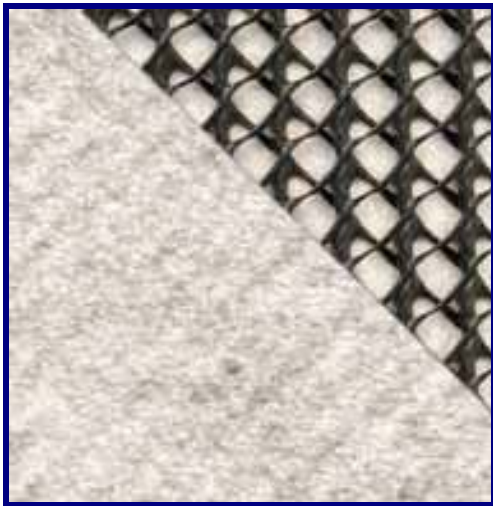


# Drainage Net and Geo-Composites

## Drainage Nets and Geocomposite Nets

Geo-nets (Geo-Composites) are polyethylene extruded grids either bi-axially or tri-axially oriented. The nets are often laminated to a non-woven geotextile to create a geocomposite net. They offer cost effective solutions whenever hydraulic conductivity of gases or liquids is needed. They also function quite well in protecting liner systems where interface friction with the sub-grade is critical.

Headwater Lining recommends incorporating geocomposite nets as a liner overlayment whenever a project requires equipment entering a lined pond to perform soil coverage.



**Tri-planer Geo-Net with  
Double-Sided  
Non-Woven Geotextile**



**Deploying geo-composite  
over membrane liner sys-  
tem in landfill**

### *Common Applications*

- Leachate Collection in Landfills
- Gas Transmission in Vented Liner Systems
- Underlayment and Overlayment Protection
- Liner Leak Detection Systems
- Landscaping and Erosion Control
- Roadway Drainage

### *Material Advantages*

- Excellent friction resistance in composite liner systems
- Prevents environmental stress cracking of crystalline geomembranes (HDPE)
- Durable for long term performance
- Lightweight, flexible and available in large roll widths for ease of installation



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# SINGLE/DOUBLE SIDED GEOCOMPOSITE

MINIMUM AVERAGE VALUES					
ENGLISH UNITS					
GEOCOMPOSITE PROPERTIES		Double Sided Geocomposite		Single Sided Geocomposite	
Property	Test Method	GC-08D-2.0	GC-08D-2.5	GC-08S-2.0	GC-08S-2.5
Transmissivity, (MD), gal/ min-ft metal plate/ geocomposite/ metal plate	ASTM D 4716	0.2 ( $4.0 \times 10^{-5} \text{ m}^2/\text{sec}$ )	0.5 ( $1.0 \times 10^{-4} \text{ m}^2/\text{sec}$ )	1 ( $2 \times 10^{-4} \text{ m}^2/\text{sec}$ )	1.4 ( $2.9 \times 10^{-4} \text{ m}^2/\text{sec}$ )
hydraulic gradient, $i = 1$ normal pressure = 10,000 lb/ft <sup>2</sup>					
Ply Adhesion, lb/ in	ASTM D 7005	1	1	1	1
<b>Roll Dimensions</b>					
1. Roll Width, ft		13.5	13.5	13.5	13.5
2. Roll Length, ft		200	150	250	175
<b>COMPONENT PROPERTIES</b>					
<b>Geonet</b>					
Thickness, mil	ASTM D 5199	200	250	200	250
Density, min., g/ cc	ASTM D 1505	0.94	0.94	0.94	0.94
Carbon Black Content, min., %	ASTM D 1603	1.5 - 3.0	1.5 - 3.0	1.5 - 3.0	1.5 - 3.0
Tensile Strength, (Peak, MD), lb/ in	ASTM D 5035	45	60	45	60
Transmissivity, (MD), gal/ min-ft metal plate/ net/ metal plate	ASTM D 4716	5 ( $1.0 \times 10^{-3} \text{ m}^2/\text{sec}$ )	7.2 ( $1.5 \times 10^{-3} \text{ m}^2/\text{sec}$ )	5 ( $1.0 \times 10^{-3} \text{ m}^2/\text{sec}$ )	7.2 ( $1.5 \times 10^{-3} \text{ m}^2/\text{sec}$ )
hydraulic gradient, $i = 1$ normal pressure = 10,000 lb/ ft <sup>2</sup> seat time = 15 minutes					
<b>Geotextile</b>					
Unit Weight, oz/ yd <sup>2</sup>	ASTM D 5261	8	8	8	8
Grab Strength, lb	ASTM D 4632	200	200	200	200
Grab Elongation, %	ASTM D 4632	50	50	50	50
Tear Strength, lb	ASTM D 4533	80	80	80	80
Puncture Strength, lb	ASTM D 4833	120	130	120	120
Permittivity, sec <sup>-1</sup>	ASTM D 4491	1.3	1.3	1.3	1.3
AOS, MaxARV	ASTM D 4751	80 sieve	80 sieve	80 sieve	80 sieve
UV Stability, % ret. (500 hr.)	ASTM D 4355	70	70	70	70

The above property values, unless otherwise specified, are the minimum acceptable average test results for any roll based on the specified test methods and do not refer to an individual test specimen. Geotextile property values are Minimum Average Roll Values, except for AOS, which is Maximum Average Roll Value. Geonet and Geotextile properties are tested prior to lamination.

This data is provided for informational purposes only and is not intended as a warranty or guarantee. Headwater Lining, LLC. assumes no responsibility in connection with the use of this data. These values are subject to change without notice. REV. 03/05



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