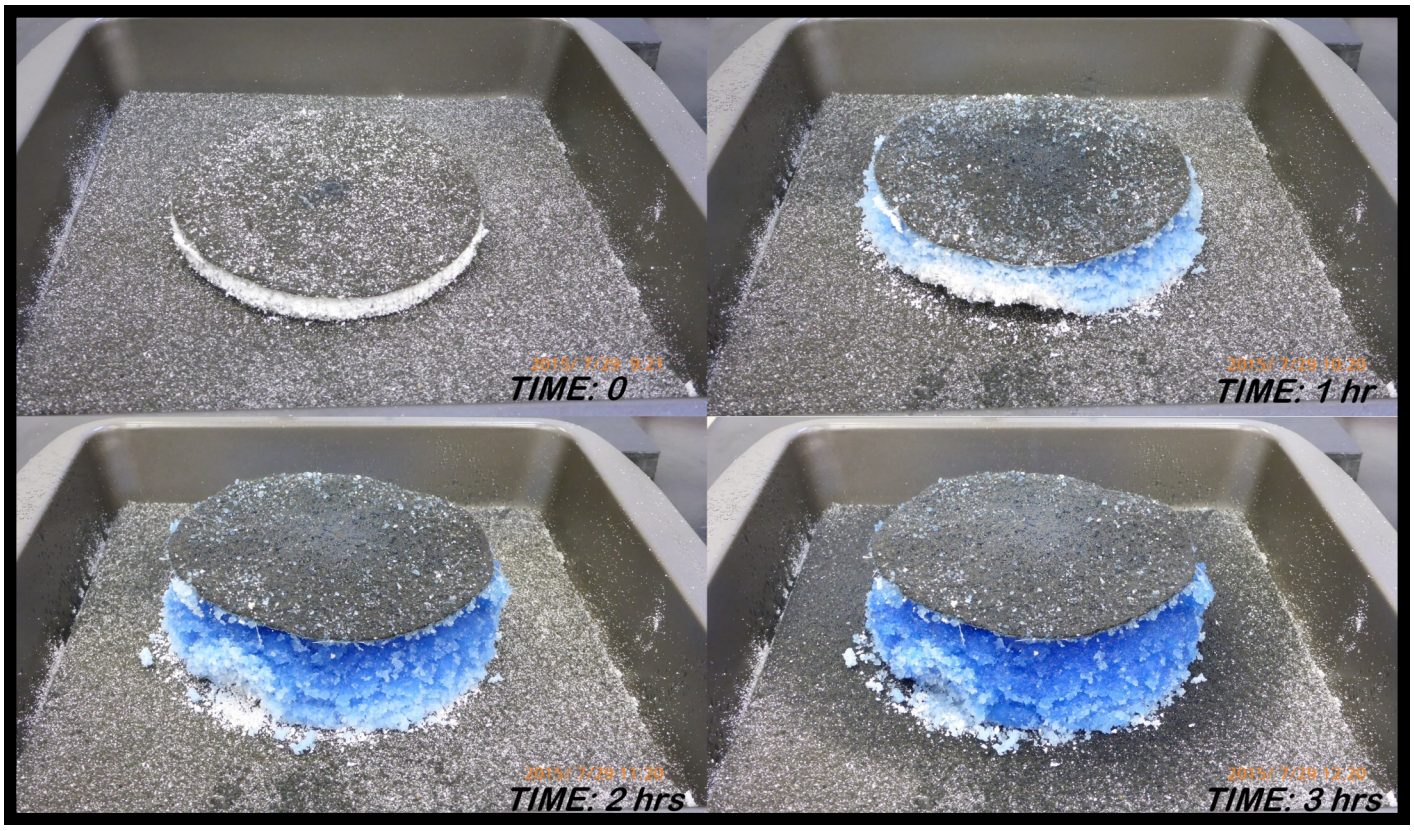
The SorbWeb™ Plus Solution

Secondary Oil Containment System

PRODUCT CATALOGUE



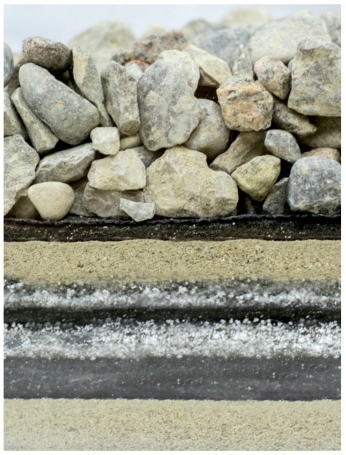
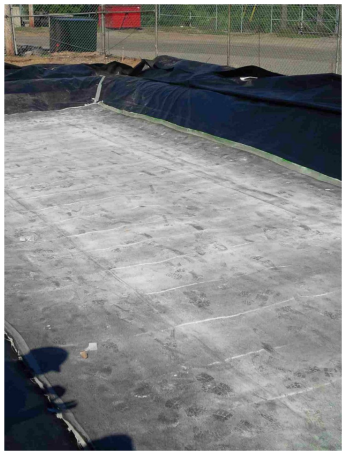
HOLDS OIL, NOT WATER!

Our containments are designed to drain within 4 hours of a 1/50 year rainfall event

What is SorbWeb™Plus?

Albarrie's innovative SorbWeb™Plus Oil Containment system significantly reduces capital outlays, provides environmental protection and drastically lessens the economic consequences of an oil spill.



How It Works

The SorbWeb™Plus allows water to move freely through its "Smart Barrier" without accumulating and pass all the way through back into the native ground. At the heart of the system is a smart geotextile known as "oilmat". In the event of a catastrophic equipment failure leading to an oil spill, the oilmat congeals and seals the containment, preventing oil from passing through.

Unmatched Capabilities,

Outstanding Performance!

- Oilmat is a patented, highly reactive geotextile layer that allows water to pass through but seals on contact with oil!
- 73.7 oz/yd^2 of polymer loading and 1/2" thick, no other product compares in performance!

