRO HDPE SMOOTH** also follows international manufacturing guidelines established by GRI GM-13, recommendation developed by the Geosynthetic Research Institute (GRI).

Available sizes	
Width (m)	Length (m)
7.00	100

PROPERTIES	TEST METHOD	UNITY	1.00 mm 40 mils	TESTING FREQUENCY
Thickness (min.ave.) Lowest individual of 10 values	ASTM D5199	mm	-10%	Per roll
Formulated Density (min.)	ASTM D1505/D792	g/cm <sup>3</sup>	0.94	90,000 kg
Tensile Properties - Yield Strength (min.ave.)	ASTM D6693 Type IV	kN/m	15	9,000 kg
Tensile Properties – Yield elongation (min.ave.)	ASTM D6693 Type IV	%	12	
Tensile Properties – Break strength (min.ave.)	ASTM D6693 Type IV	kN/m	27	
Tensile Properties – Break elongation (min.ave.)	ASTM D6693 Type IV	%	700	
Tear resistance (min.ave.)	ASTM D1004	N	125	20,000 kg
Puncture resistance (min.ave.)	ASTM D4833	N	320	20,000 kg
Stress Crack Resistance (min.)	ASTM D5397	h	500	GM 10 (GRI)
Carbon Black Content	ASTM D1603	%	2 - 3	9,000 kg
Carbon Black Dispersion	ASTM D5596	-	Note (1)	20,000 kg
Oxidative Induction Time Standard OIT (min.ave.) High Pressure OIT (min.ave.)	ASTM D3895 ASTM D5885	min	100 400	90,000kg
Oven Aging * Standard OIT (min.ave.) High Pressure OIT (min.ave.)	ASTM D5721 ASTM D3895 ASTM D5885	%	55 80	PER EACH FORMULATION
UV Resistance ** Standard OIT (min.ave.) High Pressure OIT (min.ave.)	ASTM D7238 ASTM D3895 ASTM D5885	%	Note (2) 50	PER EACH FORMULATION

(1) Carbon black dispersion for 10 different views: 9 in categories 1 and 2; 1 in category 3

(2) Not recommended since the high temperature of the Standard OIT test produces an unrealistic result for some of the antioxidants in the UV exposed samples

Obs: roll tolerable variation in width and length: ±2%

\* (Retained after 90 days)

\*\* (Retained after 1.600hrs)