§ 84.119 Facepieces; eyepieces; minimum requirements.

(a) Full facepieces shall be designed and constructed to provide adequate vision which is not distorted by the eye.

(b) All eyepieces shall be designed and constructed to be impact and penetration resistant. Federal Specification, Mask, Air Line; and Respirator, Air Filtering, Industrial, GGG-M-125d, October 11, 1965 with interim amendment-1, July 30, 1969, is an example of an appropriate standard for determining impact and penetration resistance. Copies of GGG-M-125d may be obtained from the NIOSH, Certification and Quality Assurance Branch, 1095 Willowdale Road, Morgantown, WV 26505–2888.

§ 84.120 Inhalation and exhalation valves; minimum requirements.

(a) Inhalation and exhalation valves shall be provided where necessary and protected against damage and distortion.

(b) Inhalation valves shall be designed and constructed to prevent excessive exhaled air from adversely affecting cartridges, canisters, and filters.

(c) Exhalation valves shall be protected against external influence, and designed and constructed to prevent inward leakage of contaminated air.

§ 84.121 Head harnesses; minimum requirements.

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

§ 84.122 Breathing resistance test; minimum requirements.

(a) Resistance to airflow will be measured in the facepiece or mouthpiece of a gas mask mounted on a breathing machine both before and after each test conducted in accordance with §§ 84.124, 84.125, and 84.126, with air flowing at a continuous rate of 65 liters per minute.

(b) The maximum allowable resistance requirements for gas masks are as follows:

<table>
<thead>
<tr>
<th>Type of mask</th>
<th>Inhalation</th>
<th>Exhalation</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Initial</td>
<td>Final 1</td>
</tr>
<tr>
<td>Front-mounted or back-mounted (without particulate filter)</td>
<td>60</td>
<td>75</td>
</tr>
<tr>
<td>Front-mounted or back-mounted (with approved particulate filter)</td>
<td>70</td>
<td>85</td>
</tr>
<tr>
<td>Chin-style (without particulate filter)</td>
<td>40</td>
<td>55</td>
</tr>
<tr>
<td>Chin-style (with approved particulate filter)</td>
<td>65</td>
<td>80</td>
</tr>
<tr>
<td>Escape (without particulate filter)</td>
<td>60</td>
<td>75</td>
</tr>
<tr>
<td>Escape (with approved particulate filter)</td>
<td>70</td>
<td>85</td>
</tr>
</tbody>
</table>

1 Measured at end of the service life specified in Tables 5, 6, and 7 of this subpart.

§ 84.123 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.

§ 84.124 Facepiece tests; minimum requirements.

(a) The complete gas mask will be fitted to the faces of persons having varying facial shapes and sizes.

(b) Where the applicant specifies a facepiece size or sizes for the gas mask, together with the approximate measurements of faces they are designed to fit, the Institute will insure that test
§ 84.125 Particulate tests; canisters containing particulate filters; minimum requirements.

Gas mask canisters containing filters for protection against particulates (e.g., dusts, fumes, mists, and smokes) in combination with gases, vapors, or gases and vapors, shall also comply with the requirements as prescribed in §§84.170 through 84.183, except for the airflow resistance test of §84.181.

§ 84.126 Canister bench tests; minimum requirements.

(a)(1) Bench tests, except for carbon monoxide tests, will be made on an apparatus that allows the test atmosphere at 50 ±5 percent relative humidity and room temperature (25 ±2.5 °C.) to enter the canister continuously at concentrations and rates of flow specified in Tables 5, 6, and 7 of this subpart.

(b) Front-mounted and back-mounted gas mask canisters will be tested and shall meet the minimum requirements set forth in Table 5 of this subpart.

(c)(1) Front-mounted, and back-mounted, and chin-style canisters designated as providing respiratory protection against gases, ammonia, organic vapors, carbon monoxide and particulate contaminants shall have a window or other indicator to warn the gas mask wearer when the canister will no longer satisfactorily remove carbon monoxide from the inhaled air.

(d) Escape gas mask canisters shall meet the minimum requirements set forth in Table 6 of this subpart.

(e) Escape gas mask canisters shall meet the minimum requirements set forth in Table 7 of this subpart.