

## **RESPIRATORY PROTECTION**

Respirators are a type of personal protective equipment used to provide protection against worker exposure to airborne substances. Respirators are devices worn over the mouth, nose and sometimes the eyes that help you breathe safely in a hazardous area. The best method of controlling exposures to airborne substances is to prevent the air from becoming contaminated in the first place. This should be accomplished as much as possible by engineering controls, such as local exhaust ventilation. When airborne exposures cannot be controlled, or while controls are being installed, appropriate respirators may be used.

The need for respiratory protection may exist in any line of work. It is the employer's responsibility to determine if the work you do should be performed while wearing a respirator. Your employer will provide you with the right respirator for your job. You should not use any other respiratory protective device at work without the full understanding and agreement of your employer. Before a worker may use a respirator, he/she must be pass a medical evaluation, be trained in the use, maintenance, inspection, and care of the respirator, and be fit-tested.

There are three basic types of respirators.

1. Air-purifying respirator – these respirators remove air contaminants by filtering, absorbing, adsorbing, or chemical reaction with the contaminants as they pass through the respirator cartridge. This respirator is to be used only where adequate oxygen (19.5 to 23.5 percent) is available.
2. Supplied-air respirator – these respirators provide breathing air separate from the environment. The breathing air is supplied to the respirator through an airline. This type of respirator is to be used when the hazardous substance has little odor, taste, warning properties, or when the substance is in such high concentration or toxicity, that an air-purifying respirator is inadequate to protect you.
3. Self-Contained Breathing Apparatus (SCBA) – this type of respirator allows the user complete independence from an airline and offers the greatest degree of protection. However, it is also the most complex type of respirator. Training and practice in its use and maintenance is essential.

The proper selection and use of respiratory protection is essential to controlling airborne exposures with respirators. A written respiratory protection program must be established and implemented. Prior to the use of respiratory protection, selection of the proper type of

respirator by the employer should be based on the following:

- Identify the substance or substances against which protection is necessary.
- Determine the hazards of each substance.
- Evaluate the conditions of exposure and the air concentrations of the substances.
- Verify that there is adequate oxygen in the air.
- Provide each employee who will be wearing a respirator with a medical evaluation prior to using a respirator.
- Fit the respirator carefully and instruct the worker in its use.
- Know the limitations of the respiratory protective device.

