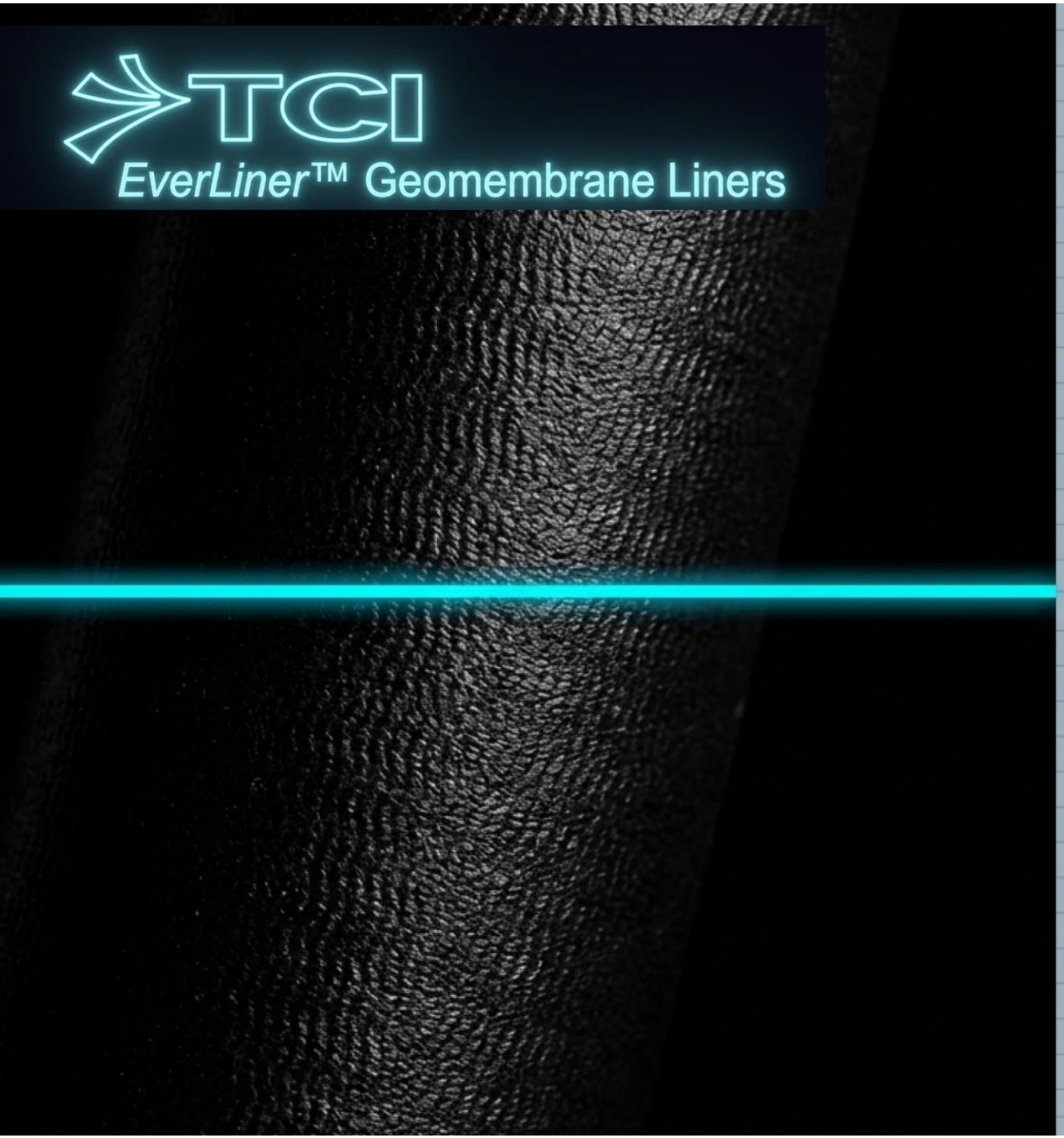


TCI

The Element of Permanence: PTFE vs. HDPE

Engineering the paradigm shift from ‘warranty-life’ to lifetime containment.

The Problem with “Acceptable Degradation”

The geomembrane industry relies on a flawed standard: the **10-20 year warranty**. Are containment systems designed around the hope of good conditions, or the reality of unpredictable chemical exposure?

Should a geomembrane be considered “successful” if groundwater contamination occurs on year 21?

EverLiner™: Zero Degradation Pathways

100% PTFE. No scrims. No additives. No corrosion variable.

