PROTECT YOUR LUNGS WITH RESPIRATORY MASKS

Many of our indoor activities and hobbies involve a variety of materials and chemicals which can be harmful to our lungs. We can reduce our exposures in several ways, such as using latex paints instead of oil based products. Ensure adequate ventilation, and when possible, perform these chores outside. In addition to these measures, the use of a protective respiratory mask, available from most hardware or safety supply companies, can also be beneficial. You can purchase fully disposable masks, or re-usable elastomeric or silicone types where the filters and cartridges can be replaced. While full face-style respirators offer a higher level of respiratory protection when used with appropriate filters and/or cartridges, most homeowners will find half masks (covering mouth and nose) generally suitable. When purchasing a respirator, look for the NIOSH (National Institute for Occupational Safety and Health) approval label. While based in the United States, most regulatory agencies and manufacturers in Canada use NIOSH standards as the benchmark for respirators.

Filters remove particulates such as dusts, mists, fibres and fumes and come in a number of different styles. When dealing with gases and vapours, however, a cartridge is normally used. Manufacturers employ various techniques to capture the gas or vapour on the surface of the charcoal in the cartridge. There are some specialized types of disposable filters which are manufactured with a small amount of charcoal in the filter so that they can be used against low levels of gases and vapours as well as particulates. It is very important to identify the gas or vapour so that the correct respirator can be selected.

NIOSH approved filters, designed to remove particulates, carry a **N, R** or **P** rating followed by the number **95, 99** or **100**. (e.g. N95, N100, etc.) N type filters can be used where there are **no** oil aerosols present. R or P series can be used when oil aerosols **are** present. Refer to the manufacturer's instructions for further information. The number designation indicates the minimum efficiency that you can expect from the filter. Normally, the more important choice is the style of face piece. A full face respirator offers 5 to 10 times the level of respiratory protection vs. a half face mask. For most home applications a 95 series filter is acceptable.

Many common indoor hobby activities generate dusts, mists, fumes, gases and vapours. A **N95** filter is usually appropriate for dust caused by woodworking. An organic vapour cartridge with a **N95 pre-filter** would normally be used for mists and vapours generated from spray painting with oil base paints.

When working with herbicides and pesticides, an organic vapour cartridge with a P95 pre-filter is often quite acceptable. People who are highly sensitive to perfumes may find that a disposable style N, R or P95 half mask with organic vapour charcoal will provide relief. If a higher level of relief is required then a polymer or silicone half mask with full organic vapour cartridges would be the next step. When cleaning up small amounts of mould a **N95** will quite often be sufficient. In serious cases of mould growth indoors, however, consumers may be better advised to have the work done professionally.

For those wishing higher levels of comfort and airflow, there is the option of a battery powered air purifying respirator. This supplies a continuous flow of filtered air to the breathing zone reducing pulmonary stress, providing greater comfort and higher levels of respiratory protection.

Suppliers of paints and chemicals are required to provide Material Safety Data sheets (MSDS) providing details on the ingredients. Based on this information, many respirator manufacturers provide on-line technical service by phone and will assist consumers in the proper choice of respirators, filters, and cartridges. If MSDS information is incomplete, suppliers can still be asked for advice on what type of mask should be used. Respirators should always be fitted, used, and maintained in accordance with the manufacturer's instructions. If in doubt about what type to use in a specific application, check with a qualified person.

Thanks to 3M Canada for providing technical information on masks.