

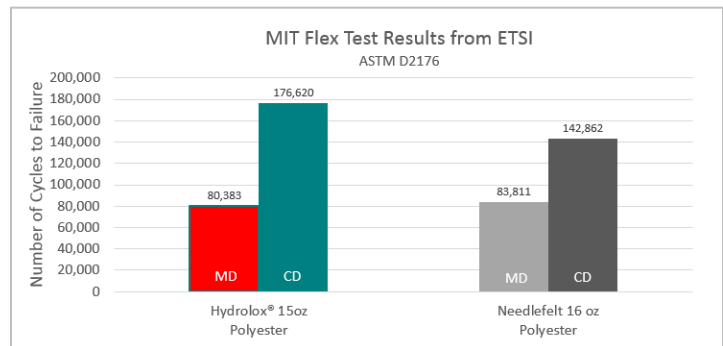
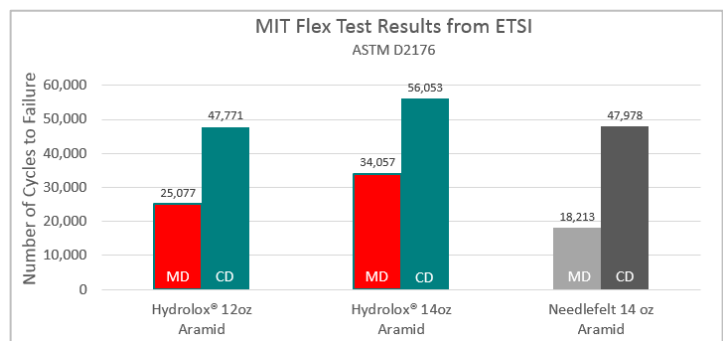
Hydrolox® Durability

A revolutionary fabric technology delivering improved performance for the industry

For many years, the industrial filtration industry has used needlefelt in filter bags as part of the air pollution control process. Recently, Bondex has introduced Hydrolox® and Hydrolox® HCE as new alternatives to traditional needlefelt filter media which provide users and OEMs dramatically improved filtration performance, which is documented separately. A vital aspect of the fabric filter performance is the durability of the fabric over time. Users and OEMs need filter bags which can withstand the mechanical fatigue associated with the frequent pulse cleaning cycles. This durability performance was studied by ETS, Inc., a third-party testing lab for the filtration industry, with a standard test method known as MIT Flex Test (ASTM D2176) comparing Hydrolox® to needlefelt.

This ASTM standard test method uses samples of the fabric cut in both the machine direction (MD) and cross direction (MD) and is setup to cycle the fabric flexing repeatedly, simulating the mechanical fatigue initiated by the cleaning cycle. The test records the total number of cycles to failure. All fabrics tested were fiber supported (no scrim), and three replicates were used for each of the fabrics.

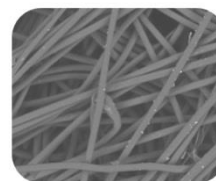
The aramid Hydrolox® in 12 oz/yd² and 14 oz/yd² was tested along with a 14 oz/yd² aramid needlefelt fabric. The superior toughness of the Hydrolox® felt can be observed with these results. At equal basis weights (14 oz/yd²), the aramid Hydrolox® lasted **36% longer** than the needlefelt when considering both MD and CD cycles to failure data. Likewise, the 12 oz/yd² aramid Hydrolox® lasted **10% longer** than the 14 oz/yd² needlefelt. Based on the superior filtration efficiency performance of Hydrolox® versus needlefelt coupled with this durability performance, lighter weight Hydrolox® options could be considered.



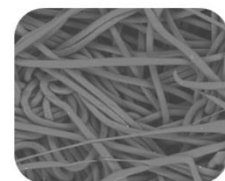
In the same testing with polyester felt, the Hydrolox® felt demonstrates substantial improvement over needlefelt, showing that 15 oz/yd² polyester Hydrolox® lasted **13% longer** than the 16 oz/yd² polyester needlefelt.

The textile technology which enables this durability performance is due to the high-pressure hydro-entangling that the Hydrolox® process is built around. With a higher degree of entanglement, more fiber to fiber intersections leads to stronger and more durable felt. The increased fiber entanglement can be observed by SEM images shown.

Bondex is happy discuss how Hydrolox® could bring value in your application. Please contact us at info@bondexinc.com to discuss how to work with your preferred filter bag supplier to execute a bag test in your application.



Needlefelt
150X Magnification



Hydrolox®
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