



Federal Register

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Part II

Department of Labor

**Occupational Safety and Health
Administration**

**29 CFR Parts 1910, 1915, and 1926
Assigned Protection Factors; Final Rule**

PART 1910—[AMENDED]

Subpart I—[Amended]

1. Revise the authority citation for subpart I of part 1910 to read as follows:

Authority: Sections 4, 6, and 8 of the Occupational Safety and Health Act of 1970 (29 U.S.C. 653, 655, and 657); and Secretary of Labor's Order No. 12-71 (36 FR 8754), 8-76 (41 FR 25059), 9-83 (48 FR 35736), 1-90 (55 FR 9033), 6-96 (62 FR 111), 3-2000 (62 FR 50017), or 5-2002 (67 FR 65008), as applicable.

Sections 1910.132, 1910.134, and 1910.138 of 29 CFR also issued under 29 CFR part 1911.

Sections 1910.133, 1910.135, and 1910.136 of 29 CFR also issued under 29 CFR part 1911 and 5 U.S.C. 553.

2. Amend § 1910.134 as follows:

- a. Add the text of the definitions for "Assigned protection factor (APF)" and "Maximum use concentration (MUC)" to paragraph (b);

- b. Add the text of paragraphs (d)(3)(i)(A), including Table 1, and (d)(3)(i)(B); and

- c. Revise paragraph (n).

The added and revised text reads as follows:

§ 1910.134 Respiratory protection.

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(b) * * *

Assigned protection factor (APF) means the workplace level of respiratory protection that a respirator or class of respirators is expected to provide to employees when the employer implements a continuing, effective respiratory protection program as specified by this section.

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Maximum use concentration (MUC) means the maximum atmospheric concentration of a hazardous substance from which an employee can be expected to be protected when wearing a respirator, and is determined by the assigned protection factor of the respirator or class of respirators and the exposure limit of the hazardous substance. The MUC can be determined mathematically by multiplying the assigned protection factor specified for a respirator by the required OSHA permissible exposure limit, short-term exposure limit, or ceiling limit. When no OSHA exposure limit is available for a hazardous substance, an employer must determine an MUC on the basis of relevant available information and informed professional judgment.

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(d) * * *

(3) * * *

(i) * * *

(A) *Assigned Protection Factors (APFs)*. Employers must use the assigned protection factors listed in Table 1 to select a respirator that meets or exceeds the required level of employee protection. When using a combination respirator (e.g., airline respirators with an air-purifying filter), employers must ensure that the assigned protection factor is appropriate to the mode of operation in which the respirator is being used.

TABLE 1.—ASSIGNED PROTECTION FACTORS ⁵					
Type of respirator ^{1,2}	Quarter mask	Half mask	Full face-piece	Helmet/hood	Loose-fitting facepiece
1. Air-Purifying Respirator	5	³ 10	50		
2. Powered Air-Purifying Respirator (PAPR)		50	1,000	⁴ 25/1,000	25
3. Supplied-Air Respirator (SAR) or Airline Respirator					
• Demand mode		10	50		
• Continuous flow mode		50	1,000	⁴ 25/1,000	25
• Pressure-demand or other positive-pressure mode		50	1,000		
4. Self-Contained Breathing Apparatus (SCBA)					
• Demand mode		10	50	50	
• Pressure-demand or other positive-pressure mode (e.g., open/closed circuit)			10,000	10,000	

Notes:

¹ Employers may select respirators assigned for use in higher workplace concentrations of a hazardous substance for use at lower concentrations of that substance, or when required respirator use is independent of concentration.

² The assigned protection factors in Table 1 are only effective when the employer implements a continuing, effective respirator program as required by this section (29 CFR 1910.134), including training, fit testing, maintenance, and use requirements.

³ This APF category includes filtering facepieces, and half masks with elastomeric facepieces.

⁴ The employer must have evidence provided by the respirator manufacturer that testing of these respirators demonstrates performance at a level of protection of 1,000 or greater to receive an APF of 1,000. This level of performance can best be demonstrated by performing a WPF or SWPF study or equivalent testing. Absent such testing, all other PAPRs and SARs with helmets/hoods are to be treated as loose-fitting facepiece respirators, and receive an APF of 25.

⁵ These APFs do not apply to respirators used solely for escape. For escape respirators used in association with specific substances covered by 29 CFR 1910 subpart Z, employers must refer to the appropriate substance-specific standards in that subpart. Escape respirators for other IDLH atmospheres are specified by 29 CFR 1910.134 (d)(2)(ii).

(B) *Maximum Use Concentration (MUC)*. (1) The employer must select a respirator for employee use that maintains the employee's exposure to the hazardous substance, when measured outside the respirator, at or below the MUC.

(2) Employers must not apply MUCs to conditions that are immediately dangerous to life or health (IDLH); instead, they must use respirators listed for IDLH conditions in paragraph (d)(2) of this standard.

(3) When the calculated MUC exceeds the IDLH level for a hazardous substance, or the performance limits of the cartridge or canister, then employers must set the maximum MUC at that lower limit.

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(n) *Effective date*. Paragraphs (d)(3)(i)(A) and (d)(3)(i)(B) of this section become effective November 22, 2006.

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