PRODUCT INFORMATION Pocket Stiff (M5-ePM10-55)

Type of Nonwoven	Pocket filter media	
Filter layer	Polypropylene	
Material composition with stiffening layer	PP Spunbond 20 g/m2 PP Meltblown 5 g/m2 Spunlaid Polyester 50 g/m2 PP Spunbond 20 g/m2	
Recommendation for Application	ISO 16890	ISO ePM10 55%

Property	Method	Average
Basis -Weight	NWSP 130.1	95 g/m2 ± 5%
Initial Pressure Drop (0,16m/s)	NWSP 70.1	16 Pa
Standart width		710 mm
Maximum diameter		800 mm

Efficiency	ISO 16890	ePM10	68 %
		ePM2,5	53%
		ePM1	48 %
		ePM10 min	59 %
		ePM2,5 min	18 %
		ePM1 min	8 %
Flammability	DIN 53438	F1/F1/K1	

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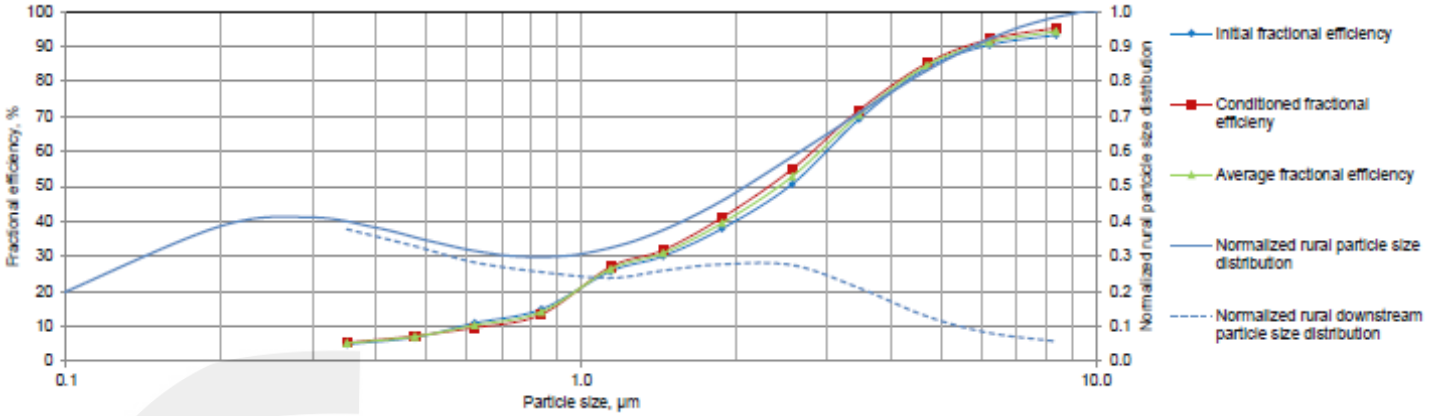

Particle size			Urban size distribution					Rural size distribution			Fractional efficiency		
Δd_i µm	$\bar{d}_i$ µm	$\Delta \ln d_i$ µm	$q_{3u}(\bar{d}_i)$	$q_{3u}(\bar{d}_i)$ * $\Delta \ln d_i$	E_i * $q_{3u}(\bar{d}_i)$ * $\Delta \ln d_i$	$E_{D,i}$ * $q_{3u}(\bar{d}_i)$ * $\Delta \ln d_i$	$E_{A,i}$ * $q_{3u}(\bar{d}_i)$ * $\Delta \ln d_i$	$q_{3r}(\bar{d}_i)$	$q_{3r}(\bar{d}_i)$ * $\Delta \ln d_i$	$E_{A,i}$ * $q_{3r}(\bar{d}_i)$ * $\Delta \ln d_i$	Sample 1 %	Sample 2 %	Average %
0.30 - 0.41	0.35	0.31237	0.22568	0.070498	0.003485	0.003818	0.003651	0.093806	0.029303	0.001518	5	5	5
0.41 - 0.55	0.47	0.29376	0.19732	0.057965	0.003992	0.004234	0.004113	0.083478	0.024522	0.001740	7	7	7
0.55 - 0.70	0.62	0.24116	0.15837	0.038193	0.004187	0.003691	0.003939	0.074324	0.017924	0.001849	11	10	10
0.70 - 1.00	0.84	0.35667	0.11522	0.041097	0.006130	0.005523	0.005827	0.070137	0.025016	0.003547	15	13	14
1.00 - 1.30	1.14	0.26236	0.08503	0.022309	0.005746	0.006019	0.005883	0.076281	0.020013	0.005277	26	27	26
1.30 - 1.60	1.44	0.20764	0.07618	0.015817	0.004752	0.005031	0.004891	0.088326	0.018340	0.005672	30	32	31
1.60 - 2.20	1.88	0.31845	0.08022	0.025546	0.009688	0.010475	0.010081	0.108042	0.034406	0.013578	38	41	39
2.20 - 3.00	2.57	0.31015	0.09984	0.030966	0.015687	0.017017	0.016352	0.137262	0.042573	0.022481	51	55	53
3.00 - 4.00	3.46	0.28768	0.12688	0.036500	0.025247	0.026185	0.025716	0.167084	0.048067	0.033866	69	72	70
4.00 - 5.50	4.69	0.31845	0.15556	0.049537	0.041524	0.042178	0.041851	0.195424	0.062233	0.052577	84	85	84
5.50 - 7.00	6.20	0.24116	0.17757	0.042823	0.038674	0.039396	0.039035	0.216707	0.052261	0.047639	90	92	91
7.00 - 10.00	8.37	0.35667	0.19157	0.068329	0.063680	0.065050	0.064365	0.231428	0.082545	0.077756	93	95	94

Symbols and units

Δd_i	Particle size range, µm
$\bar{d}_i$	Geometric mean diameter of a size range i, µm
$\Delta \ln d_i$	Logarithmic width of particle diameter size range i
$q_{3u}(\bar{d}_i)$	Discrete urban particle volume distribution, dimensionless
$q_{3r}(\bar{d}_i)$	Discrete rural particle volume distribution, dimensionless
E_i	Initial fractional efficiency of particle size range i of the untreated and unloaded filter element, %
$E_{D,i}$	Fractional efficiency of particle size range i of the filter element after an artificial conditioning step, %
$E_{A,i}$	Average fractional efficiency of particle size range i, %
$ePM_{x,ini}$	Initial particulate matter efficiency value of the clean filter, %
$ePM_{x,min}$	Minimum particulate matter efficiency value of the conditioned filter, %
ePM_x	Particulate matter efficiency, %

Particulate matter efficiencies		
$ePM_{1,ini}$	$ePM_{1,min}$	ePM_1
9 %	8 %	8 % -
$ePM_{2.5,ini}$	$ePM_{2.5,min}$	$ePM_{2.5}$
18 %	18 %	18 % -
$ePM_{10,ini}$	$ePM_{10,min}$	ePM_{10}
58 %	59 %	59 % **ePM_{10} 55 %**

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