Why Choose SorbWeb™Plus?

If you're going to spend money on a secondary containment, why not spend it on the right one? Our products are routinely put to the test and have proven their effectiveness time and time again!

Reactive Barrier vs Other Options

	Concrete	Impermeable Liner	Oil Filters	Reactive Barrier
Upfront installation costs	$$$$	$$	$	$$$
Maintenance (filter replacement & repairs)	$$$$	$$$$	$$$	-
Energy Requirements	$$$$	$$$$	-	-
Manpower (inspections)	$$$$	$$$$	$$$	$
Access (walk, drive up to Tx)	x	x	x	✓
Clean up costs (small leak)	$$$$	$$$$	$$	-
Clean up costs (Major Spill)	$$$$	$$$$	$$$	$$
Water quality discharge tests	$$$$	$$$$	$$	-
Risk of loss of volume due to water accumulation	High	High	Medium	-
Impacts on long-term stewardship to a site	$$$$	$$$$	$$$	-

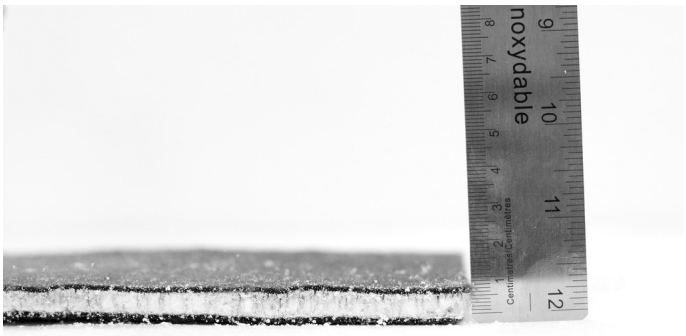
Discover why thousands of utilities have already switched to SorbWeb™Plus!

The number one reason conventional oil containments fail is due to standing water occupying the space that was reserved for an accidental spill. The flexibility and customization of our permeable oil immobilizing smart fabrics solve this problem and makes them the perfect option for a diverse range of applications.

