

Global Synthetics

Series **HDPE** – *metric*

High Density Polyethylene –2.00mm Smooth White/Black

Global Synthetic's Proliner White/Black is a Smooth high density polyethylene geomembrane manufactured with the high quality resin specially formulated for flexible geomembranes. It has a UV stabilized, White upper surface. Proliner geomembranes are durable and have been formulated to be resistant to chemicals, ultraviolet degradation and leaching additives.

The specification shown below meets or exceeds GRI GM 13.

Property	Test Method	Frequency'	Proliner White/Black
Thickness (nominal)(mm)			2.00
Thickness (min.avg.)(mm)	D5199	Per Roll	2.00
Lowest Individual of 10 value			1.80
Density (min.avg.) g/cm ³	D792	9,0000 kg	0.940
Tensile Properties (min.ave)	D6693 Type IV	9,000kg	
Yield Strength kN/m	50mm/min		29
Break Strength kN/m			53
Yield Elongation %	33 mm gage		12
Break Elongation %	50 mm gage		700
Tear resistance(min ave) N	D1004	20,000kg	249
Puncture Resistance(min.ave)N	D4833	20,000kg	640
Carbon Black Content(range)% ²	D1603	9,000 kg	2-3
Carbon Black Dispersion ³	D5596	20,000kg	Cat 1or 2
Stress Crack Resistance, hr	D5397	As per GRI GM10	300
Oxidation Induction time (mins)	D3895	90,000 kg	100
Oven Aging at 85°C	D5721	Per each Formulation	
HP OIT % retained after 90days	D5885		>80
UV Resistance	GM11	Per each Formulation	
High Pressure OIT % retained After 1600 hrs	D5885		>50

1. Testing Frequencies are rounded the nearest full roll

2. Carbon black content values apply to the black layer only

3. Carbon Black Dispersion for 10 different views all 10 in Category 1or 2.

The information contained herein has been compiled by a third party in collaboration with Global Synthetics and is, to the best of our knowledge, true and accurate. This information is offered without warranty. Final determination of suitability for use contemplated is the sole responsibility of the user. This information is subjected to change without notice.

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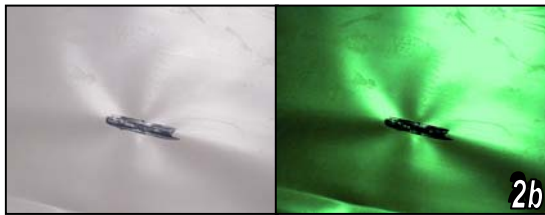
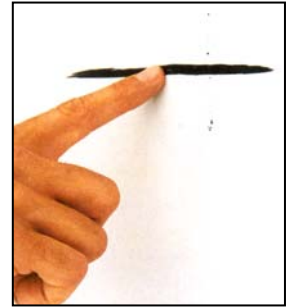
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White Surface:

The white surface reflects the sun and by doing this will reduce heat build up and by reducing heat you will reduce problems such as geomembrane wrinkles. These wrinkles are caused by thermal expansion and minimizing them can decrease the chances of damage to the membrane. Of course the lower heat absorption of the White Geomembrane also creates a better working environment and reduces worker fatigue and tiredness. Furthermore the white colour allows for easier detection of any damaged areas (1) and it can be seen better in low light applications. In addition to all of these advantages, there is of course the fact that the White Geomembrane has excellent UV resistance.



The picture on the left (2a) shows black polyethylene extruded onto white polyethylene. The black's thermal expansion warps the white layer that would have originally been unaffected. The warping effects are more visible in the enhanced photo (2b).



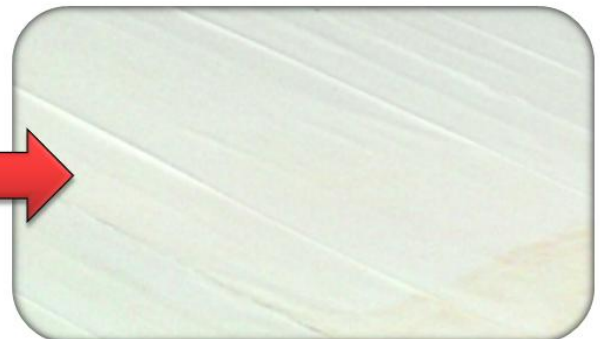
Picture (3) shows the White/Black being produced by blown film extrusion.

Each white layer is around 7% of the total weight, so a double layer of white would hold around 14% of the total geomembrane weight.



White Liner:

- **Minimize wrinkles** caused by heat expansion, so the risk of damage from wrinkles is reduced
 - Improves **damage detection**
 - **Reduce thermal expansion**
- **Minimize radiant heat build up** reducing worker fatigue
 - Reduces worker **water consumption** by up to 50%
 - **Improved visibility** in low light applications



Black Liner:

- **Wrinkles from heat**, so there is risk of damage from wrinkles
 - Time wasted on **damage detection**
- **Thermal expansion** that may cause installation issues
 - **Radiant heat build up** that causes worker fatigue
 - **Reduced visibility** in low light applications

