



# Bullard Product Assigned Protection Factors

	Bullard Product	Respirator Type	NIOSH TC#	APF	3rd Party Validation
<b>Supplied Air Respirators</b>	Lancer	Supplied Air Respirator with Loose Fitting Helmet	19C-309	1,000	Caldwell Study 1994
	77 Series	Supplied Air Respirator with Loose Fitting Helmet	19C-84	1,000	LLNL Study 1995
	88 Series	Supplied Air Respirator with Loose Fitting Helmet	19C-293	1,000	LLNL Study 1995
	CC20 Series*	Supplied Air Respirator with Loose Fitting Hood	19C-154	1,000	ORC Study 1997
	RT Series	Supplied Air Respirator with Loose Fitting Hood	19C-412	1,000	RDECOM Study 2004, 2009
	PC/CS90 Series	Supplied Air Respirator with Loose Fitting Hood & Containment Suit	19C-280	1,000	Caldwell Study 1994
	FAMB	Supplied Air Respirator with Full Face Mask	19C-155 19C-315	50	OSHA 29 CFR 1910.134 Table 1
	Spectrum	Supplied Air Respirator with Full Face Mask	19C-321 19C-322	1,000	OSHA 29 CFR 1910.134 Table 1

	Bullard Product	Respirator Type	NIOSH TC#	APF	3rd Party Validation
<b>Powered Air Purifying Respirators (PAPRs)</b>	PA30 with CC20 Series*	PAPR with Loose Fitting Hood	21C-0773 23C-2236 23C-2237	1,000	RDECOM Study 2003
	PA30 with RT Series	PAPR with Loose Fitting Hood	21C-0773 23C-2236 23C-2237	1,000	RDECOM Study 2004, 2009
	PA30IS with CC20 Series*	PAPR with Loose Fitting Hood	21C-0796 23C-2306 23C-2307	1,000	RDECOM Study 2006, 2009
	PA30IS with RT Series	PAPR with Loose Fitting Hood	21C-0796 23C-2306 23C-2307	1,000	RDECOM Study 2006, 2009
	EVA with CC20 Series*	PAPR with Loose Fitting Hood	21C-0836	1,000	RDECOM Study 2009
	EVA with RT Series	PAPR with Loose Fitting Hood	21C-0836	1,000	RDECOM Study 2009
	EVA with Spectrum Mask	PAPR with Full Face Mask	Pending	1,000	OSHA 29 CFR 1910.134 Table 1
	PA40 with Spectrum Mask	PAPR with Full Face Mask	21C-0774 21C-0837	1,000	OSHA 29 CFR 1910.134 Table 1

\*Inner bib models



TABLE 1.—ASSIGNED PROTECTION FACTORS <sup>5</sup>

Type of respirator <sup>1,2</sup>	Quarter mask	Half mask	Full face-piece	Helmet/hood	Loose-fitting facepiece
1. Air-Purifying Respirator .....	5	<sup>3</sup> 10	50	.....	.....
2. Powered Air-Purifying Respirator (PAPR) .....	.....	50	1,000	<sup>4</sup> 25/1,000	25
3. Supplied-Air Respirator (SAR) or Airline Respirator					
• Demand mode .....	.....	10	50	.....	.....
• Continuous flow mode .....	.....	50	1,000	<sup>4</sup> 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:**

<sup>1</sup> 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.

<sup>2</sup> 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.

<sup>3</sup> This APF category includes filtering facepieces, and half masks with elastomeric facepieces.

<sup>4</sup> 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.

<sup>5</sup> 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).

Employers select respirators by comparing the exposure level found in the workplace and the maximum concentration of the contaminant in which a particular type of respirator can be used (the Maximum Use Concentration or MUC). Employers generally determine the MUC by multiplying the respirator's Assigned Protection Factor (APF) by the contaminant's exposure limit (PEL). If the workplace level of the contaminant is expected to exceed the respirator's MUC, the employer must choose a respirator with a higher APF. This can be determined with the following equation:  $PEL \times APF = MUC$ . The numbers listed on this chart are the numbers that OSHA enforces to the best of our knowledge. For this reason, be sure to consult regulatory standards and/or your local OSHA representative. The Assigned Protection Factors herein do not constitute a recommendation by Bullard for the use of any respirator herein for any hazard.