



# HIGH TEMPERATURE SERIES

# FACING THE CHALLENGE

Polyethylene geomembranes have a long-established reputation of protecting the environment against hazardous materials, and are trusted by engineers and regulators around the world to line landfills, ponds, mine leach pads, and other applications. However, certain processes produce highly elevated temperatures, presenting a unique challenge for engineers responsible for protecting the environment.

Prolonged exposure to temperatures above 60°C (140°F) can have a negative effect on standard PE geomembranes. When the temperature exceeds 60°C (140°F), the liner's mechanical properties

begin to break down, causing acceleration in stress cracking and oxidation. This, in turn, leads to potential failure.

## LAYING THE GROUNDWORK

Solmax's innovative team of engineers combined high temperature resins with our proprietary formula of carbon black, UV stabilizers, and antioxidants to develop a liner that withstands the effects of extreme temperatures. Our High Temperature Liner delivers the same durability and chemical resistance as standard liners, but will retain its mechanical and physical properties in applications with sustained elevated temperatures of up to 100°C (212°F).

Our high temperature resins meet the stringent requirements of US PPI TR4 and European EN ISO 9080, and are approved by these organizations for high temperature liquid conveying. Our stabilization package has undergone an extensive battery of testing at temperatures up to 100°C (212°F) with outstanding results.



# WITHSTANDING THE HEAT

In extreme temperatures, standard PE liners may weaken and need to be replaced more frequently to maintain continuous barrier performance. In laboratory tests, at elevated temperatures Solmax High Temperature Liner showed improved tensile

strength and superior resistance to stress cracking, punctures, and UV degradation, making it essential for high temperature applications where liner integrity and long service life are required.

- Bioreactor Landfill
- Mine Leach Pads
- Secondary Containment
- Oil & Gas Operations
- Industrial Ponds
- Food Processing Systems
- Hot Liquid Storage Tanks
- Process Water Containment
- Waste Water Treatment



## BENEFITS



- Solmax's advanced resin gives exceptional long-term strength, even at elevated temperatures, and helps prevent the accelerated degradation that can occur when normal polyethylene reaches elevated temperatures.
- Solmax's proprietary stabilization package prevents premature oxidation and induction that can occur when normal geomembranes are used at elevated temperatures. This reduces environmental stress cracking and allows tie-ins for subsequent phases of work or repairs to mechanical damage that can occur.
- Solmax High Temperature Liners are welded with standard welding equipment and the same construction quality control procedures that are expected of high performance geomembranes.
- Solmax High Temperature geomembranes are engineered to provide exceptional quality, chemical resistance, and service life in prolonged exposure to temperatures up to 100°C (212°F).
- Solmax High Temperature geomembranes exceeds the international standard GRM13 and are fully compatible with existing GM13 geomembranes.

# OUR LOCATIONS



HEADQUARTER  
VARENNES, QC | CANADA

Solmax is the world's largest geosynthetics manufacturer with plants in North America, Europe, Asia, and the Middle East. Used in critical applications in more than 60 countries by the biggest names in mining, petroleum, waste management, water, and civil engineering, our products contain and drain - creating a layer of protection between our most precious resource, the earth, and the waste and contaminants that result from human activity, industry, mining, and the use of fossil fuels. Our mission is to enable progress with minimal damage to the environment.

**AIM FOR THE SKY.  
WE'VE GOT THE GROUND COVERED.**

**SOLMAX.COM**

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