- Install in new sites or
- Retrofit existing bathtub style containments

Features & Benefits

Quality & Innovation



- Robust engineered solution
- Our Oilmat has the highest polymer loading in the industry with a minimum 2500 g/m^2 or 73.7 oz/yd^2
- Installations follow a rigorous quality control protocol to ensure the containment is properly installed
- Designed to allow for vehicle access up to a max of 26,000 Kg/ group of axle

Life Cycle Assessment & Regulations

- Exceeds the EPA Spill Prevention Control & Countermeasures requirements per 40 CFR 112.7, IEEE Std. 980.
- Meets Ministry of Environment requirements for projects undergoing an Environmental Compliance Approval (ECA) or Renewable Energy Approval (REA)
- Fire quenching & free draining capabilities
- Optimizes remediation costs & protects your reputation
- Significantly reduces costs as it is virtually maintenance free

- 20-30% less than typical concrete containments
- Backed by $10M product liability insurance & a warranty

Environmental Leadership & Sustainability

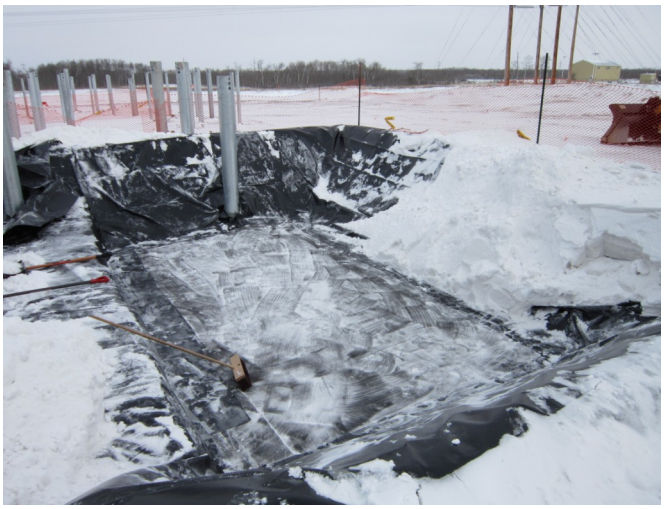
- 24/7 spill and leak protection
- Protects water, land & wildlife from potential oil contamination
- Our polymer blends are non-toxic, nonhazardous & environmentally friendly
- No use of zinc pesticides to combat biological growth
- Does not require pump & treat systems or power to operate

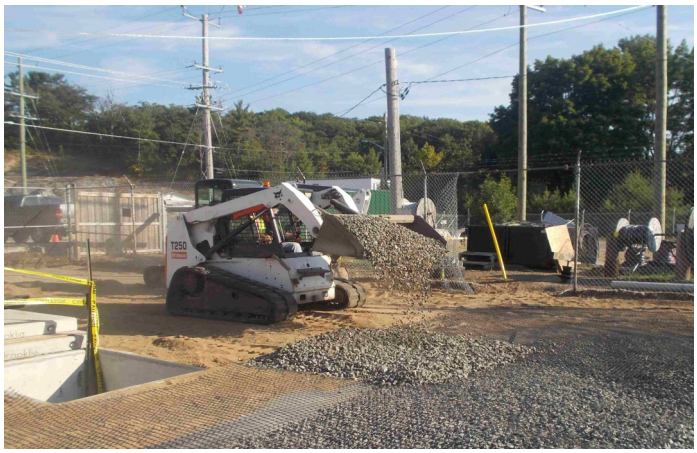
Flexibility & Customization

- Full access to equipment
- Designed for drivability
- Simple to expand or repair
- Not intrusive to the natural drainage
- Addresses all soil types
- Any configuration, multiple applications
- Design flexibility accepts complex geometry
- Installation without interruption of power
- Aligns well with world class organizations that put environmental leadership at the centre of their core values

Climates

The accumulation of snow, ice & the freezing of standing water in containments can be a significant cause for concern with traditional secondary oil containment systems due to the high potential for overflow or mechanical failure of pumps. Fortunately, due to the free-draining ability of Albarrie's smart oil immobilizer fabric you never need to worry about severe weather having a negative effect on your equipment.





Our secondary containments are designed to perform in extreme climates including:

- Harsh North American winters
- warm, wet climates
- Arid climates

Check out our website for more information.

