

S1.2.1 THERMOPLASTIC POLYMERIC MICROFIBERS FOR WET LAID AND CONCEPTS FOR IMPROVING FILTRATION MEDIA DESIGNS

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The recent development of Eastman Cyphrex™ microfiber technology provides a means for the preparation of microfibers with varied cross sectional geometries and lengths from a range of thermoplastic polymers to be used specifically for wet-laid processes. Along with providing highly uniform and consistent fibers, this technologies flexibility allows for the development of functional wet-laid media properties such as good green strengths (wet and dry), smoothness, uniformity, printability, and ideal pore structure in filtration substrates to meet increasing performance demands for efficiencies in filtration applications. This novel microfiber technology has been previously described using polyester terephthlate (PET), which provided fibers that are easily and uniformly dispersed as well as providing wet-laid nonwovens with unparalleled uniformity, strength, and other structural characteristics. Current developmental efforts are underway to develop polylactic acid (PLA) microfibers for incorporation into a range of wet-laid nonwovens and paper to similarly provide unique performance features in the nonwoven substrate. This presentation will provide the results from initial laboratory and pilot wet-laid studies using PLA microfibers.