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RADON AND YOU

WHAT IS RADON AND WHY IS IT DANGEROUS?

Radon is a radioactive gas that has no taste, smell nor colour. It is formed when radium found in most soils and rocks, particularly granite, disintegrates radioactively.

As radon gas further decays, a series of tiny radioactive particles are formed. When either the gas or these particles are breathed into the lung, some is deposited and continues to emit radiation. People so affected will have a higher risk of lung cancer.

Exposure to a combination of tobacco smoke and high radon levels poses a serious health risk. A cigarette smoker runs three times more risk of getting lung cancer than non-smokers exposed to high radon levels.

HOW DOES RADON GET INDOORS?

Natural radon emitted from soil, rock or from building materials such as concrete made with granite may enter the basement, ground or upper floors of buildings from the walls and floors, or through cracks or openings in the ground. If a building is not well ventilated, radon gas will become trapped and accumulate.

HOW HIGH ARE INDOOR RADON LEVELS IN HONG KONG?

A survey conducted in 1993 showed an average radon concentration in Hong Kong buildings of 98 Becquerels per cubic metre (Bq/m³).

This level is lower than that found in surveys carried out in UK, Sweden and the USA. Nevertheless, some measured levels do exceed the World Health Organisation's guideline level of 200 Bq/m³ above which improvement action is needed.

IS 200 Bq/m³ A SAFE LEVEL FOR RADON EXPOSURE?

We recommend that you take action to reduce radon level if it exceeds 200 Bq/m³. Please note, however, that radon exposure carries risks even at low levels. Therefore you should aim to reduce radon level whenever it is simple and practicable to do so.

HOW DO I FIND OUT IF I HAVE A POTENTIAL RADON PROBLEM?

Granite is very widely used in concrete for building construction in Hong Kong. High radon concentrations may be found on any floor of any building. You should check the following to see if you have a potential radon problem:-

1. whether you keep the windows of your accommodation shut most of the time, or if you close the fresh air intake of the air conditioning or mechanical ventilation systems;
2. whether your accommodation is in the basement or on the ground floor; or
3. whether the building is extensively constructed from granite, such as a stone house.

TIPS FOR REDUCING RADON RISK

Here are a few simple ways to reduce the radon risk

associated with your accommodation:-

1. Open your windows more often if your accommodation is naturally ventilated.
2. Set the fresh air intake and exhaust correctly if you have air conditioners or ventilation systems.
3. Seal any crack on the ground or walls if your accommodation is in a basement or on the ground floor.
4. Apply less permeable wall covering such as wall paper.
5. Quit smoking immediately if you are a smoker.
6. Spend more of your leisure time outdoors in areas with good air quality, such as country parks.

MEASURING INDOOR RADON LEVEL

You may wish to measure the level of radon in your accommodation, particularly if you have checked that you have a potential radon problem. Before you make any measurements, you should have explored all the tips for reducing radon risk.

Measuring radon normally takes from 90 days to one year. Since radon levels vary considerably during the day, from day to day and from season to season, a longer measurement period will provide more representative results. For long exposures, a testing device called an "Alpha track detector" is commonly used. To obtain results that would provide reasonable indication of exposure, the device is left exposed at places in the building which are frequently occupied.

Alternatively, a "charcoal canister" can be used to carry out short term measurements lasting less than 90 days. This device will give a quick assessment of the radon level.

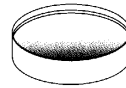
You may buy these testing devices from either local or overseas suppliers.

If the measured level, as averaged over at least 7 days, is higher than 200 Bq/m³, you should consult an indoor air quality professional for advice on improvement measures.

Common Radon Testing Devices



α - track detector



charcoal canister

FOR MORE INFORMATION OR ADVICE, PLEASE CONTACT....

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