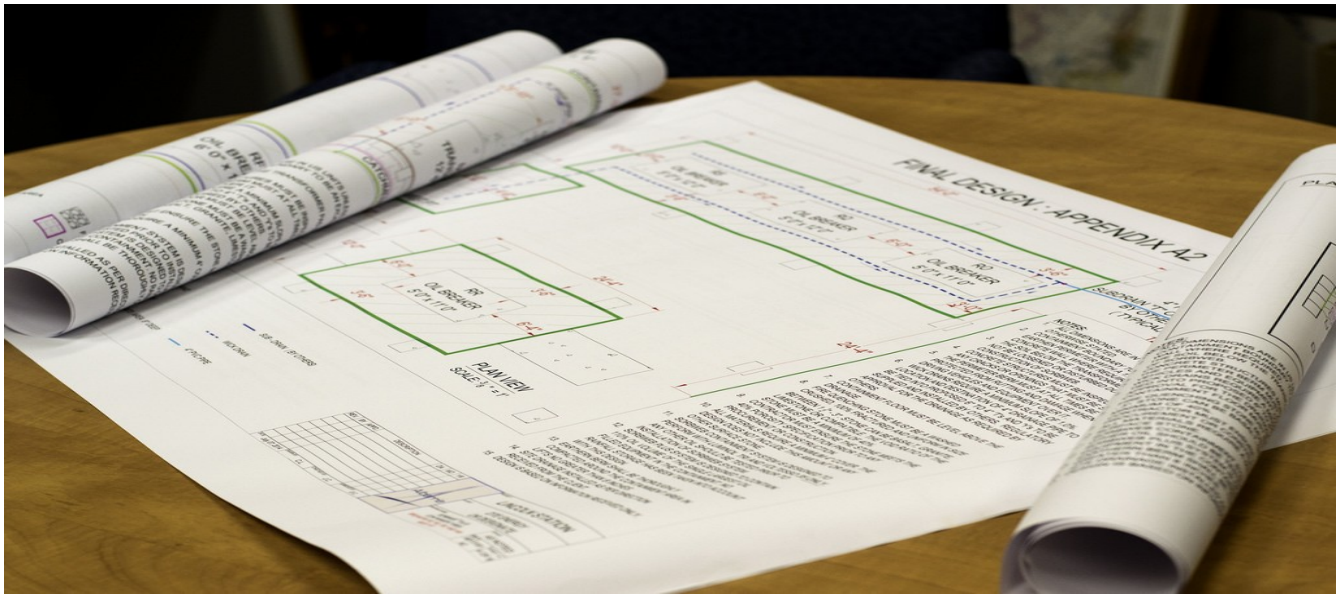
Applications

The SorbWeb™Plus system is extremely flexible and can be designed with a multitude of configurations, from standard earthen berm perimeters, to concrete walls, fibreglass or carbon fiber walls, jersey barriers, underground or above ground.

- Substation Transformers of all sizes, particularly large size equipment with the potential for considerable discharges
- Environmentally sensitive areas where an oil spill could cause significant damage
- Single or multiple above ground storage tanks
- Can be installed both in new substations or retrofitted into existing concrete containments eliminating standing water and the need for mechanical pumps

Engineering & Design

Albarrie is certified with the Professional Engineers of Ontario to provide secondary containment services that are within the practice of Professional Engineering in the Province of Ontario, in accordance with the provisions of the Professional Engineers Act. With in-house Professional Engineering staff, we offer stamped drawings as part of our complete IFC package†. Through our network, we are able to access other Professional Engineers to conduct peer reviews, allowing us to provide stamped designs throughout North America.



Typical Design Specs

Albarrie's innovative design team follows specific design criteria to ensure the project is successful and the client's goals are achieved. Along with best practice recommendations, client input, and a promise to deliver the highest quality product, we focus on developing the right solution for your needs.

- Typical 110% Containment plus a 1/25 rainfall event
- IEEE guidelines for secondary oil containment
- SPCC Rules/MOE Requirements
- Site considerations
- Client specifications
- Site plan drawing
- Volume of oil
- How many pieces of oil filled equipment
- Soil permeability (geotechnical report is best)

SorbWeb™Plus with SAM

Derived from the original SorbWeb™Plus system, this containment incorporates the use of a special absorbent geotextile known as “SAM”.

How it Works

Once the Oilmat is positioned and bonded, SAM is installed throughout the containment area. SAM absorbs and locks in oil but still remains porous and allows water to pass through. It offers an exceptional absorption capability per square inch to prevent chronic leaks from reaching the Oilmat and sealing the containment.

