

(3) Designed and constructed to prevent inward leakage of contaminated air.

**§ 84.178 Head harnesses; minimum requirements.**

(a) All facepieces shall be equipped with head harnesses designed and constructed to provide adequate tension during use and an even distribution of pressure over the entire area in contact with the face.

(b) Facepiece head harnesses, except those employed on single-use respirators, shall be adjustable and replaceable.

(c) Mouthpieces shall be equipped, where applicable, with adjustable and replaceable harnesses, designed and constructed to hold the mouthpiece in place.

**§ 84.179 Non-powered air-purifying particulate respirators; filter identification.**

(a) The respirator manufacturer, as part of the application for certification, shall specify the filter series and the filter efficiency level (i.e., "N95", "R95", "P95", "N99", "R99", "P99", "N100", "R100", or "P100") for which certification is being sought.

(b) Filters shall be prominently labeled as follows:

(1) N100 filters shall be labeled "N100 Particulate Filter (99.97% filter efficiency level)" and shall be a color other than magenta.

(2) R100 filters shall be labeled "R100 Particulate Filter (99.97% filter efficiency level)" and shall be a color other than magenta.

(3) P100 filters shall be labeled "P100 Particulate Filter (99.97% filter efficiency level)" and shall be color coded magenta.

(4) N99 filters shall be labeled "N99 Particulate Filter (99% filter efficiency level)" and shall be a color other than magenta.

(5) R99 filters shall be labeled "R99 Particulate Filter (99% filter efficiency level)" and shall be a color other than magenta.

(6) P99 filters shall be labeled "P99 Particulate Filter (99% filter efficiency level)" and shall be a color other than magenta.

(7) N95 filters shall be labeled as "N95 Particulate Filter (95% filter efficiency level)" and shall be a color other than magenta.

(8) R95 filters shall be labeled as "R95 Particulate Filter (95% filter efficiency level)" and shall be a color other than magenta.

(9) P95 filters shall be labeled as "P95 Particulate Filter (95% filter efficiency level)" and shall be a color other than magenta.

**§ 84.180 Airflow resistance tests.**

(a) Resistance to airflow will be measured in the facepiece, mouthpiece, hood, or helmet of a particulate respirator (complete respirator) mounted on a test fixture with air flowing at continuous rate of  $85 \pm 2$  liters per minute, before each test conducted in accordance with § 84.182.

(b) The resistances for particulate respirators upon initial inhalation shall not exceed 35 mm water column height pressure and upon initial exhalation shall not exceed 25 mm water column height pressure.

**§ 84.181 Non-powered air-purifying particulate filter efficiency level determination.**

(a) Twenty filters of each non-powered air-purifying particulate respirator model shall be tested for filter efficiency against:

(1) A solid sodium chloride particulate aerosol as per this section, if N-series certification is requested by the applicant.

(2) A dioctyl phthalate or equivalent liquid particulate aerosol as per this section, if R-series or P-series certification is requested by the applicant.

(b) Filters including holders and gaskets; when separable, shall be tested for filter efficiency level, as mounted on a test fixture in the manner as used on the respirator.

(c) Prior to filter efficiency testing of 20 N-series filters, the 20 to be tested shall be taken out of their packaging and placed in an environment of  $85 \pm 5$  percent relative humidity at  $38 \pm 2.5$  °C for  $25 \pm 1$  hours. Following the pre-conditioning, filters shall be sealed in a gas-tight container and tested within 10 hours.