

Comparison Chart

ASHRAE 52.2, ISO16890, EN779, EN1882

ASHRAE Standard 52.2-2012				EN779: 2012				ISO16890: 2016				EN1822: 2009
Min. Efficiency Reporting Value	Composite Average Particle Size Efficiency (E _m) % in Size Range, μm			Filter Class	Average Arrestance (A _m) of Synthetic Dust	Average Efficiency (E _m) at 0.4μm	Minimum Efficiency (E _{min}) at 0.4μm	Average of initial and discharged efficiency E _m = (E _i +E _d)/2		Initial efficiency (E _i)	Initial Arrestance (A _m)	Initial Efficiency (E _i) at MPPS (typically 0.08 - 0.15 μm)
	Range 1	Range 2	Range 3		Test Final dP 250Pa	Test Final dP 450Pa		ePM1 (%)	ePM2.5 (%)	ePM10 (%)	Coarse (%)	
(MERV)	0.3-1.0	1.0-3.0	3.0-10.0		%	%	%	0.3-1.0	0.3-2.5	0.3-10	ISO Fine Dust	%
1 (A)			E _m <20	G1	50≤A _m ≤65					A _m <75 Final dP 200 Pa		
2 (A)			E _m <20	G2	65≤A _m ≤80							
3 (A)			E _m <20									
4 (A)			E _m <20									
5 (A)			E _m ≥20	G3	80≤A _m ≤90					A _m >75 Final dP 300 Pa		
6 (A)			E _m ≥35									
7 (A)			E _m ≥50	G4	A _m ≤90							
8 (A)		E _m ≥20	E _m ≥70									
9 (A)		E _m ≥35	E _m ≥75	M5		40≤E _m ≤60				E _i >50		
10 (A)		E _m ≥50	E _m ≥80									
11 (A)	E _m ≥20	E _m ≥65	E _m ≥85	M6		60≤E _m ≤80			50≤E _m ≤60	E _i >60		
12 (A)	E _m ≥35	E _m ≥80	E _m ≥90									
13 (A)	E _m ≥50	E _m ≥85	E _m ≥90	F7		80≤E _m ≤90	E _{min} ≥35	50≤E _m ≤75	E _m >70	E _i >80		
14 (A)	E _m ≥75	E _m ≥90	E _m ≥95	F8		90≤E _m ≤95	E _{min} ≥55	75≤E _m ≤85	E _m >80	E _i >90		
15 (A)	E _m ≥85	E _m ≥90	E _m ≥95	F9		95≤E _m	E _{min} ≥70	E _m >85				
16 (A)	E _m ≥95	E _m ≥95	E _m ≥95									
N/A	N/A	N/A	N/A	E10				N/A	N/A	N/A	N/A	E _i ≥85
				E11								E _i ≥95
				E12								E _i ≥99.5
				H13								E _i ≥99.95
				H14								E _i ≥99.995
				U15								E _i ≥99.9995
				U16								E _i ≥99.99995
				U17								E _i ≥99.999995
A _m =Average Arrestance E _m = Average Efficiency E _{min} = Minimum Efficiency E _d = Discharged Efficiency E _i = Initial Efficiency												
Note: The filter class is the highest class where the filter meets all requirements. Comparisons are approximation given for reference only. Filters should be tested to the most recent standards. For ISO ePM1 and ePM2.5 both initial and discharged efficiency need to be over 50% to qualify for a class.												