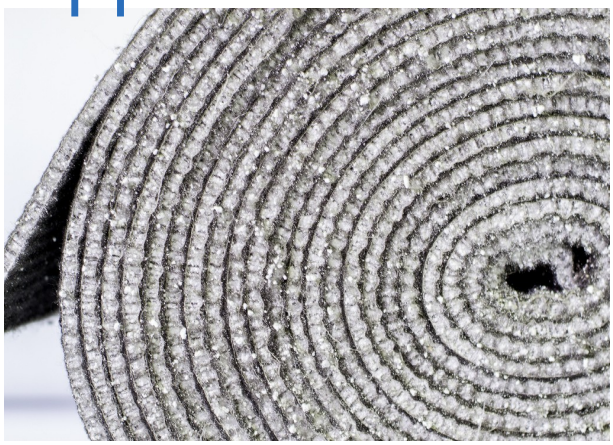
Applications

- SorbWeb™Plus with SAM is extremely flexible and can be designed with a multitude of configurations, from standard earthen berm perimeters, to concrete walls, fibreglass or carbon fiber walls, jersey barriers, underground or above ground. Bring us your challenge and we will work together to develop the right solution
- Substation Transformers of all sizes, particularly large size equipment with the potential for considerable discharges
- Oil filled assets located in remote unmanned areas.
- Environmentally sensitive areas where an oil spill could cause significant damage
- Single or multiple above ground storage tanks
- Gas Stations
- Pipeline Valves
- Can be installed both in new substations or retrofitted into existing concrete containments eliminating standing water and the need for mechanical pumps

Oil Blocker

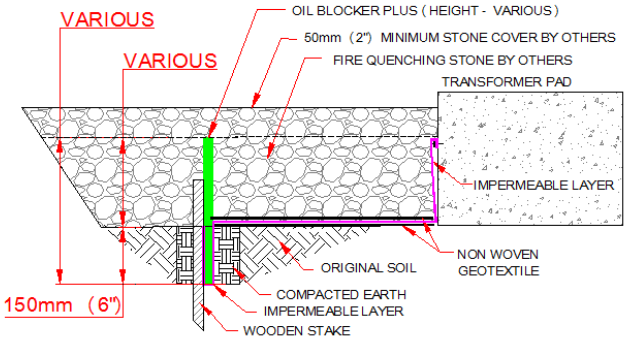
Oil Blocker offers an excellent, affordable barrier option for impervious sub-grade soils such as clay. Oil Blocker seals and traps in escaping oil from spills minimizing damage. It's flexible and easy to install, available in various widths and can be shipped in 3-5 business days.

Applications



- Install around substation perimeters or individual oil filled equipment.
- For Impervious subsoil conditions.
- In oil storage areas and under oil filled containers as oil blankets
- Mechanically bound between two nonwoven geotextiles.
- Oil Blocker has the highest polymer loading in the industry with a minimum of 2,500 mg/m^2 or 73.7 oz/yd^2. No other product comes close!

Oil Blocker™Plus



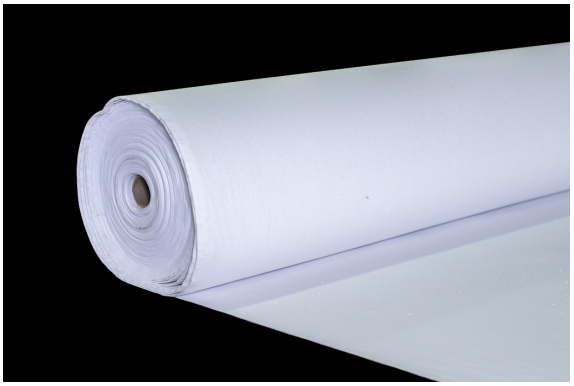
Oil Blocker™Plus is manufactured with a special oilmat-liner connection joint which prevents water from pooling at the bottom of the containment. Because the system incorporates a permeable oil blocking barrier as the entire perimeter wall, it has an extremely high flow rate allowing water to quickly leave the containment while trapping oil and preventing it from escaping. Oil blocker Plus can be custom cut at our facility or in the field, and shipped within 48-72hours.

