

CLASSIFICATION	Arrestance or Dust Spot Efficiency	US ASHRAE 52.2	European Union EN779 Class		Typical Controlled Contaminant	Application		
PRE Filter (G Class)	AFI <65 %	MERV 1	G1	Am < 65%	Particle bigger than 10.0µm Pollen Spanish moss Dust mites Sanding dust Spray paint dust Textile fibers	Gross filter, domestic and commercial		
	AFI 65%-70%	MERV 2	G2	65% Am < 80%				
	AFI 70%-75%	MERV 3						
	AFI 75%-80%	MERV 4						
	AFI 80%-85%	MERV 5	G3	80% Am < 90%	Particle size within 3.0µm-10.0µm (Mold Spores) Hair spray (Cement dust (Snuff (Powdered milk	Commercial, industrial, paint shop		
	AFI 85%-90%	MERV 6						
	NBS 25%-30%	MERV 7	G4	90% Am				
	NBS 30%-35%	MERV 8						
MEDIUM Filter (F Class)	NBS 40%-45%	MERV 9	F5	40% Em < 60%			Particle Size within 1.0µm-3.0µm (Lead dust (Milled flour (Coal dust (Auto emissions (Nebulizer drop (Welding fumes	IAQ concerned commercial & industrial, medical
	NBS 50%-55%	MERV 10						
	NBS 60%-65%	MERV 11	F6	60% Em < 80%				
	NBS 70%-75%	MERV 12						
	NBS 80%-85%	MERV 13	F7	80% Em < 90%	Particle size within 0.3µm-1.0µm (All bacteria (cooking oil (Most smoke (Copier toner (Most face powder (Most paint pigments	IAQ concerned commercial, industrial, medical, food etc		
	NBS 90%-95%	MERV 14	F8	90% Em < 95%				
	NBS > 95%	MERV 15	F9	95% Em				
MERV 16								
CLASSIFICATION	Mean Fractional Efficiency	IEST RP-CC001.3	European Union EN1822 Class		Typical Controlled Contaminant	Application		
HEPA Filter (H Class)	95% at 0.3µm	n/a	H10	85% at MPPS	Particle size bigger than 0.3µm (Virus [unattached] (Carbon dust (Sea salt (All combustion smoke (Radon progeny	All types of cleanrooms		
	98% at 0.3µm		H11	95% at MPPS				
	99.97% at 0.3µm	TYPE A	H12	99.5% at MPPS				
	99.99% at 0.3µm	TYPE C						
	99.995% at 0.3µm	TYPE D	H13	99.95% at MPPS				
	99.999% at 0.3µm		H14	99.995% at MPPS				
ULPA Filter (U Class)	99.9995% at 0.12µm	TYPE F	U15	99.9995% at MPPS	Particle size bigger than 0.12µm	super cleanroom		
	99.99995% at 0.12µm		U16	99.99995% at MPPS				
	99.999995% at 0.12µm		U17	99.999995% at MPPS				

Note :

1. AFI : American Filter Institute
2. NBS : National Bureau of Standards
3. ASHRAE : American Society of Heating Refrigerating & Air-conditioning Engineers
4. MERV : Minimum Efficiency Reporting Value
5. MPPS : Most Penetrating Particle Size

6. HEPA : High Efficiency Particulate Air Filter
7. ULPA : Ultra Low Penetration Air Filter
8. Am : Average Arrestance Efficiency for Coarse Filters
9. Em : Average Efficiency for Fine Filters
10. IEST : Institute of Environmental Sciences and Technology

Clean, Safe and Comfortable Air

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