

## Comparative Guide to Norms for the Classification of Air Filters

Description	Thick dust filters				Fine dust filters												HEPA					ULPA						
	Coarse				ePM1	ePM2,5	ePM10	ePM1	ePM2,5	ePM10	ePM1	ePM2,5	ePM10	ePM1	ePM2,5	ePM10	ePM1	ePM2,5	ePM10									
EN ISO 16890		40%	50%	>60%	<20%	<40%	≥50%	<40%	50-60%	>60%	50-70%	>65%	>80%	70-80%	>80%	>90%	>80%	>90%	>80%	>90%	>80%	>90%						
EN779:2012	G1	G2	G3	G4	M5		M6		F7			F8			F9													
	Average performance (Am) against synthetic dust %				Average efficiency (Em) against particles of 0,4 μ m %																							
M5 < F9	50 < 65	65 < 80	80 < 90	90 < Am	40 < 60		60 < 80		80 < 90			90 < 95			95 < Em													
Minimum efficiency 0,4 μ m									35 %			55 %			70%													
EN1822:2011 (DEHS)																		E10	E11	E12	H13	H14	U15					
INICIAL eff. MPPS (DEHS) MPPS=Most penetrating particle size	n/a	n/a	n/a	n/a	n/a		n/a		n/a			n/a			n/a			>85	<95	>99,5	>99,95	>99,995	>99,999					
EUROVENT 4/5 DPf F5<F9 = 600Pa	EU1	EU2	EU3	EU4	EU5		EU6		EU7			EU8			EU9			EU10	EU11	EU12	EU13	EU14	EU15					
ASHRAE MERV Values	1	2-3-4	5-6	7-8	9-10		11-12		13			14			15			=16	=17	=18	=19	=20						
ASHRAE 52-76 (weight arr.)	n/a	G70	G85	G95	n/a		n/a		n/a			n/a			n/a			n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a		
Gravimeter	m > 65	65 > 80	85 > 90	> 90	> 97		> 98		> 98			> 99,5			> 99,5													
ASHRAE 52-76 (Dust spot) Opacity-metric	> 20	> 20	> 20	> 20	40 < 60		60 < 80		80 < 90			90 < 95			< 95													

NBN X 44 001	n/a	G70	G85	G95	F50	F70	F85	n/a	F95	U95	U99,5	U99,99			
DIN 24185 E	A	B1	B2	B2	B2	C1	C2	C3	C3	Q	R	S	ST	T	
US fed 209 (0,3µm DOP) Initial efficiency	n/a	n/a	n/a	0-5	5-15	10-25	45-60	65-75	75-85	>85	<95	>99,5	>99,99	>99,999	>99,999
Initial efficiency on particles															
0,12µm	-	-	-	-	0-10	5-15	25-35	35-45	45-60						>99,999
0,3µm	-	-	-	0-5	5-15	10-25	45-60	65-75	75-85	>85	<95	<99,5	<99,99	<99,999	
0,4µm	-	-	-	0-7	10-20	20-35	50-70	70-80	80-90						
0,5µm	-	-	0-5	5-15	15-30	20-40	60-75	80-90	90-95						
1µm	-	0-5	5-15	15-35	30-50	50-65	85-95	95-98	>98						
3µm	0-5	5-15	15-35	30-55	70-90	85-95	>98	>99	>99						
5µm	5-15	15-35	35-70	60-90	90-99	95-99	>99	>99	>99						
10µm	40-50	50-70	70-85	85-98	>98	>99	>99	>99	>99						
Decontamination factor in MPPS	1	1	1	1	1	1	2	3	5	7	20	200	2.000	20.000	200.000