

# Ultra X-Text Fabric

## Polypropylene to Ultra X-Text Comparison

Ultra X-Text is a patented hydrophilic (water attracting) and lipophilic (oil attracting) material made of recycled synthetic fibers. The fibers are blended and processed to form a lightweight mass with enormous surface area and interstitial spaces. These properties make Ultra-X-Text an extremely high performing oil sorbent and filter material. It's offered in bulk media form and also in roll form. Ultra X-Text has over 10 years of demonstrated and proven performance in capturing hydrocarbons and filtering oil laden water.

- Polypropylene is hydrophobic (water repelling), and will not let water pass freely through the fabric. However, Ultra X-Text is hydrophilic, and lets the filtered water freely pass through.
- Polypropylene only absorbs oils and hydrocarbons in the outer layers. Ultra X-Text absorbs throughout the entire fabric. So foot for foot, this makes Ultra X-text more efficient.
- For every gallon of oil that needs to be captured, it will require significantly more polypropylene fabric than is needed with Ultra X-Text to get the job done.
- Ultra X-Text can be infused with Ultra-Microbes. These are oil-eating microbes that transform hydrocarbons into lipids, carbon dioxide, trace carbon, and bacterial cells.

## Cost Comparison

Taking into account deployment and retrieval costs for each boom, the Ultra-X-Text material (\$50.48/foot\* of boom per gallon of oil) is over three-and-a-half times more cost effective than traditional polypropylene booms (\$176.21/foot of boom per gallon of oil).

Target Quantity of Oil Absorbed= 1 gallon per foot of boom	Ultra-X-Text Boom 5 inch Diameter	Polypropylene Boom 5 inch diameter.
Cost per foot of 5" diameter Oil Absorbing Boom	\$9.75	\$3.50
Gallons of Oil absorbed per foot of boom*	0.79	0.19
Number of times a boom need to be deployed to absorb the target quantity of oil	1.27	5.26
Labor cost to deploy booms needed to absorb the target quantity of oil <sup>2</sup>	\$19.05	\$78.90
Labor cost to retrieve saturated booms to absorb the target quantity of oil <sup>2</sup>	\$19.05	\$78.90
<b>Total cost per foot of Boom to absorb the Target Gallons</b>	<b>\$50.48</b>	<b>\$179.21</b>

\* Prices referenced were current only as of the date of this study. Please contact us for a current price quote for your project.

<sup>1</sup> Based on the thick crude oil from the Deepwater Horizon Gulf oil spill vs. refined oil. Assumes full saturation of the hydrophilic Ultra-X-Text booms based on actual testing and industry information data and partial absorption (based on discussions with First Responders, polypropylene booms are only absorbing oil into the outside 1 inch of the boom before blinding over, resulting in only a 36% effective area for a 5 inch diameter boom) by the polypropylene boom based on testing and industry information.

<sup>2</sup> Based on discussions with First Responders, a typical charge to deploy a boom in calm water is \$14-\$16/foot of boom. For the purpose of this exercise, \$15/ foot of boom will also be used for the retrieval of each boom, although in reality this charge will be slightly higher.

