Berkshire Hathaway HOMESTATE COMPANIES

Respiratory Protection Overview

Respirators fall into two broad categories: Air-Supplying, and Air-Purifying.

Air-Supplying respirators are typically used in oxygen deficient atmospheres. Air-Purifying respirators are used in atmospheres with sufficient oxygen to remove hazardous substances from the air. They work by using a cartridge to remove enough of the hazardous substance from the air to bring it below the Permissible Exposure Limit (PEL). The PEL is the maximum level of a hazardous substance that a person can be exposed to over an 8-hour shift without suffering adverse health effects. Cal/OSHA publishes a list of hazardous substances and acceptable PEL's. PEL's can be obtained from a substance's Safety Data Sheet (SDS).

When selecting an Air-Purifying respirator, the user will need to know the type of substance present and the concentration of the substance in the air. Masks are provided with an Assigned Protection Factor (APF). This is the level of protection that a respirator is expected to provide when properly used. For example, a half-mask respirator has an APF of 10, which means it is capable of supplying clean air to the user in a work environment that has up to 10 times the PEL of a hazardous substance. It is also important to use the correct type of filter. Using a filter for particulates will not protect the user from vapors. Filter cartridges indicate the type of contaminant that they filter and are also commonly color-coded. Some filter types and typical colors are listed below.

- Organic Vapors – Black
- Organic Vapor/Acid Gasses – Blue
- Multi-Gas/Vapor - Olive
- Acid Gasses – White
- Particulates – Purple

Particulate filters are broken down into the following three series:

- N – for use in environments free of oil mists.
- R – can be exposed to oil mists, but only should be worn for one shift.
- P – can be exposed to oil mists for longer than one shift.

Particulate filters are also assigned a minimum efficiency number (95, 99, 100).For example, an N-95 respirator filters at least 95% of airborne particles, but is not oil resistant.

Filter cartridges need to be replaced at intervals indicated by the manufacturer to ensure their effectiveness. This is typically indicated in hours of use. Some respirators will have an end of life service indicator on them, which is visual identifier of when the filter cartridge is no longer effective and requires replacement.

If employees are required to wear an air-purifying respirator, they will be required to participate in a Respiratory Protection Program, which includes medical screening, respirator fit testing, and documented training on the use, care, and storage of the assigned respirator.

Please contact the Loss Control team at:
losscontrol@bhhc.com for any further questions.