

What is a MERV rating?

Minimum Efficiency Reporting Values, or MERVs, report a filter's ability to capture larger particles between 0.3 and 10 microns (μm).

- This value is helpful in comparing the performance of different filters
- The rating is derived from a test method developed by the American Society of Heating, Refrigerating, and Air Conditioning Engineers (ASHRAE) [see www.ashrae.org].
- The higher the MERV rating the better the filter is at trapping specific types of particles.

MERV Rating	Average Particle Size Efficiency in Microns
1-4	3.0 - 10.0 less than 20%
5	3.0-10.0 greater than or equal to 20%
6	3.0-10.0 greater than or equal to 35%
7	3.0-10.0 greater than or equal to 50%
8	1.0-3.0 greater than or equal to 20% 3.0-10.0 greater than or equal to 70%
9	1.0-3.0 greater than or equal to 35% 3.0-10.0 greater than or equal to 75%
10	1.0-3.0 greater than or equal to 50% 3.0-10.0 greater than or equal to 80%
11	0.30-1.0 greater than or equal to 20% 1.0-3.0 greater than or equal to 65% 3.0-10.0 greater than or equal to 85%
12	0.30-1.0 greater than or equal to 35% 1.0-3.0 greater than or equal to 80% 3.0-10.0 greater than or equal to 90%
13	0.30-1.0 greater than or equal to 50% 1.0-3.0 greater than or equal to 85% 3.0-10.0 greater than or equal to 90%

MERV Rating	Average Particle Size Efficiency in Microns
14	0.30-1.0 greater than or equal to 75% 1.0-3.0 greater than or equal to 90% 3.0-10.0 greater than or equal to 95%
15	0.30-1.0 greater than or equal to 85% 1.0-3.0 greater than or equal to 90% 3.0-10.0 greater than or equal to 95%
16	0.30-1.0 greater than or equal to 95% 1.0-3.0 greater than or equal to 95% 3.0-10.0 greater than or equal to 95%
High efficiency Particulate Air filter HEPA*	99.97% of particles in the 0.3-micron range Particles that are larger or smaller than 0.3 microns are captured with a greater than 99.97% efficiency

HEPA is a type of pleated mechanical air filter. It is an acronym for "**high efficiency particulate air [filter]**" (as officially defined by the U.S. Dept. of Energy). This type of air filter can theoretically remove at least 99.97% of dust, pollen, mold, bacteria, and any airborne particles with a size of 0.3 microns (μm). The diameter specification of 0.3 microns corresponds to the worst case; the most penetrating particle size (MPPS). Particles that are larger or smaller are trapped with even higher efficiency. Using the worst-case particle size results in the worst-case efficiency rating (i.e. 99.97% or better for all particle sizes).

All air cleaners require periodic cleaning and filter replacement to function properly. Follow manufacturer's recommendations on maintenance and replacement.