

(3) N95, R95, and P95 filters shall demonstrate a minimum efficiency level of 95 percent.

§ 84.171 Non-powered air-purifying particulate respirators; required components.

(a) Each non-powered air-purifying particulate respirator described in § 84.170 shall, where its design requires, contain the following component parts:

- (1) Facepiece, mouthpiece with noseclip, hood, or helmet;
- (2) Filter unit;
- (3) Harness;
- (4) Attached blower; and
- (5) Breathing tube.

(b) The components of each non-powered air-purifying particulate respirator shall meet the minimum construction requirements set forth in subpart G of this part.

§ 84.172 Breathing tubes; minimum requirements.

Flexible breathing tubes used in conjunction with respirators shall be designed and constructed to prevent:

- (a) Restriction of free head movement;
- (b) Disturbance of the fit of facepieces, mouthpieces, hoods, or helmets;
- (c) Interference with the wearer's activities; and
- (d) Shutoff of airflow due to kinking, or from chin or arm pressure.

§ 84.173 Harnesses; installation and construction; minimum requirements.

(a) Each respirator shall, where necessary, be equipped with a suitable harness designed and constructed to hold the components of the respirator in position against the wearer's body.

(b) Harnesses shall be designed and constructed to permit easy removal and replacement of respirator parts, and, where applicable, provide for holding a full facepiece in the ready position when not in use.

§ 84.174 Respirator containers; minimum requirements.

(a) Except as provided in paragraph (b) of this section each respirator shall be equipped with a substantial, durable container bearing markings which show the applicant's name, the type of respirator it contains, and all appropriate approval labels.

(b) Containers for single-use respirators may provide for storage of more than one respirator, however, such containers shall be designed and constructed to prevent contamination of respirators which are not removed, and to prevent damage to respirators during transit.

§ 84.175 Half-mask facepieces, full facepieces, hoods, helmets, and mouthpieces; fit; minimum requirements.

(a) Half-mask facepieces and full facepieces shall be designed and constructed to fit persons with various facial shapes and sizes either:

- (1) By providing more than one facepiece size; or
- (2) By providing one facepiece size which will fit varying facial shapes and sizes.

(b) Full facepieces shall provide for optional use of corrective spectacles or lenses, which shall not reduce the respiratory protective qualities of the respirator.

(c) Hoods and helmets shall be designed and constructed to fit persons with various head sizes, provide for the optional use of corrective spectacles or lenses, and insure against any restriction of movement by the wearer.

(d) Mouthpieces shall be equipped with noseclips which are securely attached to the mouthpiece or respirator and provide an airtight seal.

(e) Facepieces, hoods, and helmets shall be designed to prevent eyepiece fogging.

(f) Half-mask facepieces shall not interfere with the fit of common industrial safety corrective spectacles.

§ 84.176 Facepieces, hoods, and helmets; eyepieces; minimum requirements.

Facepieces, hoods, and helmets shall be designed and constructed to provide adequate vision which is not distorted by the eyepieces.

§ 84.177 Inhalation and exhalation valves; minimum requirements.

(a) Inhalation and exhalation valves shall be protected against distortion.

(b) Inhalation valves shall be designed and constructed and provided where necessary to prevent excessive exhaled air from adversely affecting filters, except where filters are specifically designed to resist moisture.

- (c) Exhalation valves shall be:
 - (1) Provided where necessary;
 - (2) Protected against damage and external influence; and

(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 ± 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.