

A photograph showing a large, dark, flexible tube (the Titan Tube) laid out in a field, used for dewatering. The tube is connected to a body of water on the right. The background shows a green field and a line of trees under a cloudy sky. A green diagonal graphic element is in the top left corner.

# Titan Tube

**Easy, Low Cost  
Dewatering Solution**



**TITAN**

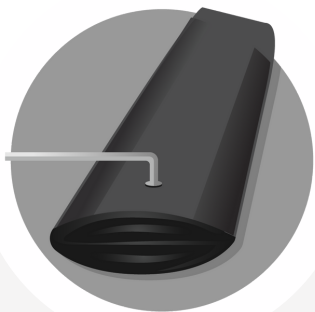
BUILD YOUR LEGEND

# About Titan Tubes

Titan Tubes are designed for dewatering and/or desludging in a variety of applications from wastewater treatment, to environmental remediation, mine processing and more. Made of high-strength woven geotextile fabric these tubes allow liquids to filter through its pores for collection, leaving behind only solid particles. They essentially work to separate the solids from liquids for simple containment. Titan Tubes resist ultraviolet deterioration, rotting, and biological degradation, and are inert to most naturally encountered chemicals, alkalis, and acids. They are simple to use, low cost and an effective dewatering solution for both large and small scale projects.



## How It Works



### 1. TUBE FILLS

Sludge is pumped into the tube until it is full.



### 2. DEWATERING OCCURS

Liquid filters through the tube pores and the solids begin to collect.



### 3. SOLIDS REMAINS

As liquid escapes, the solids consolidate in the tube for eventual disposal.

# About Titan Tubes

## Features:

- Cost effective alternative to traditional materials.
- Easy to transport, set-up, and install.
- Efficient.
- High strength & stress resistant.
- Can be left in place and used for erosion control.
- Reduces pumping distances.
- Minimal impact on the environment.
- Fabricated from high strength

## Benefits:

- Made from high strength woven geotextile.
- Available in different fabrics to meet your flow rate needs and strength requirements.
- Custom manufactured in 15, 30, 45, and up to 120' circumferences in 15' increments with standard lengths of 100, 200, and 300 ft for a variety of projects.
- Assortment of colors options.

## Applications:

### Environmental Remediation

Management of contaminated sediments from industrial run-off, or other into waterways.

### Water & Wastewater Treatment

Extraction of bio-solids in lagoons and stabilizations ponds.

### Industrial Processing

Management of contaminated sediments, sludge or processing agents in pulp and paper mills or other.

### Mining & Mineral Processing

Management of heap leach, slag tailings or other processing materials

## OUR TITAN TUBE PROJECTS

### WATER & WASTEWATER TREATMENT

#### Town of Invermere Lagoon

(Invermere, British Columbia)

#### West Hawk Lake Sewage Lagoon

(West Hawk Lake, Manitoba)

#### Helca Island Sewage Lagoon

(Hecla Island, Manitoba)

#### Bannock Point Rehabilitation Camp Lagoon

(Whiteshell Provincial Park, Manitoba)

#### Gemaco Energy Lagoon

(Coldstream, British Columbia)

#### Town of Osoyoos Lagoon

(Osoyoos, British Columbia)

#### Belmont Lagoon

(Belmont, Manitoba)

#### Community of Barrows Wastewater Stabilization Pond

(Barrows, Manitoba)

#### Crystal City Stabilization Pond

(Crystal City, Manitoba)

#### Russel Stabilization Pond

(Russell, Manitoba)

### MINING & MINERAL PROCESSING

#### Agrium

(Redwater, Alberta)

#### Agrium

(Fort Saskatchewan, Alberta)

### ENVIRONMENTAL REMEDIATION

#### Hazco Environmental Services

(Winnipeg, Canada)

#### Erco Worlwide

(Saskatoon, Saskatchewan)



## Lagoon Disludging

### WHERE:

Invermere Lagoon (Invermere, British Columbia)

### WHAT:

Over time the accumulation of bio-solids in municipal lagoons affects holding capacity which requires desludging. In this project, Titan Tubes were used to remove bio-solid sludge with the objective of increasing the lagoon's capacity. Slurry from the lagoon was pumped into approximately 6- 60'x100' Titan Tubes, which were contained in a temporary sloped berm lined with 20 mil Titan TRP-200R geomembrane. As the tubes dewatered, the liquid flowed into a depressed sump area where it was pumped out and the bio-solids remained in the tubes for disposal after drying.

