

Geomembrane Liners and Barriers

# Manufacturing Capabilities



## The Full Potential of PVC

John R Burt founded Plastatech in 1990 to explore the capabilities of PVC membranes. Plastatech offers you the technical expertise and manufacturing capabilities to meet your needs.

# Contain. Control. Comply.

Whether you need to keep things out or keep things in, Plastatech® thermoplastic films and membranes have proven to be highly effective at **containing** and **controlling** materials in a wide range of applications. Our durable barriers help to reduce

installation and maintenance costs, and protect the environment while complying with regulations.\*

\* Reference vour local and federal containment regulations for complete compliance requirements.



# Calendered and **Extruded Films**

Plastatech produces vinyl films and sheeting using a computerized calender, which controls all aspects of the manufacturing process to produce consistent, high-quality films. Calendered films are available with matte finish or shallow suedene embossing and are featured in all Plastatech geomembranes.

In December 2014, Plastatech expanded its manufacturing capabilities with a PVC extruder which produces films and reinforced membranes up to 10 feet wide. This investment reinforced Plastatech's mission to manufacture industry-leading products, inspired by founder John R Burt's passion for producing the highest quality possible.

#### **Calender Capabilities:**

- Thickness: 6-40 mil
- Width: Up to 76.25"

#### **Extruder Capabilities:**

- Film Thickness: 20-80 mil
- Reinforced Membrane Thickness: 40-80 mil

## **Textile Knits**

To ensure consistent quality and to meet manufacturing demands, in October 1992, Plastatech began knitting our own weft-inserted scrim in-house. When laminated, these knits offer reinforcement which makes our membranes strong, durable and tear-resistant.

#### **Knitting Capabilities:**

- Weft: > 1,000d
- Warp: > 1,000d





## Laminates

The high-speed laminators used at Plastatech are capable of combining multiple films with a layer of high-strength polyester scrim. Our lamination system imparts excellent physical properties to all of our engineered products. This process delivers a cohesive bond between the high-thread-count scrim and the films - creating a non-separable, long-lasting adhesion that will not delaminate.

#### Laminator Capabilities:

- Width: Up to 72"
- Weights: 16 oz.-57 oz./sq. yd.
- Thickness: 20-60 mil
- Set up for a four-layer construction
- Can supply material with translucent or blackout characteristics
- Matte and taffeta emboss rolls available

#### **Applications:**

- Single-ply roofing
- Reinforced geomembranes



# Membranes

By forming a flexible, durable barrier, Plastatech geomembranes are highly effective at containing and controlling materials, runoff, chemicals, spills and more. In addition to being available as traditional rolled goods, Plastatech geomembranes are ideal for custom-fabrication by fabricating specialists. This eliminates a large portion of the on-site labor required for seaming – dramatically reducing installation times and increasing job site efficiency.

Plastatech geomembranes meet the intense, long-term durability and environmental challenges found in waste management, secondary containment, oil and natural gas and aquaculture industries. They can be manufactured to withstand extreme temperatures and UV exposure, deliver exceptional tensile and puncture strength and resist harsh chemical attacks.

# Greater Flexibility. Greater Control.

We developed our PVC geomembranes with maximum flexibility for ease of handling and installation. They are easily welded in the factory or the field, making installation and maintenance easier and more cost-effective.

We offer reinforced and non-reinforced membrane options for a wide range of applications. Our diverse product line includes:

- Plastatech Industrial Grade (IG) geomembrane
- Plastatech Fish Grade (FG) geomembrane
- Plastatech Oil Resistant (OR) geomembrane
- Plastatech Tech 5® geomembrane
- Plastatech Tech 7® geomembrane
- \* Reference your local and federal containment regulations for complete compliance requirements.





## Landfill



#### Secondary Containment



Aquaculture





### Waterproofing











### Industrial Grade Geomembrane

Plastatech IG geomembrane was developed for applications like landfills, canals, ponds and other containment purposes. This geomembrane is formulated to withstand UV exposure, atmospheric pollutants and harsh chemicals commonly found in industrial settings. Plastatech IG geomembrane offers excellent lay-flat characteristics and meets ASTM D7176 requirements.

