

MERV RATING CHART

FILTRATION PERFORMANCE



Standard 52.5 Minimum Efficiency Reporting Value	Dust Spot Efficiency	Arrestance	Typical Controlled Contaminants	Typical Applications and Limitations	Typical Air Filter/Cleaner Type
20	n/a	n/a	<0.30 pm particle size	Cleanrooms	Particles @ ≥99.999% eff. on .10-.20 pm
19	n/a	n/a	Virus (unattached)	Radioactive Materials	Particles @ ≥99.999% eff. on .10-.20 pm
18	n/a	n/a	Carbon Dust	Pharmaceuticals Mfg.	Particulates @ ≥99.999% eff. on .10-.20 pm
17	n/a	n/a	All Combustion Smoke	Carcinogenetic Materials	≥99.97% eff. on .30 Particles
16	n/a	n/a	.30-1.0 pm Particle Size All Bacteria	Hospital Inpatient Care General Surgery	<u>Bag Filters:</u> Nonsupported Microfine fiberglass or synthetic media. <u>Box Filters:</u> Rigid Style Cartridge Filters (6-12 in.).
15	>95%	n/a	Most Tobacco Smoke Proplet Nuceli	Smoking Lounges Superior Commercial Buildings	
14	90-95%	>98%	Cooking Oils Most Smoke		
13	89-90%	>98%	Insect Dust, Copier Toner Most Face Powders Most Paint Pigments		
12	70-75%	>95%	1.0-3.0 pm Particle Size Legionella	Superior Residential	<u>Bag Filters:</u> Nonsupported Microfine fiberglass or synthetic media. <u>Box Filters:</u> Rigid Style Cartridge Filters (2-6 in.).
11	60-65%	>95%	Humidifier Dust Lead Dust	Better Commercial Buildings	
10	50-55%	>95%	Milled Flour Auto Emissions	1.0-3.0 pm Particle Size Hospital Labs	
9	40-45%	>90%	Welding Fumes		
8	30-35%	>90%	3.0-10.0 pm Particle Size Mold Spores	Commerical Buildings	<u>Pleated Filters:</u> Disposable, extended surface (1-5 in.) thick w/ cotton-polyester blend media & cardboard frame. <u>Cartridge Filters:</u> Graded density viscous coated cube or pocket filters, synthetic media. <u>Throwaway Disposable:</u> Synthetic medial panel filters.
7	25-30%	>90%	Hair Spray Fabric Protector	Better Residential	
6	<20%	85-90%	Dusting Aids Cement Dust	≤ 3.0-10.0 pm Particle Size Industrial Workplace	
5	<20%	80-85%	Pudding Mix	Paint Booth Inlet	
4	<20%	75-80%	>10.0 pm Particle Size Pollen	Minimal Filtration	<u>Throwaway:</u> Disposable fiberglass or synthetic panel filters. <u>Washable:</u> Aluminum mesh, latex coated animal hair, or foam rubber panel filters. <u>Electrostatic:</u> Self charging (passive woven polycarbonate panel filter.
3	<20%	70-75%	Dust Mites Sanding Dust	≤ 3.0-10.0 pm Particle Size Residential	
2	<20%	65-70%	Spray Paint Dust Textile Fibers	≤ 3.0-10.0 pm Particle Size Residential	
1	<20%	<65%	Carpet Fibers	≤ 3.0-10.0 pm Particle Size Window A/C Units	

HEPA Filtration refers to filtration above 16 MERV and are at least 99.97% efficiency at filtering 0.3 µm mass median diameter (MMD) particles.

A **MERV rating chart** shows a numerical value. The range is from 1 (lowest efficiency) to 20 (highest efficiency). **MERV** stands for **Minimum Efficiency Reporting Value**. This is an industry standard rating system for filtration.