

HydroTube is a containment system specially designed for dewatering a wide variety of sludge type.

# HydroTube

*in cooperation with HUESKER Synthetic GmbH*



Your Best Partner  
in Geosynthetics

HydroTube is a containment system designed for dewatering a wide variety of sludge types.

As a result of the particular opening size of HydroTube the solid component of the sludge is captured inside the tube allowing the water to escape.

The dewatering performance of HydroTube can be further enhanced by combining polymer additives to the slurry before pumping into the tube. The purpose of the polymer additives is to flocculate the fines and to increase the dewatering efficiency.

HydroTube can be utilized where a broad selection of dredged materials require to be drained and/or contaminants encapsulated.

HydroTube dimension can be customized according to the project requirements.

#### STRENGTHS:

- ⟨ Strong and Durable
- ⟨ High Permeability
- ⟨ Easy Installation
- ⟨ Effective Sludge Containment

#### APPLICATIONS:

- ⟨ Municipal Sewage Sludge
- ⟨ Agricultural Sludge
- ⟨ Industrial Sludge
- ⟨ Marine (Contaminated) Sediments
- ⟨ Sludge Lagoon Cleanouts

## HydroTube - Standard Specification\*

PROPERTIES	UNIT	TEST METHOD	VALUE
Raw Material			Polypropylene
Ultimate Tensile Strength (CD/MD)	kN/m	EN ISO 10.319	105
Strain at nominal tensile strength (CD/MD)	%	EN ISO 10.319	10
Opening size	m	EN ISO 12.956	200
Water permeability index normal to the plane	m/s	EN ISO 11.058	$25 \times 10^{-3}$

#### Notes:

1. The values given are indicative and relate to typical values obtained in the laboratories and testing institute.
2. GSi reserves the right to change the specification contained herein without notice.
3. Specifiers are requested to check the validity of the specifications being used.

#### Disclaimer :

This document should not be construed as engineering advice. GSi assumes no liability for the accuracy or completeness of this information or for the ultimate use by the purchaser.



## Typical dewatering process

### The 4 Stage Hydro Tube™ Dewatering Mode of Operation

1. Filling	2. Dewatering	3. Consolidation	4. Disposal
The geotextile tube is filled with processed sludge. The geotextile confines the solids.	The geotextile enables the water to drain but still retains the solids.	Due to the process of desiccation the water content of former sludge continues to decrease.	Subsequent deposition, combustion or land application of the dewatered sludge.
At the inner surface of the tube a filter cake develops.			

## Dewatering cycle



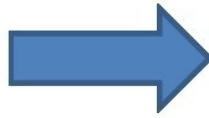
Picture 1: *Tube preparation*

Picture 2: *Filling and Dewatering Process*

Picture 3: *Consolidation Process*

Picture 4: *Disposal of the dewatered material*

## Sludge flow



Picture 1:

- < *Dredging (sediment)*
- < *Industrial sludge*
- < *Mining residuals*
- < *Sewage sludge*

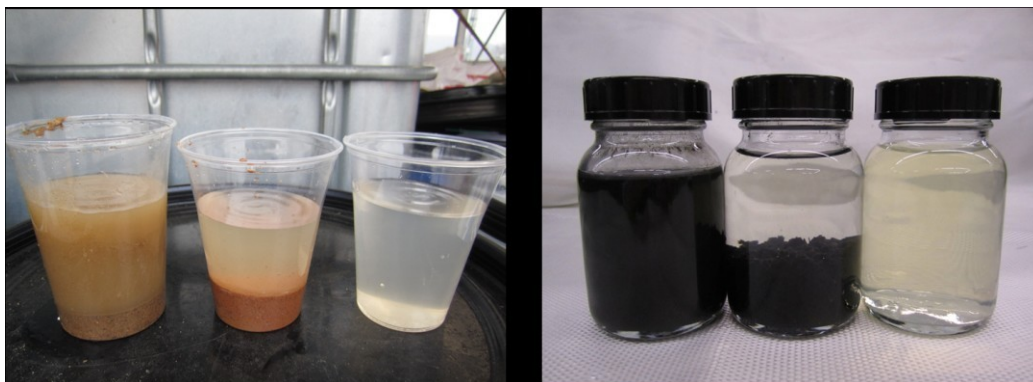
Picture 2:

- < *Conditioning of the sludge with polymers*

Picture 3:

- < *Dewatering with tubes*

## Effect of blending polymer



The polymer additive acts to enhance/accelerate the solid-liquid separation process. The polymer is added to the sludge before it is pumped into the tube.