Chemically Inert

Universal compatibility across the full 0–14 pH scale.

Thermally Stable

Unmatched operating range from -425°F to 600°F.

Structural Independence

Self-supporting multi-directional strength requires no degradable reinforcements.

Environmental Immunity

Unaffected by UV, oxidation, and moisture.

Surviving the ‘Witch’s Brew’

TCI
EverLiner™ Geomembrane Liners

Landfills and industrial sites generate unpredictable, highly concentrated chemical mixtures over time.

Standard HDPE is aggressively attacked by common solvents and acids.

PTFE remains completely unaffected by virtually all industrial chemicals, organic solvents, and oxidizers.

Aggressive Chemicals	HDPE	100% PTFE
Benzene	Chemically Attacked	Chemically Resistant
Toluene		
Nitric Acid (50%)		
Xylene		
Perchloroethylene		

50x Greater Flex Fatigue Resistance

Flex Fatigue cycles per AS 4878.9–2001. EverLiner™ remains entirely nonporous even after severe, continuous flexing, ensuring long-term structural integrity against ground settling and seismic shifting.

Absolute Environmental Immunity

TCI
EverLiner™ Geomembrane Liners

Zero UV Degradation

Unaffected by severe, continuous sunlight exposure without relying on leachable stabilizers.

Zero Moisture Absorption

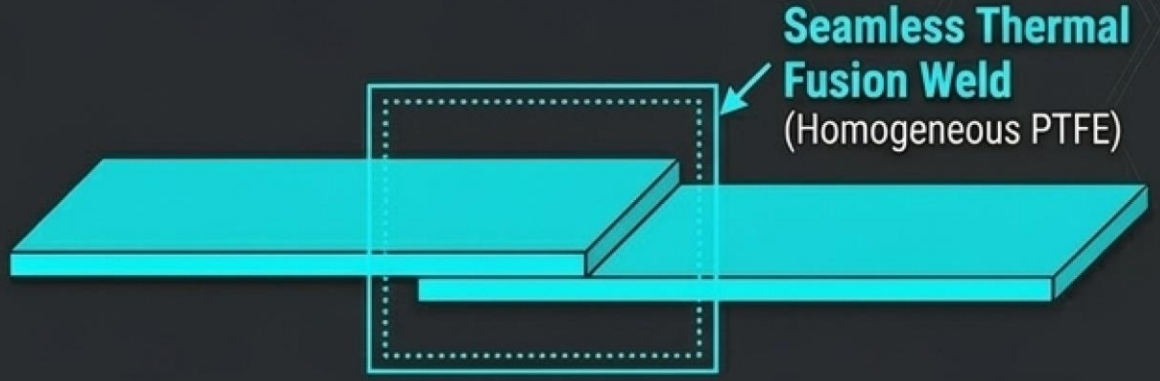
Completely non-porous.

Unlimited Shelf Life

Material does not age, oxidize, or become brittle prior to or after deployment.

Flawless Deployment & Seaming

Because PTFE is 100% uniform and inert, seaming two panels together eliminates the critical risk of "edge exposure"—the primary failure point where chemicals attack the structural scrim of traditional liners.



- Available in thicknesses from 0.003" (0.076 mm) to 0.060" (1.52 mm).
- Factory-welded into large prefabricated panels to drastically reduce field seams.
- Fast, reliable field patching via hot plate or hot gas thermal fusion.

Real-World Proof: The 150°C "Hot Tank"

Hazard: Hydrocarbons

Environment: Sand Burial

Sustained Heat: 302°F (150°C)

The Mission & Problem:

The Mission:
A major Canadian petroleum refinery required secondary containment beneath a massive heated storage tank.

The Problem:
The continuous 150°C storage temperature would rapidly melt or crack traditional HDPE and PP liners.

• The Solution:

TCI
EverLiner™ Geomembrane Liners

- Over 2,500 square yards of EverLiner™ 2130 were fabricated and deployed. As the only material capable of withstand extreme heat and hydrocarbons simultaneously, it provided a permanent, corrosion-free barrier.

TCI

EverLiner™ Geomembrane Liners

The Last Geomembrane You Will Ever Need.

In an era demanding zero-leak reliability, climate resilience, and ultra-long service life, accepting the "corrosion variable" of traditional liners is an engineering liability.

100% PTFE | No scrims | No additives | Infinite chemical and UV resistance

Specify EverLiner™ for **"Forever Containment."** Contact TCI for engineering and specification support.