

**Designed to help maintain
a high level of service,
even in volatile markets**

Green Shield Solutions, LLC's strategic approach ensures that our customers get superior products and unmatched service. In doing so, we provide unrivaled containment solutions for the oil and gas industry across Texas.

This liner/membrane has been tested by the manufacturer to have a projected performance life of, or in excess of 20 years.

**Call Green Shield Solutions, LLC
today to learn more
about the toughest, most
environmentally protective
liner membrane available.**

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Green Shield Solutions

Green Shield Solutions, LLC is the Texas Distributor
for Garland Energy Systems, Inc.

**Proudly providing
Garland Energy's
Fusion 50™ Family of
Containment Membranes
For Oil and Gas Drilling,
Hydraulic Fracturing, and
Tank Battery Applications**



Containment Membrane Description

The Fusion™ 50 TB (tank battery) non-absorptive, tear/puncture and UV resistant containment membranes are specifically designed to withstand the toughest conditions of oil and gas locations. These membranes are composed of 50 Mils of Polyvinyl Chloride (PVC) chemistry along with the additional thickness of polyester reinforcement on the bottom side for puncture resistance. The light colored membrane comes textured with a slip resistant surface to improve foot traction when wet.



Physical Properties Data Table

Property	Test Procedure	Fusion 50 TB
Thickness	ASTM D 1777	50 mils (0.050)
Breaking Strength	ASTM D 751 Procedure B	222 lbs.
Elongation	ASTM D 751	150%
Low Temperature Flex.	ASTM D 2136-02	-30°F
Puncture Resistance	ASTM D 751	95.2 lbf
Tearing Strength	ASTM D 751	43 lbf
Seam Strength	ASTM D 751	245 lbf
Flammability	Visual Observation (20 Secs.)	Smoke (self Extinguish)
Abrasion Resistance	ASTM D 3389 – Method B	1000 cycles



Physical Properties

These uniquely engineered containment membranes provide puncture resistance from above and below the surface with elongation properties (over 150% stretchability) that allow for flexibility without sacrificing toughness.

Temperature Extremes: Testing has proven Fusion’s strength and flexibility capabilities are not compromised by low temps to -30°F, nor extreme highs in excess of 250°F. A light, natural sand color helps reduce surface level working temperatures in hot weather.

UV Resistance: The chemical composition of Fusion 50 creates a membrane that is highly resistant to the harmful affects of UV exposure. With Fusion, you’ll no longer be plagued with brittle and cracked membranes.

Textured PVC Top Surface: The slip-resistant PVC surface will not absorb contaminants.

Puncture Resistant: A non-woven fabric bonded to the bottom of the membrane increases tear/puncture resistance from below without the need for installing additional layers of materials.

Thickness: At 50 Mils thick, Fusion provides a strong, seamless barrier of protection to keep contaminating material from entering the soil below.

Recycled Content: The PVC surfacing contains recycled material for environmental responsiveness.



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