

# Respiratory Protection for Wildfire Smoke Inhalation - Oregon

Oregon Occupational Safety and Health Administration (OSHA) has adopted two new permanent rules (OAR 437-002-1081 and OAR 437-004-9791) requiring employers to provide respiratory protection for voluntary use to employees who are exposed to wildfire smoke where the Air Quality Index (AQI) exceeds 101, and for required use when the AQI is at or above 251. These rules are effective as of July 1st, 2022. This rule does not apply to short term exposures of less than 15 minutes in an hour or less than 1 hour in a 24 hour time period.

## Where can I find AQI information?

The United States AirNow system contains current AQI data, which includes a clickable map for area-specific AQIs. Local resources such as the [Oregon Smoke Information](#) blog, Oregon Department of Environmental Quality's air quality website, local air pollution control district websites, or local air quality management district websites may also be helpful. A direct reading particulate monitor may also be used to determine the AQI.

## What does it mean for you?

### When the AQI exceeds 101, but is below 251:

According to these new rules, which are enforced by Oregon OSHA, employers must have an adequate supply of National Institute for Occupational Safety and Health (NIOSH) approved filtering facepiece respirators available to exposed workers for voluntary use. In addition to providing NIOSH approved filtering facepiece respirators for voluntary use, employers must also monitor air quality, provide training to employees, and implement engineering and administrative controls when feasible.

### When the AQI reaches levels between 251 and 500:

Employers must ensure workers wear NIOSH approved filtering facepiece respirators when the AQI is at or above 251, even after engineering and administrative controls are implemented. The employer shall provide filtering facepiece respirators, and employee use is mandatory in accordance with Appendix A in OAR 437-002-1081 and OAR 437-004-9791. A Wildfire Smoke Respiratory Protection Program as described in Appendix A does not require medical evaluations or fit testing of respirator users. This exemption to the 1910.134 Respiratory Protection Program requirement is only for when the AQI is less than 501, and only when filtering facepiece respirators are used. Employers must also monitor air quality, provide training to employees, and implement engineering and administrative controls when feasible.

### When the AQI reaches levels at or above 501:

Employers must ensure workers wear NIOSH approved respirators. The employer shall provide respirators, and employee use is mandatory. A Respiratory Protection Program in accordance with 1910.134 is required for any type of respirator use.

## What is PM<sub>2.5</sub>?

PM<sub>2.5</sub> means particulate matter measuring 2.5 microns or less across. A micron is a very small unit of measure—one millionth of a meter.

- These particles are so small that they cannot be seen by the human eye.
- Particles this small can be easily inhaled and travel deep into the respiratory tract and have been associated with a variety of short-term and long-term health conditions.

Source: [United States Environmental Protection Agency](#)

## AQI Categories for PM<sub>2.5</sub>

Air Quality Index	Level of Health Concern
0 to 50	Good
51 to 100	Moderate
101 to 150	Unhealthy for Sensitive Groups
151 to 200	Unhealthy
201 to 300	Very Unhealthy
301 to 500	Hazardous

Source: <https://www.airnow.gov/aqi/aqi-basics/>

### AQI 101-250

Voluntary use of NIOSH approved filtering facepiece respirators.

### AQI 251-500

Mandatory use of NIOSH approved filtering facepiece respirators in accordance with a Wildfire Smoke Respiratory Protection Program.

### AQI ≥ 501

Mandatory use of NIOSH approved respirators in accordance with a Respiratory Protection Program under 1910.134.

<sup>1</sup>Respirators help protect against certain airborne contaminants. Before use, the wearer must read and understand the User Instructions provided as a part of the product packaging. Follow all local regulations. In the U.S., a written respiratory protection program must be implemented meeting all the requirements of OSHA 29 CFR 1910.134 including training, fit testing, and medical evaluation. Misuse may result in sickness or death. For correct use, consult supervisor and User Instructions, or call 3M Personal Safety Division Technical Service at 1-800-243-4630.

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## Why is this important? What risks are associated with inhaling wildfire smoke?

Although there can be many hazardous chemicals and other constituents in wildfire smoke, one of the most significant pollutants for people who are not very close to the fire is “particulate matter,” the tiny particles suspended in the air. According to the [United States Environmental Protection Agency](#), PM<sub>2.5</sub> can be easily, and often unknowingly, inhaled—and due to the small particle size, it can travel deep into the respiratory tract, potentially irritating the lungs and being accompanied by persistent coughing, wheezing, or difficulty breathing. These small particles can also enter the bloodstream from the lungs and have been associated with more serious long-term health problems such as reduced lung function, bronchitis, worsening of asthma, heart failure, and early death.

## What about employees in states other than Oregon?

Although this regulation applies to Oregon, employers in other states may choose to use this standard as a “best practice” and decide to help protect their employees similarly. Employers should follow the United States Occupational Safety and Health Administration (OSHA) [Respiratory Protection Standard 29 CFR 1910.134](#), or the Respiratory Protection standard in their state.

## How 3M can help?

3M has a variety of NIOSH-approved N95 filtering facepieces that can be used to help comply with this new regulation.



### 3M™ Aura™ Particulate Respirator 9205+

Three-panel, flat-fold disposable respirator designed to help provide comfortable, reliable worker protection against non-oil based particles.

3M ID 7100232940  
UPC 638060430613



### 3M™ Particulate Respirator 8200

Designed to help provide reliable worker respiratory protection against certain non oil based particles.

3M ID 7000052787  
UPC 50051131070238



### 3M™ Particulate Respirator 8577

Helps provide respiratory protection against certain oil and non oil based particles.

3M ID 7000002062  
UPC 50051138543711



### 3M™ Particulate Respirator 8511

Premium protection with comfort and protection combined. Manufactured with 3M™ Cool Flow™ Exhalation Valve to help reduce heat buildup inside the respirator.

3M ID 7000002056  
UPC 50051138543438

## Other 3M Resources

### Center for Respiratory Protection Program

If you are implementing a respiratory protection program for the first time, or would like more information on programs, consider visiting [3M's Center for Respiratory Protection](#) for a step-by-step guide.

### Medical Evaluations

The [3M™ Online Respirator Medical Evaluation](#) provides immediate medical evaluation of respirator wearers for compliance with OSHA's Respiratory Protection Standard 29 CFR 1910.134. It can be used for all brands of respirators and is available in English and Spanish.

### Fit Testing

3M™ Qualitative Fit Test kits are designed to help your organization meet respirator fit testing requirements. The kits can be used to check face-to-respirator seal on any particulate respirator or gas/vapor respirator with a particulate prefilter. A free instructional video on [Qualitative Fit Testing](#) using saccharin and Bitrex™ can be found on our [YouTube channel](#).

### 3M™ Qualitative Fit Test Apparatus, Sweet FT-10

Uses a test solution of sodium saccharin that produces a sweet-tasting aerosol.

3M ID 70-0701-2151-5  
UPC 00051138163587

### 3M™ Qualitative Fit Test Apparatus, Bitter FT-30

Uses a test solution of denatonium benzoate to produce a very bitter taste.

3M ID 70-0707-0964-0  
UPC 00051138542030

For more information, please consult the [3M Personal Safety Division's wildfire resource webpage](#).