

What is a HEPA filter?

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.

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%
6	3.0 - 10.0 49.9%
8	3.0 - 10.0 84.9%
10	1.0 - 3.0 50% - 64.9%, 3.0 - 10.0 85% or greater
12	1.0 - 3.0 80% - 89.9%, 3.0 - 10.0 90% or greater
14	0.3 - 1.0 75% - 84%, 1.0 - 3.0 90% or greater
16	0.3 - 10.0 95% or greater