### WHY TITAN:

Not only did Titan supply the Titan Tubes but we successfully completed the desludging project, which had been abandoned by the previous contractor, and offered value-added service by lining the temporary berm. Because of this and the client's satisfaction with our work, we were later contracted to re-line the lagoon cell which we also completed successfully.



## Temporary Leachate Water Containment

### WHERE:

Beaver Municipal Landfill (Ryley, Alberta)

### WHAT:

Titan was hired to construct a new landfill cell at Beaver Municipal Landfill as part of an expansion project. During this time, the area experienced heavy rains that washed out containment berms in the existing cell. This caused leachate water to flow into an area of the new cell that we were constructing. An immediate solution was needed. Our custom-made Titan Tubes proved to be a quick and cost-effective way to contain this leachate water. The tubes were constructed on-site and successfully stored a total of 450,000 gallons of leachate water which was then treated and discharged into a storage pond outside of the landfill cell. The landfill kept the bags and stored them for re-use if required.

### WHY TITAN:

We were asked to provide a quick solution to the unforeseen problem and were able to respond immediately. This was a valuable solution to the client as it prevented them from having to shut down their operation and allowed us to continue work on the new cell while minimizing delays.



# Titan Tube 30

Titan Tube 30 is manufactured using high tenacity polypropylene yarns that are woven to form a dimensionally stable network, which allows the yarns to maintain their relative position. Titan Tube 30 resists ultraviolet deterioration, rotting and biological degradation and is inert to commonly encountered soil chemicals.

TESTED PROPERTY	TEST METHOD	UNIT ENGLISH (METRIC)	MARV VALUE ENGLISH (METRIC)
Grab Tensile Strength	ASTM D 4632	lbs (N)	600 x 700 (2670 x 3115)
Elongation	ASTM D 4632	%	15 x 15
Wide Width Tensile	ASTM D 4595	lbs/ft (kN/m)	4800 x 7200 (70 x 105.1)
Wide Width Elongation	ASTM D 4595	%	14 x 9
Wide Width Tensile Strength at 5% Strain	ASTM D 4595	lbs/ft (kN/m)	1200 x 2640 (17.5 x 38.5)
CBR Puncture	ASTM D 6241	lbs (N)	2400 (10675.7)
Trapezoidal Tear	ASTM D 4533	lbs (N)	180 x 275 (801 x 1223)
UV Resistance (at 500 hrs)	ASTM D 4355	%	80%
Apparent Opening Size (AOS)*	ASTM D 4751	US Std Sieve (mm)	40 (0.425)
Permittivity	ASTM D 4491	sec	0.26
Water Flow Rate	ASTM D 4491	gpm/ft <sup>2</sup> (L/min/m <sup>2</sup> )	20 (815)
<b>STANDARD TUBE SIZES</b> (CUSTOM SIZES AVAILABLE UPON REQUEST)			
Circumference		ft	15, 30, 45, 60, 75, 90
Length		ft	100, 150, 200

**\*Maximum average roll value.**

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**Titan Environmental supplies proven geosynthetics and specialty civil engineering construction solutions designed to extend the life of vital infrastructure while protecting precious natural resources.**

We push limits with creative solutions. Our product lines include geomembranes, geotextiles, geogrids, primary & secondary containment systems, stormwater management solutions, drainage solutions, MSE wall & slope systems, and erosion & sediment control products. We service the road construction, agricultural, waste management, water resources, mining, oil and gas, and hydroelectric industries that support essential infrastructure worldwide. By providing engineers with a resilient foundation for building better, we've become North America's fastest-growing-end-to-end geosynthetics supplier, fabricator and installer.

We do more than help manage environmental impact, we help improve how that's done. With a team of audacious innovators and agile problem-solvers, we're trusted to adapt to change, respond quickly, and support you at every stage. When you build with Titan, you strive for your very best.

**Titan Environmental Containment**

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