

Plasterer

HAZARDS AND RISKS

The main respiratory hazard associated with plastering activities is exposure to airborne plaster dust when mixing the material from a dry state to wet in preparation for use, and during sanding down of dried materials. This is because plastering materials contain composites, such as calcium sulphate hemihydrate, limestone and clays, small amounts of silica and mica, and sometimes hydrated lime. Inhalation of dust from these materials can lead to respiratory complaints and potentially serious diseases in the long term. Inadvertent disturbance of asbestos containing materials (ACMs) is also a risk.

Airborne dusts

Plaster dust (bagged material)

The long term health effects of regularly inhaling plaster dusts during mixing are unclear at present but likely to include chronic obstructive pulmonary disease (COPD – see below).

Inhaling dust from sanding of plaster materials

Can lead to occupational asthma and COPD, which includes serious conditions such as chronic bronchitis and emphysema, which is irreversible.

Silica

Inhaling fine silica dust, known as respirable crystalline silica (RCS) can also lead to serious lung diseases, including fibrosis, silicosis, COPD and lung cancer. These diseases can cause permanent disability and early death.

Asbestos

Plasterers can be at risk of exposure to asbestos from preparation of surfaces such as textured coverings (especially when sanding or grinding tools are used) and disturbing asbestos containing materials (ACMs), particularly when working in buildings built before 2000. Asbestos is classified as a category 1 carcinogen, capable of causing cancer. Inhalation of airborne asbestos fibres can cause mesothelioma, asbestos-related lung cancer, asbestosis, and pleural thickening - which are fatal, serious and incurable diseases which take many years to manifest. In Ireland, over 50 cases of mesothelioma is reported annually.

CONTROL OPTIONS

Elimination/prevention

Asbestos

- The aim is to avoid exposure completely. Information on the presence of asbestos should come from the premises' asbestos survey and/or asbestos management plan and asbestos register.
- See Asbestos Containing materials in the workplace - Practical Guidelines on ACM Management and Abatement for more information on the management of ACMs.

Engineering controls

- Use general mechanical ventilation to prevent accumulation of airborne dust and transfer dusts to outside.
- Use powered sanding tools with integrated, or "on-tool", dust extraction.

Safe working methods

- Work in a well ventilated area, ensuring good natural ventilation that allows dusts to readily disperse.
- Use hand tools in place of power tools, if feasible, for sanding tasks.
- Limit the number of persons near dusty work.
- Rotate workers undertaking dusty tasks.

PPE

- Respiratory protective equipment (RPE) should be used to supplement the above controls where necessary eg; if good ventilation cannot be achieved, or if sanding is being carried out. RPE with particulate filters (with FFP3 rated protection) should be worn.
- Tight fitting RPE users should be subject to face fit tests to ensure the RPE affords each individual the anticipated level of protection.

MANAGING THE RISK

Training & communication, supervision, maintenance & testing of controls and air monitoring* are all vital aspects of managing the risk, in addition to health surveillance which can be a requirement in certain circumstances.

Air monitoring

Air monitoring is a specialist activity. It may be needed as part of a chemical agents risk assessment, as a periodic check on control effectiveness and to assess compliance with relevant Occupational Exposure Limit Values (OELVs), or where there has been a failure in a control (for example if a worker reports respiratory symptoms). A qualified Occupational Hygienist can ensure it is carried out in a way that provides meaningful and helpful results.

Refer to the current Code of Practice for the most up to date OELVs.

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OCCUPATIONAL EXPOSURE LIMIT VALUES (OELVs) & EXPOSURE LEVELS

Agent or substance	Control/Exposure Limit	Exposure Levels
Calcium sulphate	10mg/m ³ (8hr Reference period)	Exposure levels may be significant during frequent or prolonged dusty tasks, especially in poorly ventilated spaces/areas.
Mica	Respirable: 3 mg/m ³ (8hr Ref. period)	
Silica - RCS	0.1 mg/m ³ (8 hr Ref. period)	Dry work with high silica-content materials – such as sandstone - causes the highest risk.
Asbestos (all types)	0.1 fibres/cm ³ (8 hr Ref. period)	The aim should be to avoid any exposure. The Safety, Health and Welfare at Work (Exposure to Asbestos) Regulations, 2006 as amended, must be adhered to when working with or near asbestos or asbestos containing materials.

Further information

- Code of Practice for the Safety, Health and Welfare at Work (Chemical Agents) Regulations and the Safety, Health and Welfare at Work (Carcinogens, Mutagens & Reprotoxic Substances) Regulations, 2024.
- Control of Chemical Agents: Your Steps to chemical safety. A guide for small business. Health and Safety Authority.
- Guidelines on Occupational Asthma, Health and Safety Authority.
- Guidelines on Occupational Dermatitis, Health and Safety Authority.