Thickness:	10, 20, 30 and 40 mil
Width:	76.25 inches
Color:	Black/Gray (other colors and embossed surface upon request)
Tensile breaking strength (ASTM D882), Ib <sub>r</sub> /inch:	<ul> <li>10 mil: 24 min.</li> <li>20 mil: 48 min.</li> <li>30 mil: 73 min.</li> <li>40 mil: 97 min.</li> </ul>
Applications:	<ul> <li>Landfill liners and caps</li> <li>Secondary containment</li> <li>Wastewater containment</li> <li>Containment ponds</li> <li>Canals</li> </ul>



### • 🕹 🔊 Fish Grade Geomembrane

Plastatech FG geomembrane is designed for aquatic environments, such as fisheries, fish ponds and landscaping applications. This geomembrane provides unsurpassed tensile strength and flexibility, making it easy to install in irregularly contoured areas.

hickness:	20 and 30 mil (other thicknesses upon request)
/idth:	76.25 inches
olor:	Black/Light Gray
ensile breaking trength (ASTM 882), Ib <sub>f</sub> /inch:	• 20 mil: 48 min. • 30 mil: 73 min.
pplications:	<ul> <li>Fisheries</li> <li>Hatcheries</li> <li>Food processing</li> <li>Ponds</li> <li>Cistern liners</li> <li>Recreational fish ponds</li> </ul>



### **… () () () () Oil Resistant Geomembrane**

Plastatech OR geomembrane provides reliable containment for oils, fuels and harsh chemicals commonly found in industrial and oil refinery settings. This geomembrane was developed as a solution for primary and secondary containment of oil products. Plastatech OR geomembrane offers enhanced chemical resistance and maximum flexibility, elongation and tensile strength for long-term design performance in accordance with various ASTM standards.

hickness:	30 mil (other thicknesses upon request)
Vidth:	76.25 inches
olor:	Black/Gray
ensile breaking trength (ASTM 9882), Ib <sub>r</sub> /inch:	• 30 mil: 73 min.
Applications:	<ul> <li>Primary and secondary containment</li> <li>Chemical holding basins</li> <li>Oil field storage</li> <li>Crude oil storage</li> <li>Fuel tank storage facilities</li> <li>Landfill liners and caps</li> <li>Wastewater lagoons</li> <li>Industrial lagoons</li> </ul>



### Tech 5 Geomembrane

Plastatech Tech 5 geomembrane helps shield the environment against harsh chemicals and other pollutants commonly found in landfills, reservoirs, chemical processing plants, refineries, manufacturing facilities and water treatment operations. Tech 5 meets the challenges found in high-stress applications requiring protective barriers, and can be easily installed in exposed work sites.

Tech 5 is reinforced with a high-tenacity, low-wicking polyester scrim that provides exceptional dimensional stability, puncture resistance and long-term durability. It consistently meets the various ASTM industry standards for a variety of characteristics, including: breaking strength, tear strength, hydrostatic resistance, adhesion, puncture resistance, UV resistance and flexibility.



### Tech 7 Geomembrane

Plastatech Tech 7 geomembrane is our toughest membrane yet. It is designed to remain strong even in the harshest environments – helping to contain a variety of chemicals and pollutants commonly found in water treatment operations.

Tech 7 is reinforced with high-tenacity, anti-wicking polyester scrim that provides exceptional dimensional stability, puncture strength and durability. This membrane delivers a cohesive bond between the high-thread-count scrim and film, creating nonseparable, long-lasting adhesion.



Thickness:	30 mil
Width:	64.25 inches
Fabric weight:	5 oz./sq. yd.
Finished weight:	30 oz./sq. yd.
Color:	Black
Applications:	<ul> <li>Wastewater containment</li> <li>Secondary containment</li> <li>Secondary lining</li> <li>Landfill caps</li> <li>Containment ponds</li> </ul>

Thickness:	40 mil
Width:	120 inches
Fabric weight:	7 oz./sq. yd.
Finished weight:	36 oz./sq. yd.
Color:	Black
Applications:	<ul> <li>Wastewater containment</li> <li>Secondary containment</li> <li>Secondary lining</li> <li>Landfill caps</li> <li>Containment ponds</li> </ul>

Find complete information on typical properties and testing data for our geomembrane products at Plastatech.com.

