

## Filter Fabric Technology Landscape with Hydrolox®

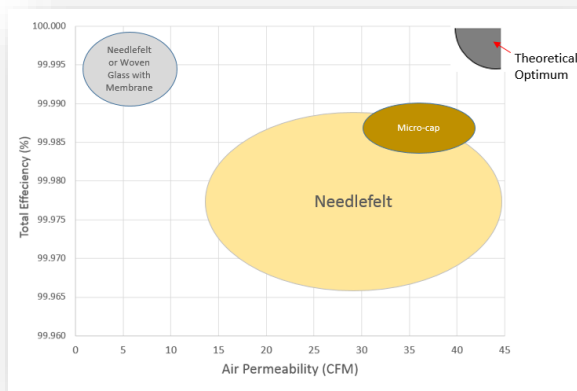
*A revolutionary fabric technology delivering improved performance for the industry*

The industrial filtration industry is due for an innovative solution to the fabric filter application. Although the industry serves a vital role within the air pollution control system for industries, reliability engineers have historically been limited to a few choices during selection of filter fabric for their baghouse. Typically, a choice must be made between filtration efficiency and breathability. Ideally, plants could be operated with a fabric filter baghouse with maximum airflow and maximum efficiency. However, the filtration industry is forced to choose from two primary fabric technologies: Needlefelt and ePTFE membrane laminated to either woven glass or needlefelt. Recently, Bondex has introduced Hydrolox® and Hydrolox® HCE as new alternatives to traditional filter fabrics which provide users and OEMs a solution that is closer to the theoretical optimum between efficiency and breathability.

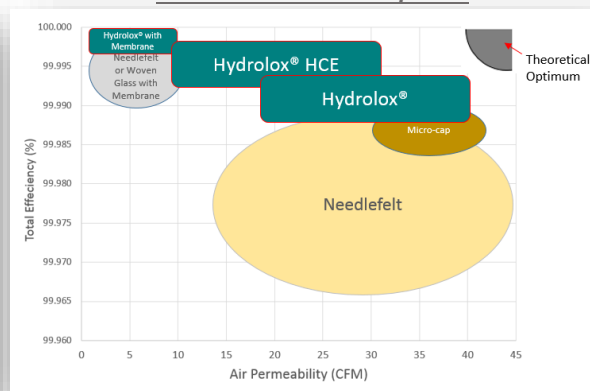
Needlefelt fabric technology provides users with a relatively breathable fabric which offers adequate filtration efficiency for several applications. There also exists an incremental improvement on the needlefelt platform where fabric producers add a micro-fiber “cap” to the needlefelt to offer marginal improvement in filtration efficiency without sacrificing breathability. Alternatively, applications which require superior filtration efficiency are forced to only one other option: ePTFE membrane laminated to either woven glass or needlefelt. This membrane laminated fabric offers high efficiency, but at the cost of low breathability and high pressure drop.

The graphic on the left below illustrates this technology landscape. The upper-right corner of this graph illustrates the “theoretical optimum” which is a filtration fabric of 100% efficiency at maximum breathability.

**Historical Filter Fabric Options**



**Current Filter Fabric Options**



Bondex sought to improve how filter fabrics were produced, and successfully developed the Hydrolox® technology. Hydrolox® combines the benefits of needle loom entanglement with revolutionary hydro-entangling technology which produces filtration fabric with a fundamentally new balance of properties. While there may be other hydro-entangled (or “spunlace”) fabrics in the market, only the Hydrolox® product provides options in polyester, PPS and aramid up to 17 oz/yd<sup>2</sup> from a process which was specifically designed to bring solutions to the industrial filtration market. The graphic on the right above illustrates how Hydrolox® delivers improved filtration efficiency versus needlefelt without sacrificing air permeability. Additionally, Hydrolox® HCE delivers improved air permeability over a membrane laminated media with equal filtration efficiency. Even for applications which require maximum filtration efficiency with low air permeability, Hydrolox® with ePTFE membrane is available as well.

Bondex is happy to share filtration efficiency data which illustrates this new balance in performance. Please contact us at [info@bondexinc.com](mailto:info@bondexinc.com) to discuss how to work with your preferred filter bag supplier to execute a bag test in your application.