Respiratory protective equipment

Respirators or dust masks, also known as respiratory protective equipment (RPE), should be worn in dusty conditions or where atmospheric contaminants present an inhalation risk. This would be the case when other control measures, such as exhaust ventilation, are not practical or not effective.

Respiratory protection is effective only if:

- the correct respirator is used,
- it's available when you need it,
- you know when and how to put it on and take it off, and you have stored it and kept it in working order in accordance with the manufacturer's instructions

All respirators require training to be properly used. Sometimes you can practice using your own respirator. Training must cover storage, maintenance and use of the respirator. This information is provided by the supplier of the respiratory protective equipment.

Some respirators require testing to ensure a tight fit to the face, and should not be used with facial hair.

If you do not use a respirator correctly, it is very likely that it will not protect you—and may even hurt you.

The choice of respiratory protective equipment should be included in the risk assessment documentation.

Respirator classes

There are different classes of filters. Choice of filter depends on the nature, toxicity, physical form and concentration of the contaminant. AS/NZS 1715 Selection, use and maintenance of respiratory protective equipment classifies filter types as follows:

1. Particulate Filters

Class P1 intended for use against mechanically generated particulates of sizes most commonly encountered in industry, e.g. asbestos, silica.

Class P2 intended for use against both mechanically and thermally generated particulates, e.g. metal fume.

Class P3 intended for use against all particulates containing highly toxic materials, e.g. beryllium

2. Filter Absorption

Class AUS low absorption capacity filters.

Class 1 low to medium absorption capacity filters.

Class 2 medium absorption capacity filters.

Class 3 high absorption capacity filters.

Gas/Vapour filters are produced specifically for use against various gases and vapours and are tested and marked accordingly (all as specified by the manufacturer). There are many different types:

Type A for use against certain organic gases and vapours.

Type AX for use against low boiling point organic compounds (less than 65ºC).

Type B for use against certain inorganic gases and other acid gases and vapours.

Type E for use against sulphur dioxide and other acid gases and vapours.

Type G for use against certain organic compounds with vapour pressures less than 1.3 Pa (0.01mmHg) at 25ºC. These filters have an integral particulate filter with an efficiency at least equivalent to that of a P1 filter.

Type Hg for use against metallic mercury.

Type K for use against ammonia and organic ammonia derivatives.

Type MB for use against methyl bromide

Type NO for use against oxides of nitrogen.

Resources

AS/NZS 1715 Selection, use and maintenance of respiratory protective equipment

AS/NZS 1716 Respiratory protective devices