



# TAKE ADVANTAGE OF COMPREHENSIVE PROTECTION & EXCEPTIONAL PERFORMANCE.

## WHAT APFs DO NOT ACCOUNT FOR

It's a common misconception that hexavalent chromium produced by industrial welding requires protective equipment with an Assigned Protection Factor (APF) 1000 rating. However, examination of the hazards within your environment will reveal the actual APF rating appropriate for your environment and the ideal equipment for your team.

## APF 25 SUITED FOR INDUSTRIAL WELDING

Considerations:

- 1 OSHA's Permissible Exposure Limit (PEL) for Cr(VI) is 5 µg/m<sup>3</sup> as an 8-hour time-weighted average.
- 2 With an APF 25, the PureFlo 3000 provides adequate protection for:
  - up to 12.5 mg/m<sup>3</sup> but not beyond it for hexavalent chromium
  - up to 375 mg/m<sup>3</sup>, but not beyond for manganese



PureFlo 3000

## DESIGN DISCREPANCIES OF APF RATINGS

Without full consideration of these factors, PAPRs that offer just as much protection, along with potentially better flexibility, are often discounted as viable solutions in many industries. OSHA categorizes PAPRs into two main types:

- 1 "Tight-fitting" facepiece, designed to provide a tight seal with the face
- 2 "Loose-fitting" facepiece, designed to provide a loose fit around the face providing positive air flow

RESPIRATOR DESCRIPTION	APF RATING
With a neck cape that <b>HAS</b> a drawstring that can be cinched up	<b>1000 APF</b> ; but still considered a "loose-fitting" facepiece
With an elastic faceseal that <b>DOES NOT HAVE</b> a drawstring that can be cinched up	<b>25 APF</b> ; considered a "loose-fitting" facepiece



## HOW THE NUMBERS ARE DETERMINED

Most industries and applications where a PAPR is warranted do not expose their employees to hazardous substances in large enough volume to require more than an APF of 25, even in applications such as industrial welding.

### NIOSH Respirator Recommendations for Hexavalent Chromium

Up to 2.5 mg/m <sup>3</sup>	Up to 5 mg/m <sup>3</sup>	Up to 12.5 mg/m <sup>3</sup>	Up to 25 mg/m <sup>3</sup>	Up to 250 mg/m <sup>3</sup>
<b>(APF = 5)</b> Any quarter-mask respirator	<b>(APF = 10)</b> Any particulate respirator equipped with an N95, R95, or P95 filter (including N95, R95, and P95 filtering facepieces) except quarter-mask respirators	<b>(APF = 25)</b> Any supplied-air respirator operated in a continuous-flow mode	<b>(APF = 50)</b> Any air-purifying, full-facepiece respirator with an N100, R100, or P100 filter	<b>(APF = 2000)</b> Any supplied-air respirator that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode
	<b>(APF = 10)</b> Any supplied-air respirator	<b>(APF = 25)</b> Any powered, air-purifying respirator with a high-efficiency particulate filter	<b>(APF = 50)</b> Any powered, air-purifying respirator with a tight-fitting facepiece and a high-efficiency particulate filter	
<div style="border: 1px solid #ccc; padding: 10px; display: inline-block;"> <b>COVERAGE FOR UP TO APF 25</b> </div>			<b>(APF = 50)</b> Any self-contained breathing apparatus with a full facepiece	
			<b>(APF = 50)</b> Any supplied-air respirator with a full facepiece	

### OSHA Respirator Recommendations for Manganese

Up to 150 mg/m <sup>3</sup>	Up to 375 mg/m <sup>3</sup>	Up to 750 mg/m <sup>3</sup>	Emergency or planned entry into unknown concentrations or IDLH conditions
<b>(APF = 5)</b> Any particulate respirator equipped with an N95, R95, or P95 filter (including N95, R95, and P95 filtering facepieces) except quarter-mask respirators	<b>(APF = 25)</b> Any supplied-air respirator operated in a continuous-flow mode	<b>(APF = 50)</b> Any air-purifying, full-facepiece respirator with an N100, R100, or P100 filter	<b>(APF = 10,000)</b> Any self-contained breathing apparatus that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode
<b>(APF = 10)</b> Any supplied-air respirator	<b>(APF = 25)</b> Any powered, air-purifying respirator with a high-efficiency particulate filter	<b>(APF = 50)</b> Any powered, air-purifying respirator with a tight-fitting facepiece and a high-efficiency particulate filter	<b>(APF = 10,000)</b> Any supplied-air respirator that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode in combination with an auxiliary self-contained positive-pressure breathing apparatus
<div style="border: 1px solid #ccc; padding: 10px; display: inline-block;"> <b>COVERAGE FOR UP TO APF 25</b> </div>			<b>(APF = 50)</b> Any self-contained breathing apparatus with a full facepiece
			<b>(APF = 50)</b> Any supplied-air respirator with a full facepiece



## WHY PAPRs COULD BE BETTER OPTIONS



### 1 Respirator Training Programs

While APFs are a very important part of protecting workers, if a company has not established a comprehensive program for training and maintenance, the effectiveness of any respirator may be compromised.



### 2 Overall Hazard Protection

If a company selects its respirators on APF alone, it may be limiting the overall environmental protection it can offer its workers, sacrificing the comfort and ease-of-use that leads to better compliance.



### 3 Respirator Fit Factor (FF)

If your organization can demonstrate an FF much higher than the APF, then you can be sure about achieving the required APF in the actual workplace.



PureFlo 3000



PureFlo ESM+

## SHORE UP YOUR ORGANIZATION'S SAFETY

Safeguard your team with purchase decisions that are inclusive of all relevant factors, not just APF ratings. Educate your team, dispelling the myth of the all-encompassing APF rating and identify integrated, comfortable respiratory, head, face and eye protection that enhances workplace performance with PureFlo.

Visit [Gentexcorp.com/PureFlo](https://www.gentexcorp.com/PureFlo) to find the PAPRs right for your team.

© 2020 Gentex Corporation. The PF Pureflo Logo and PureFlo are registered trademarks of Gentex Corporation or its affiliates.