

## TEXEL TEX-O-FLEX

THE SOLUTION TO PROTECT AND AVOID THE LIFTING OF MANHOLES AND CATCH BASINS DUE TO FREEZING

### ADVANTAGES:

- Ensures the sustainability of structures;
- Simple and quick to install;
- Reduction of infiltrated water and soil;
- Elimination of costly repairs.

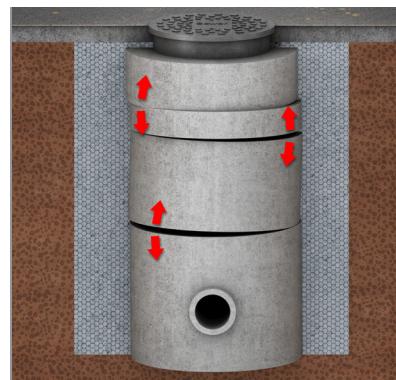


THE PROBLEM

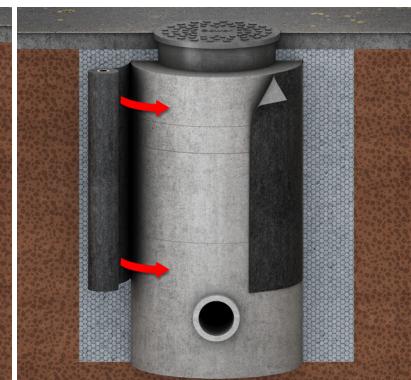


THE SOLUTION

Texel Tex-O-Flex is a protection composite material made of a PVC geomembrane extruded over a needlepunched nonwoven geotextile. Its multilayer design controls the effects of freezing-thawing on manholes and catch basins limiting misalignment of concrete sections. This product offers an economical solution, while protecting the system from infiltration of all kinds.

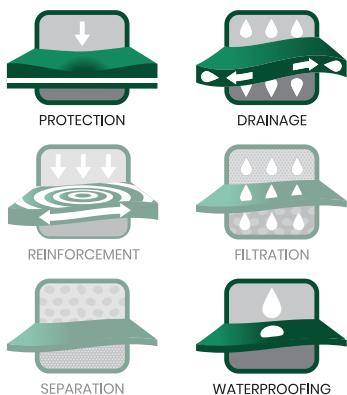


WITHOUT PROTECTION



WITH TEXEL TEX-O-FLEX

### FUNCTIONS

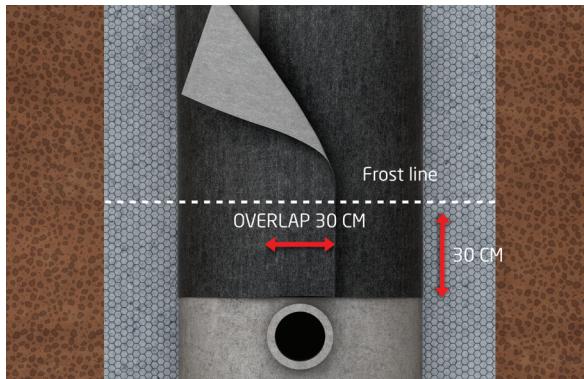


### SECTORS

- Municipal and Landscape Architecture
- Roads and Transportation

### A SOLUTION PROVIDING A QUICK RETURN ON INVESTMENT

- Manhole protection = less than 5 % of the manhole's cost;
- Repair of manholes which have moved = more than 33 % of the manhole's cost;
- A single 30-m roll can protect eight 900-mm manholes;
- Without protection repairs are to be expected after the thaw.



## TEXEL TEX-O-FLEX CAN BE INSTALLED RAPIDLY WITHOUT SPECIALIZED TOOLS:

1. Wrap around manhole with geotextile against the concrete;
2. Adjust at the same level as the head of the concrete;
3. Overlap the material by 30 cm;
4. Cover up to 30 cm below the frost line;
5. Attach with a rope or fasteners to retain it during backfill;
6. Place granular material around manhole at a width of at least 30 cm and compact in layers of 30 cm.

## TEXEL TEX-O-FLEX, A VERY EFFICIENT SOLUTION

### THE SOURCE OF THE PROBLEM

Under the effect of freezing, humid soil around manholes sticks to the concrete walls forming a homogenous soil-manhole block which follows the movements of the soil. When concrete section move, soil particles penetrate into the joints preventing sections exposed to freezing from returning to their initial position when thawing. The tightness of the manhole and its adjustment in relation to the level of the pavement are no longer assured.

### THE SOLUTION

The formation of a homogenous soil-manhole block must be avoided at freezing time. To do so, the manhole must be surrounded by a product having a low friction coefficient with the soil thus creating two independent blocks. This technique allows the soil to move without causing the movement of the concrete sections. Furthermore, thanks to the drainage properties of the geotextile which faces the concrete and which ensures optimal draining of seeping water, Texel Tex-O-Flex dissipates any water inflows. Texel's extrusion process provides an adhesion geotextile/geomembrane which is definitely superior to the lamination process used by competing products and guarantees that the composite material will not delaminate and will keep its mechanical properties throughout its life. This, Texel Tex-O-Flex increases the lifetime of the manholes.

SPECIFICATIONS	Description	Type of product	Format
	Texel Tex-O-Flex	Extruded PVC geomembrane over a non-woven polypropylene geotextile	Roll

## TEXEL TEX-O-FLEX, PROPERTIES WHICH MAKE A DIFFERENCE

Properties Measured		Test Method	Unit	Interpretation
Composite mechanics	Adhesion	ASTM D751	N/mm	Ensures the integrity of the composite over time by measuring the adhesion force between layers.
	Resistance at low temperatures of -30 °C	ASTM D751	-	Validates that the type of polymer used as a membrane will perform over a long period even under rigorous conditions.
Hydraulic	CBR puncture	ASTM D6241	N	Indicates the composite's puncture resistance.
	Transmissivity gradient of 1.0, 8 kPa	ASTM D4716	m <sup>2</sup> /sec	Ensures adequate drainage of the composite so as to prevent damage caused by the accumulation of water over the manhole.

This table presents a summary of specifications. We invite you to consult updated information sheets and detailed technical specifications on our website at [www.texel.ca](http://www.texel.ca).

### WANT TO LEARN MORE?

Feel free to contact one of our representatives to discuss your project. 1800 463-8929 | [texel.ca](http://texel.ca)

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