



Mould Hazard Guidance - Consumer Information – Right to Know

Mould is the non-scientific name we give to a group of organisms in the Fungi kingdom. Dry rot, wet rot, brown rot, white rot, yeast, mildew, smuts, rusts, stinkhorns, puffballs, jelly fungi, mushrooms, toadstools and many others are all different types of fungi and all produce spores to reproduce. There are approximately 100,000 species of fungi identified by science to date with a prediction that hundreds of thousands are still waiting to be identified. The **specific** effects of many are unknown.

Mould growth in a building, in general, is a health hazard; it is specified as such in the following documents:

- Control of Substances Hazardous to Health Regulations ACOP 2002 L5 6th Edition (fungal spores are a biological substance and are referred to as asthmagens in COSHH). Note: COSHH is a regulation under the Health and Safety at Work Act 1974.
- The World Health Organisation (WHO guidelines for indoor air quality, mould and damp)
- The Healthy Housing Safety Rating System (Guidance for Landlords and Property Related Professionals – in reference to Housing Act 2004)
- Health and Safety Executive publication: The Approved List of biological agents
- USA EPA (Environmental Protection Agency) www.epa.gov/mold/

Mould/Fungi has always been affecting buildings, but now people can easily confirm that it is a health hazard as the information is freely available on the internet.

Following water damage or flooding, mould spores (which are ubiquitous (meaning they are present everywhere)) can germinate in as little as 12 - 24 hours.

Modern building materials such as plasterboard, chipboard and MDF and wallpaper, are an ideal substance to promote the rapid growth of mould should they become damp or wet. These items would naturally be covered with fungal debris including spores, but these levels would be considered to be at normal (i.e., at normal ecological levels). It is only when moisture levels become excessive that the viable spores present would germinate and develop into visible colonies thus elevating the fungal load in the air that it becomes a problem.

Mould spores are invisible to the naked eye. They are between 2-20 microns in size. (Fungal spores can be larger – up to 80 microns). Mould growth cannot be seen by the naked eye until it has already grown into large colonies supporting hundreds of thousands (if not millions) of spores. Mould fragments (micro fragments) can be smaller than 1 micron. (1 micron is one thousandth of a millimetre).

Mould can replicate quickly and continuously release spores. In perfect conditions, a single spore can turn into a colony approximately 20 million times its original mass in as little as 3 to 6 days.

There are strict laws relating to the controlling of hazardous substances. Information is available in the following documents:

- **ANSI/IICRC S500:2021 Standard for Professional Water Damage Restoration 5th Edition**
- **ANSI/IICRC S520:2015 Standard for Professional Mold Remediation 3rd Edition**
- **ANSI/IICRC R520:2015 Reference Guide for Professional Mold Remediation 3rd Edition**
- **BS: PAS 64:2013 Mitigation and recovery of water damaged buildings – Code of practice**
- **The Health and Safety at Work Act 1974**
- **The Control of Substances Hazardous to Health Regulations 2002**
- **Personal Protective Equipment at Work Regulations 1992**
- **HSE: Respiratory Protective Equipment - HSG53**
- **HSE: The Approved List of biological agents: 2021**
- **EH40/2005 Workplace Exposure Limits 2005**

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Statutory compliance to the health and safety law above documents is an absolute requirement.

It is a breach of health and safety law to aerosolise a hazardous substance without taking appropriate control measures to prevent exposure and potential harm to oneself and others. This includes biological agents such as mould.

All moulds give off MVOC's (microbial volatile organic compound gases). MVOC's have a negative impact on health and are an indicator of poor indoor air quality. All moulds produce toxins (mycotoxins). Some toxins are known to be harmful to human health.

Exposure to mould can cause short-term or long-term health problems but can also cause severe allergic or asthmatic reactions.

There is evidence that mould exposure can cause biological change in humans and may cause (irreversible) chemical sensitivity to develop in some people, e.g., asthma.

Mould is a hazard whether it is actively growing or dried out and dormant. According to the World Health Organisation, dried fragments of mould may be 40 times more hazardous than active mould growth. Until physically removed, the hazard remains and could represent a health risk for decades.

The HSE publication "The Approved List of biological agents: 2021" lists 8 entire genera of fungi (representing hundreds if not thousands of species of moulds) as human pathogen hazard group 2 with a further 40 individually named species as human pathogen hazard group 2 or 3!! This list excludes some species which are known to be toxigenic. e.g., *stachybotrys chartarum*.

In summary:

- Some moulds are pathogenic (disease causing).
- Some moulds produce toxins which (in sufficient dose) are known to be carcinogenic (e.g., aflatoxin)
- All moulds are asthmagenic (i.e., may cause asthma or trigger an asthmatic response)
- Some moulds are known to be allergens (may result in an allergic response)
- Some moulds will be a combination of two or more of the above
- All moulds have the potential for harm and should be regarded as a hazard to health subject to species, dose, duration of exposure and frequency.

Suspected and controversial:

- The effects of some moulds are believed to be mutagenic (affecting unborn babies).
- The effects of some moulds are believed to be estrogenic (affecting human reproductive systems)

Risk Assessment and COSHH Risk Assessment

COSHH Regulations cover all harmful substances (other than asbestos, lead and radio-active materials). COSHH Risk Assessments must be carried out to control substances hazardous to health, and controls must be implemented to prevent human exposure to hazardous substances. It is a legal duty on any organisation undertaking work to carry out a suitable and sufficient risk assessment. A person carrying out such a risk assessment would need the appropriate skills, knowledge, ability, training and experience. Failure to carry out such a risk assessment is a breach of Health and Safety law. This applies to self-employed trades.

Domestic houses are workplaces when a person enters it to carry out ANY paid or voluntary work.

Landlords have a duty to provide a healthy home that is fit for purpose.

Tenants cannot be blamed for living a normal lifestyle when the property has ventilation or damp issues.

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