# Accessories

# Out-of-the-Ordinary R&D

Custom-fabricated geomembrane accessories can save you time and reduce your cost for creating corner and stack flashings in the field.

# Accessories to Complete Your Plastatech Geomembranes

Our accessories are custom-manufactured in quality-controlled factory conditions. These accessories allow you to achieve faster installation times while lowering the risk of leaks or failures. Additionally, our customizable options are designed to meet the needs of a variety of installation challenges.

#### Plastatech accessories for our family of geomembranes include:

- Pipe boots
- angled and straight configurations
- open or closed styles
- Corners
- inside and outside configurations

#### Products are available in the following materials:

- Polyvinyl chloride (PVC)
- High-density polyethylene (HDPE)
- Linear low-density polyethylene (LLDPE)
- Reinforced polyethylene (RPE)
- Reinforced polypropylene (RPP)
- Thermoplastic olefin (TPO)

We know we can serve you best by making sure we take the time to understand your needs. This time helps us find the best solution for even the most challenging customer application.

This attention to detail helps us meet your unique needs with the right combinations of high-performance films, specialized formulations for flexibility, scrims for reinforcement and additives to protect against degradation, aging, swelling and delamination – as well as fungicides, biocides, antioxidants, carbon black or other components to suit specific applications.

Additionally, product testing is done in our in-house laboratory, allowing us to find cost-effective solutions to real-world situations.

# **Custom Formulation**

The versatility of PVC allows for a variety of formula options to modify performance properties. Plastatech offers the ability to create custom formulations of PVC to modify film performance, including:

- Printability
- Chemical resistance
- Antistatic
- High-temperature resistance
- UV resistance
- IR reflectivity
- Electronical resistance
- Antimicrobial
- Flame resistance
- CSFM
- NFPA
- MVSS302
- UBC301
- CAN/ULC-S102.2-03

Custom formulations can also create special effects, such as custom colors, pigment effects, iridescent and phosphorescent.



# A Culture of Sustainability

Being a responsible corporate citizen has always been an important part of the culture at Plastatech. This culture drives the sustainability of not only our products, but our manufacturing processes, in many ways:

## **Reduced Energy** Consumption

Plastatech recycles up to 95% of its waste, including non-manufacturing byproducts like plastic, paper, cardboard and super sacks; by:

- Partnering with local recycling companies
- Regrinding PVC scrap back into the manufacturing process
- Repurposing additional scrap for use in commercial flooring products, concrete expansion joints and roofing accessories



Water Conservation: Throughout our manufacturing process, we use a closed-loop cooling system which continuously cycles water to help reduce our water consumption and maintain quality. Additionally, we have reduced the water intensity (gallons of water/yards produced) in our manufacturing process by 8% since 2013.





Closed-loop water system

## Made in America

Plastatech products are proudly engineered and manufactured entirely in the USA.

# Quality. Control.

We subject our products to extensive qualitycontrol testing. Our in-house xenon-arc and QUV® accelerated weathering testers provide valuable exposure data.

As part of our QC process, we combine continuous inline testing procedures during manufacturing with ongoing post-production audits. A certificate of analysis is available, upon request, for every product we make.

Our products are also field tested under extreme conditions and exposed to UV radiation in various geographic locations and climates. Their outdoor performance is tested and validated through EMMAQUA® accelerated and static weathering studies.





## **Customer Support**

From start to finish, our technical experts are here to assist you. This may include helping you select the proper materials or products for your project, providing on-site manufacturing consultations or recommending ideal welding applications. No matter what type of support you need, from formulations to testing and manufacturing, our goal is to ensure your total satisfaction.



CONTAIN.CONTROL.COMPLY.

For more information about Plastatech, give us a call or visit our website today.

800.892.9358 plastatech.com

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