



Respirator Protection Factors

Respirators are rated for the level of protection they provide to the person wearing them. These ratings are Assigned Protection Factors (APF). The Protection Factor represents the protection multiplied by the Permissible Exposure Level (PEL) set by OSHA. The one assumption is the respirator fits properly and no air leaks in around the seal to the face (this is why we document a “fit test”).

- Dust Masks and Half Face Dual Cartridge Respirators, Protection Factor of 10.
- Full Face Dual Cartridge Respirators, Protection Factor of 50 (only with Quantitative Fit Testing).
- Powered Air Purifying Respirators (PAPR) to a hood, Protection Factor of 25.
- Full Face Airline Supplied Respirators, Protection Factor of 1,000
- Full Face Airline Supplied Respirators with escape bottle, Protection Factor of 10,000
- Full Face Continuous Flow Airline Respirators, Protection Factor of 1,000
- Self-Contained Breathing Apparatus (SCBA), Protection Factor of 10,000

EXAMPLE: THE OSHA PEL for acetone is 1,000 ppm. That implies that an employee is allowed (under OSHA) to breath up to 1,000 ppm of acetone without a respirator. If you are fit tested with a Half-Mask Respirator using organic vapor cartridges, you can go up 10X over that limit (or 10,000 ppm) while using that respirator.

Unless you have sampled the air and know the PEL, you may not know what level of protection you need. Unless you do fit testing, you won't know if the respirator is properly sealing to your face. Our Safety Services Team can assist you and provide you with the answers you need!

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