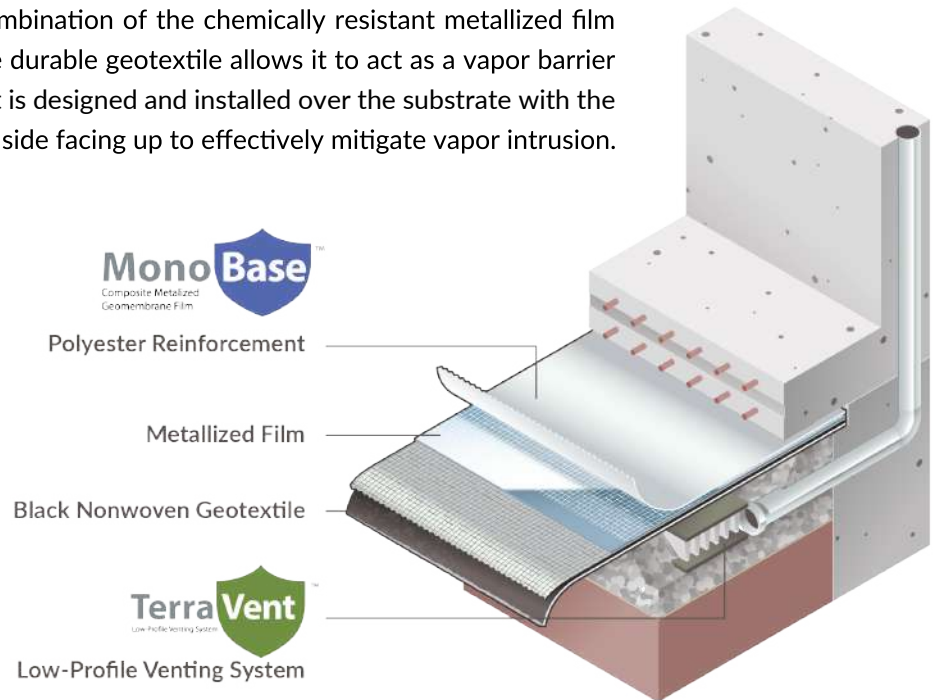




# MonoShield® Technical Data Sheet

The MonoShield System is a 30-mil composite geomembrane comprised of flexible chemically resistant metallized film laminated to a geotextile, a copolymer polyethylene and a tear resistant PET reinforcement grid structure. The combination of the chemically resistant metallized film thermally bonded to polyethylene and the durable geotextile allows it to act as a vapor barrier system for low-level contaminated sites. It is designed and installed over the substrate with the geotextile fabric facing down and metallic side facing up to effectively mitigate vapor intrusion.



## Application Details:

- MonoBase is seamed together with a 6” overlap and bonded using Land Science’s NitraCore at 60-mil thickness; applying the core to both above and below the barrier overlaps.
- MonoBase is overlapped at all perimeters a minimum of 3” onto the perimeter foundation with adherence using the Nitrile Core.
- All penetrations are wrapped using the MonoBase, zip tied and NitraCore is sprayed to seal each penetration.
- Smoke testing can be performed on the MonoShield System and is recommended to ensure the system is free of leaks.



## MonoBase General Properties

Properties	Test Method	MonoBase
Composite Thickness	MFX internal Method	30 mil
Layer Thickness	MFX internal Method	22 mil
Weight	EN1849-2	13 oz./SY
Color		Metallic Gray/Black Geotextile
Tensile Strength (Grab)	ASTM D751 - Procedure A	MD – 236 lbs CD – 247 lbs
Elongation	ASTM D751 - Procedure A	MD – 81% CD – 20%
Tear Resistance	ASTM D5884	MD – 26 lbs CD – 30 lbs
Fire Properties	EN13501-1	Class F
UV Stability	6 Months	Free Outdoor Exposure
Methane Permeability	ASTM D1434	105 (mL(STP)/m <sup>2</sup> .d.atm)
Benzene Diffusion Coefficient	GeoKinetics Method	2.1 x 10 <sup>-18</sup> m <sup>2</sup> /sec
Chemical Resistance		Excellent
TCE Diffusion Coefficient	GeoKinetics Method	2.89 x 10 <sup>-17</sup> m <sup>2</sup> /sec
Packaging	Dimension: 9.84' x 164'	Weight: 143 lbs



# Nitra-Core™ Technical Data Sheet

Nitra-Core, a patent-pending, nitrile-advanced asphalt latex, that is comprised of an elastic, water-based, co-polymer modified asphaltic nitrile latex, in addition to other proprietary compounds. Nitra-Core is used to install all Land Science barriers to improve constructibility and create a continuous seal between adjacent sheets and around penetrations. Nitra-Core has exceptional bonding to a wide variety of substrates including green concrete. Nitra-Core will build up to a specific thickness in a single application through multiple passes, allowing for easy installation around penetrations, uneven surfaces and oddly shaped areas.

## Nitra-Core General Properties

Properties	Nitra-Core
Application to MonoBase	60 mils (17 ft <sup>2</sup> /gal)

## Typical Uncured Properties

Properties	Test Method	Nitra-Core
Specific Gravity	ASTM D 244	1.0
Brookfield Viscosity	ASTM D 2196	75 – 90 centipoises
pH	Oakton	10-13
Residue Content	ASTM D 2939	62 – 65%
Color		Brown to Black
Demulsibility	ASTM D 6936	35 – 40%
Non-Toxic		No Solvents
Shelf Life		6 months

## Packaging

Drums	55 gal
Totes	275 gal