

ASTM F2100-21 explained



	Level 1 Low fluids	Level 2 Light to moderate fluids	Level 3 Moderate to high fluids
PFE at 0.1 micron ASTM F2299	≥95%	≥98%	≥98%
BFE at 3.0 micron ASTM F2101	≥95%	≥98%	≥98%
Delta P (ΔP) mm H₂O/cm² MIL-M-36954C	<5	<6	<6
Fluid resistance (mmHg)	≥80 mm Hg	≥120 mm Hg	≥160 mm Hg
Flammability	Class 1	Class 1	Class 1



Fluid resistance

Tests penetration resistance to synthetic blood at three protection levels—80 mm Hg, 120 mm Hg and 160 mm Hg.



Particle filtration efficiency (PFE)

Assesses filtration ability when tested against sub-micron particulate matter 0.1 microns in size—which is representative of some viruses.



Bacterial filtration efficiency (BFE)

Tests filtration ability against an aerosol containing bacteria 3.0 microns in size.

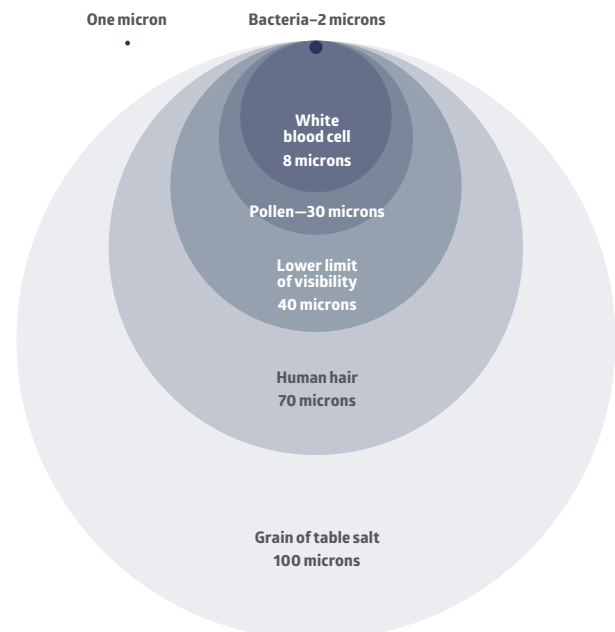


Differential Pressure (ΔP)

Gauges air flow from one side of a mask to the other, assessing breathability.

How small is a micron?

While an actual micron is not visible to the human eye, this magnified diagram demonstrates particulate size by comparing a micron to other common substances.



Scale is approximate.