Implementing a Respiratory Protection Program

The Respiratory Protection Brand®

Implementing a Respiratory Protection Program

Respiratory protection is crucial in creating safe, comfortable, and legally abiding industrial workplaces. Those that fail to provide adequate protection place their workers' health at risk and can face extensive citations to their business. This document will give an overview of the industries we service through standards Occupational Safety & Health Administration (OSHA) implement, the hazards associated in those work environments, the financial implications of not having a respiratory protection program, steps to create a program and the products we offer that comply with these standards.

The primary objective of the respiratory protection program according to OSHA, is to prevent exposure to air contaminated with harmful dusts, fogs, fumes, mists, gases, smokes, vapors, or sprays, in order to prevent occupational illness. In understanding what your respiratory protection program requires it is important to examine the standards that OSHA has created. In all cases engineering controls are the first measure that should be taken to mitigate the exposure risk, such as installation of ventilation and extraction units. When these are unable to sufficiently reduce the risk or are not feasible, administrative measures should be implemented to reduce the exposure risk, such as rotating shifts and increasing break times. Although these measures help to reduce the exposure this is not always sufficient and places industrial workers in dangerous environments. In these instances, respiratory protection is required.

Standards for Each Industry

Fabrication

The protection required is varied due to the range of different tasks and applications of welding and grinding. OSHA requires operators to have helmets and hand shields to protect the face, neck, and ears from radiant heat. Employees need to wear respirators whenever engineering and work practice control measures are not adequate to prevent atmospheric contamination at the worksite. When sufficient ventilation cannot be obtained in confined spaces, employees need to be protected by supplied air respirators. For shade lens numbers for specific applications, refer to OSHA Welding Fact Sheet.

Painting

OSHA states that all exposed parts must be protected with appropriate protective suits and gloves. Eyes and face also must be covered. As painting applications vary, and environments play a role in the severity of the hazards, there is no blanket rule that covers all applications. OSHA requires operators to wear respirators when working with paints and coatings that are mixed, or dissolved in volatile, toxic, or flammable solvents. Supplied airline respirators must be worn when working in confined spaces or compartments where there is spraying operations with paints mixed with toxic vehicles or solvents. The breathing air must meet human consumption requirements of grade D as described in ANSI/Compressed Gas Association Commodity Specification for Air, G-7.1-1989.

For chemical handling refer to OSHA documentation for chemical specific requirements. The same measures are required for protection of exposed body parts.

Abrasive blasting

OSHA states that operators must only use respirators that have National Institute for Occupational Safety and Health (NIOSH) certification. This must be a positive pressure blasting helmet, with supplied air. The respirator must also cover the wearers head, neck, and shoulders.

In conjunction with this respiratory protection equipment, the user must also have hearing protection, leather gloves and steel cap safety shoes/boots.

Every employer is required to provide their employees with the appropriate respiratory protection and PPE for their role. When implementing and maintaining a respiratory protection program, this must align and be up to date with the current OSHA standards.

Creating a Respiratory Protection Program

The responsibility of the program sits with the program administrator. Some larger companies will have in-house medical departments, industrial hygienists, and safety engineers, these people should liaise with the program administrator. For smaller businesses, personnel such as the foreman is required to implement the program. Whoever is placed in charge needs to be knowledgeable with the respirators for this to be effective. Both employees and employers require training for respirator use, inspections, cleaning, and maintenance and identifying hazards in their environment.

According to OSHA, an effective program should include:

- Written worksite specific procedures
- Program evaluation
- Selection of an appropriate respirator approved by the National Institute for Occupational Safety and Health (NIOSH)
- Training
- Fit testing
- Inspection, cleaning, maintenance, and storage
- Medical evaluations
- Work area surveillance
- Air quality standards.

Each of these elements need written operating procedures to ensure the respirators are being used correctly. Employees need to understand how they work and the limitations of the products they are using.

Consequences of Failing to Provide and Implement a Respiratory Protection Program

OSHA govern the application of these programs through site visits and inspections. Workplaces that fail to adhere to these standards face the following citation amounts.

- **Serious:** $13,484 per violation
- **Other-Than-Serious** (direct correlation to job safety and health, but not serious in nature): maximum penalty of $13,494 per violation.
- **Failure to abate:** $13,494 per day beyond abatement date
- **Willful or repeated:** $134,937 per violation.

Products Available

There is an extensive range of respirators on the market that provide either tight-fitting negative pressure respiratory protection, or loose-fitting positive pressure respiratory protection. The limitations with tight-fitting respirators is they require fit testing and pulmonary functioning tests each year for the users which comes at a significant cost. Operators with underlying respiratory issues cannot use these and any facial hair present renders these ineffective.

On the other hand, loose-fitting respirators do not require fit testing as they are positive pressure, which prevents ambient air from entering the respirator. This means users can breathe as they normally would and removes the need for pulmonary function tests allowing those with breathing difficulties to use these. Loose-fitting respirators can also accommodate facial hair, piercings, prescription lens glasses and weight gain/loss without compromising their safety.

The RPB® range for fabrication, blasting and painting, all offer loose-fitting respirators with positive air pressure supply.

Respirators for Fabrication:


Z-Link®


Z-Link+®


Z4®


Z3™

Respirators for Blasting:


Nova 2000®


Nova 3®

Respirators for Painting:


Z-Link®


T-Link®


T100™ Series

Refer to our website **www.rpbsafety.com/industrial/respirators** for more in-depth product information.

For further information from OSHA on standards and respiratory protection programs, visit their website.

Sources:

NIOSH. (2018, October 18). NIOSH Pocket Guide to Chemical Hazards. Retrieved from Centers for Disease Control and Prevention: https://www.cdc.gov/niosh/npg/nengapdxe.html

OSHA. (2002). Respiratory Protection. Retrieved from Occupational Safety & Health Administration: https://www.osha.gov/Publications/OSHA3079/osha3079.html

OSHA. (2012, January). Eye Protection against Radiant Energy During Welding and Cutting in Shipyard Employment. Retrieved from OSHA Fact Sheet: https://www.osha.gov/Publications/OSHAfactsheet-eyeprotection-during-welding.html

OSHA. (2013, March). Controlling Hazardous Fume and Gases during Welding. Retrieved from OSHA FACT SHEET: https://www.osha.gov/Publications/OSHA_FS-3647_Welding.pdf

OSHA. (2014, September). Protecting Workers from the Hazards of Abrasive Blasting Materials. Retrieved from OSHA Fact Sheet: https://www.osha.gov/Publications/OSHA3697.pdf

Want to know more?
Contact us

Visit rpbsafety.com
or call us toll-free at 1-866-494-4599

Request a quote **rpbsafety.com/request-a-quote**
Start your 30 day trial **rpbsafety.com/buy-to-try**

Protecting you for life's best moments.

rpb