

SPECIAL SEGMENT REPORT **REPLACED BY Spunbonded 2005**
(This segment report is available separately)

SPUNBONDED NONWOVENS AND COMPOSITES FOR FILTRATION

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(Updated early 2005)

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TABLE OF CONTENTS

	<u>PAGE</u>
SUMMARY AND HIGHLIGHTS	4
GENERAL COMMENTS	5
'FINE DENIER' PET SPUNBONDED POLYESTER	8
MANUFACTURERS OF PET SPUNBONDED MEDIA	11
BBA NONWOVENS	11
JOHNS MANVILLE	14
FREUDENBERG	16
TOYOBO STEARNS	17
AMERICAN NONWOVENS	18
AKZO NONWOVENS AND OTHERS	19
LIST 1019 WORLDWIDE	20
APPLICATIONS	25
ACTIVATED CARBON (A.C.) COMPOSITE	25
SWIMMING POOLS	28
AIR INTAKE RADIAL FIN FILTERS	29
LIST 1020 WORLDWIDE	30
SMS SURGICAL/MEDICAL FACE MASKS	37
HVAC ROLL FILTER	39
PLEATED FILTER BAGS	40
PLEATED DUST CARTRIDGES (TORIT TYPE)	43
LIQUID DISPOSABLE PLEATED CARTRIDGES	45
MEMBRANE BACKING	46
COOLANT FILTRATION	49
AUTOMOTIVE	52
VACUUM CLEANER	55
OTHER APPLICATIONS	58
MARKET SUMMARY BY SEGMENT	59
CURRENT MEDIA PRICES	60
FORECAST 2004 – 2010 MARKET SUMMARY	61
COMMENTS TO FORECAST	62
DISCLAIMER	65

SUMMARY AND HIGHLIGHTS

Historically BBA NONWOVENS is by far the largest current supplier of spunbonded nonwovens into filtration worldwide. In Europe, we believe that JOHNS MANVILLE is the largest supplier of 'fine denier' spunbonded polyester.

There are now a number of equipment manufacturers offering equipment including bi-component fibers to produce 'fine denier' spunbonded materials.

We believe that the current market 2004/2005 amounts to approximately \$110 – \$120 million for roll goods based on spunbonded nonwovens for filtration. Probably as much as 50% is to be 'fine denier'.

We believe that coolant filtration or filter media in general for this application will decrease in years to come. This is particularly apparent in Europe.

It can be safely stated that still relatively few companies of the many spunbonded producer have focused on filtration.

Spunbonded media as membrane backing will most likely decline in favor of some wet laid filtration media.

'Fine Denier' spunbonded – 1.0 dpf – 6 dpf (denier per filament) carries tremendous potential to get into new and existing filtration applications.

We use MM (million) , currency conversion of € 1.00 = \$ 1.30 as of 03/2005.
As of 2005 it is apparent that "Spunbonded Technology" although around for 40 years, is in transition to fiber fibers, which consequently favors filtration requirements. We also believe, that bi-component

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