Applications

- Around small size transformers and other oil filled equipment
- Designs for assets with potential for small discharges located in sandy or unknown sub-soil conditions
- Ideal for solar and wind farm applications
- Can be used around existing pad mount transformers

EsterWeb

Albarrie's EsterWeb is the ideal passive containment solution for ester-based oils like Environtemp FR3, or BIOTEMP. Derived from vegetable oil, ester oils can be difficult to contain. Although officially classified as being "readily biodegradable", ester oils still produce sheen if released into the environment and require secondary containment. We tailored our typical containment system to account for the slow coagulation of these oils, ensuring their full containment.



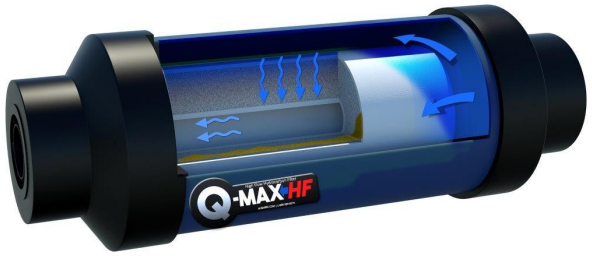
- Accounts for the slow solidification process of ester oils
- The unique microporous membrane is made from high quality 100% virgin white fiber with excellent chemical resistance

Applications

- All size transformers and other equipment filled with ester oils
- Oil filled assets located in remote unmanned areas
- Environmentally sensitive areas where an oil spill could cause significant damage
- Ideal performance in wet climates

Q-MAX *HF* High Efficiency Hydrocarbon Filter

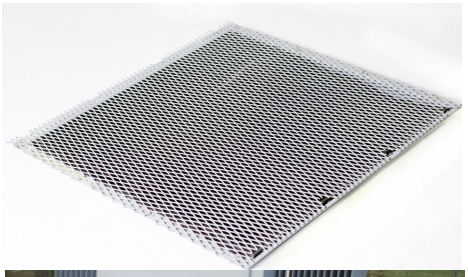
The Q-Max was designed to capture hydrocarbons like, diesel, gasoline, transformer oil and much more. This 360° filtration surface gives the Q-Max the highest flow rates in the industry and a longer filter life. It acts as an automated shut off system that allows water to drain quickly out of virtually any type of containment system but shuts off and stops hydrocarbons from escaping.



Applications

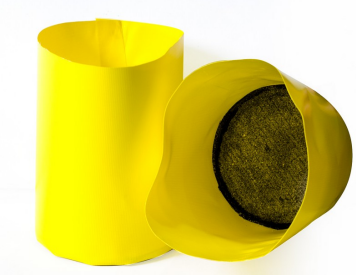
- All size transformers with concrete containments
- Temporary above ground storage tank and portable spill containments
- Use for dewatering in applications where hydrocarbons could be present
- Allows water drainage of containment berm applications

Spill Trays



Spill trays are custom designed to be mounted underneath radiators, valves and special equipment that are prone to leaks. The spill trays are shipped 100% complete with mounting hardware included. Most commonly mounted onto existing equipment these can also be designed to be freestanding. The spill trays capture drips from leaky equipment and are drain-free making them ideal for outdoor conditions. The advantage of the spill tray is that water will drain through the material but oil will be immobilized.

Absorbent Pillows & Leak Control Inserts for Oil Pan



Tundish inserts are cost effective, temporary solutions for leaky valves & equipment. The insert is prefabricated & placed under leaky valves or equipment that is prone to leaks or blowback. The insert features an oil immobilizing shell sewn into a bucket shape with a layer of oil absorbent fabric in the bottom. Tundish inserts can be placed virtually anywhere. Once the Tundish insert is filled, oil can be drained & the insert disposed of following required oil waste management guidelines.

Vault Oil Containment Kits

Vault Oil Containment kits are custom designed to capture any leakage from underground transformer vaults. The containment consists of a prefabricated unit featuring four oil immobilizing mats secured between two layers of impermeable liner in specifically chosen locations and size to maximise drainage without sacrificing performance. The timely work is done in-house making the installation of the containment take only 1 day with minimal on-site sealing. This product saves time and money and can be installed at the same time as the transformer vault.

Albarrie

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