§ 84.157  
(b) The exhalation resistance to a flow of air at a rate of 85 liters (3 cubic feet) per minute shall not exceed 25 millimeters (1 inch) of water.

§ 84.157  Airflow resistance test; Type C supplied-air respirator, pressure-demand class; minimum requirements.

(a) The static pressure in the facepiece shall not exceed 38 mm. (1.5 inches) of water-column height.

(b) The pressure in the facepiece shall not fall below atmospheric at inhalation airflow less than 115 liters (4 cubic feet) per minute.

(c) The exhalation resistance to a flow of air at a rate of 85 liters (3 cubic feet) per minute shall not exceed the static pressure in the facepiece by more than 51 mm. (2 inches) of water-column height.

§ 84.158  Exhalation valve leakage test.

(a) Dry exhalation valves and valve seats will be subjected to a suction of 25 mm. water-column height while in a normal operating position.

(b) Leakage between the valve and valve seat shall not exceed 30 milliliters per minute.

§ 84.159  Man tests for gases and vapors; supplied-air respirators; general performance requirements.

(a) Wearsers will enter a chamber containing a gas or vapor as prescribed in §§84.160, 84.161, 84.162, and 84.163.

(b) Each wearer will spend 10 minutes in work to provide observations on freedom of the device from leakage. The freedom and comfort allowed the wearer will also be considered.

(c) Time during the test period will be divided as follows:

1. Five minutes. Walking, turning head, dipping chin;
2. Five minutes. Pumping air with a tire pump into a 28-liter (1 cubic foot) container, or equivalent work;
3. Five minutes. Pumping air with a tire pump into a 28-liter (1 cubic foot) container, or equivalent work;
4. Five minutes. Pumping air with a tire pump into a 28-liter (1 cubic foot) container, or equivalent work;
5. Five minutes. Pumping air with a tire pump into a 28-liter (1 cubic foot) container, or equivalent work;
6. Five minutes. Pumping air with a tire pump into a 28-liter (1 cubic foot) container, or equivalent work;
7. Five minutes. Pumping air with a tire pump into a 28-liter (1 cubic foot) container, or equivalent work;
8. Five minutes. Pumping air with a tire pump into a 28-liter (1 cubic foot) container, or equivalent work;
9. Five minutes. Pumping air with a tire pump into a 28-liter (1 cubic foot) container, or equivalent work;
10. Five minutes. Pumping air with a tire pump into a 28-liter (1 cubic foot) container, or equivalent work;

(d) No odor of the test gas or vapor shall be detected by the wearer in the air breathed during any such test, and the wearer shall not be subjected to any undue discomfort or encumbrance because of the fit, air delivery, or other features of the respirator during the testing period.

§ 84.160 Man test for gases and vapors; Type A and Type AE respirators; test requirements.

(a) The completely assembled respirator will be worn in a chamber containing 0.1 ±0.025 percent isoamyl acetate vapor, and the blower, the intake of the hose, and not more than 25 percent of the hose length will be located in isoamyl acetate-free air.

(b) The man in the isoamyl acetate atmosphere will draw his inspired air through the hose, connections, and all parts of the air device by means of his lungs alone (blower not operating).

(c) The 10-minute work test will be repeated with the blower in operation at any practical speed up to 50 revolutions of the crank per minute.

§ 84.161 Man test for gases and vapors; Type B and Type BE respirators; test requirements.

(a) The completely assembled respirator will be worn in a chamber containing 0.1 ±0.025 percent isoamyl acetate vapor, and the intake of the hose, and not more than 25 percent of the hose length will be located in isoamyl acetate-free air.

(b) The man in the isoamyl acetate atmosphere will draw his inspired air through the hose and connections by means of his lungs alone.

§ 84.162 Man test for gases and vapors; Type C respirators, continuous-flow class and Type CE supplied-air respirators; test requirements.

(a) The completely assembled respirator will be worn in a chamber containing 0.1 ±0.025 percent isoamyl acetate vapor, the intake of the hose will be connected to a suitable source of respirable air, and not more than 25 percent of the hose length will be located in isoamyl acetate-free air.

(b) The man in the isoamyl acetate atmosphere will draw his inspired air through the hose and connections by means of his lungs alone.
§84.163 Man test for gases and vapors; Type C supplied-air respirators, demand and pressure-demand classes; test requirements.

(a) The completely assembled respirator will be worn in a chamber containing 0.1 ±0.025 percent isoamyl acetate vapor. The test will be repeated with the maximum rate of flow attainable within specified operating pressures.

(b) The test will be conducted at the minimum pressure with the maximum hose length and will be repeated at the maximum pressure with the minimum hose length.

TABLE TO SUBPART J OF PART 84

Table 8—Air-supply-line requirements and tests

<table>
<thead>
<tr>
<th>Specific requirements</th>
<th>Requirements for the air-supply lines of the indicated type of supplied-air respirators</th>
</tr>
</thead>
<tbody>
<tr>
<td>Length of hose</td>
<td>Type A: Maximum of 91 m. (300 feet), in multiples of 7.6 m. (25 feet). Type B: Maximum of 23 m. (75 feet), in multiples of 7.6 m. (25 feet). Type C: Maximum of 91 m. (300 feet) in multiples of 7.6 m. (25 feet). It will be permissible for the applicant to supply hose of the approved type of shorter length than 7.6 m. (25 feet) provided it meets the requirements of the part.</td>
</tr>
<tr>
<td>Air flow</td>
<td>Type A: None. Type B: None. Type C: The air-supply hose, detachable coupling, and demand valve of the demand class or pressure-demand valve of the pressure-demand class for Type C supplied-air respirators, demand and pressure-demand classes, shall be capable of delivering respirable air at a rate of not less than 115 liters (4 cubic feet) per minute to tight-fitting and 170 liters (6 cubic feet) per minute to loose-fitting respiratory-inlet coverings through the maximum length of hose for which approval is granted and at the minimum specified air-supply pressure. The maximum flow shall not exceed 425 liters (15 cubic feet) per minute at the maximum specified air-supply pressure with the minimum length of hose for which approval is granted.</td>
</tr>
<tr>
<td>Air flow</td>
<td>Type A: None. Type B: None. Type C: The air-supply hose with air regulating valve or orifice shall permit a flow of not less than 115 liters (4 cubic feet) per minute to tight-fitting and 170 liters (6 cubic feet) per minute to loose-fitting respiratory-inlet coverings through the maximum length of hose for which approval is granted and at the minimum specified air-supply pressure. The maximum flow shall not exceed 425 liters (15 cubic feet) per minute at the maximum specified air-supply pressure with the minimum length of hose for which approval is granted.</td>
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</tbody>
</table>