Persimmon

Health, Safety
& Environment
Department

Dust Standards

Contents

1. Introduction

The purpose of these dust standards is to give site teams and sub-contractor guidance on how construction dust must be controlled on our sites, in order to protect our employees and sub-contractors from dust related respiratory diseases.

Constriction dust is not just an annoyance to site workers, breathing in dust regularly over a prolonged period can cause life changing and life threatening lung diseases.

Recent HSE research has estimated that silica may be responsible for the deaths of over 500 people each year who have worked in construction. The HSE also estimates that around 4,000 people die every year from COPD linked to work activities. Construction workers are one of the high risk groups because of the dust that they breathe in as part of their work.

2. Types of dust that we produce

There are generally four types of dust that can be found or produced on a construction sites from the construction processes and the use or heavy vehicle movement, these include:

Silica dust, created when working on silica containing materials like concrete, mortar and sandstone;
Wood dust, created when working on softwood, hardwood and wood-based products like MDF and plywood;
Other ‘general’ dust, created when working on other materials containing very little or no silica. The most common include gypsum (e.g. in plasterboard), limestone, marble and dolomite; and
Road and spoil heap dust, created from heavy plant and machine movement around site especially when not on a tarmac road. Unseeded spoil heaps can also be a cause of this kind dust. This dust is usually not dangerous in small quantities but can cause nuisance to local residents and can get in the eyes and noses of site operatives.

3. Controlling Dust

3.1 Silica dust

As a first step to control silica dust, other process of cutting should be considered, for example instead of using a saw to cut blocks use a block splitter.
When cutting concrete, roof tiles or any other material that is likely to produce silica dust the following measures must be put in place:

- Pumped water suppression throughout the cutting process;
- Face masks, which has been face fit tested, must be worn by the person carrying out the cutting and they must be of FFP3 standard; and
- Anyone in the cutting zone, eye and hearing protection must also be worn;

3.2 Wood Dust

To prevent wood dust being released into the air and breathed in the following measures must be put in place:

- Joiners, Carpenters and kitchen fitters must use on tool local exhaust ventilation (LEV) equipment and this must be of Class M extraction fitted to all chop saws, routers etc. The LEV device must be thoroughly examined and tested annually by a competent person. FFP3 face fit tested face masks must still be worn by the operator or anyone working nearby.
- As far as reasonably practicable small circular saws should be connected to an LEV, if this cannot be achieved due to the limited space or extraction hoses obstructing the work area, then the saws must have a dust collecting bag fitted as a minimum and operatives must wear a FFP3 face fit tested, face mask.

There may also be one or two specialist trades who also use wood cutting type equipment and the same principles would then apply.

3. Controlling Dust

3.3 Other Dust

For all other dust measures, steps must be taken to prevent dust from being released into the air:

Sanding plasterboard

When the jointers are sanding down the plasterboard joints using a mechanical sander, the equipment must be fitted with on tool LEV and this must be of Class L extraction. The LEV device must be thoroughly examined and tested annually by a competent person. FFP3 face fit tested face masks must also be worn by the operator.

Sweeping up

Sweeping causes large amounts of dust to be released into the air, a vacuum cleaner will stop dust becoming airborne. If a vacuum is not available then the dust and debris should be dampened down with water before it is swept, the person sweeping and anyone in the plot must wear a FFP3 face fit tested face mask.

Road and spoil heap dust

This dust can travel great distances during dry and windy conditions and can cover cars and windows of local residents. If in large quantities this could be regarded as statutory nuisance and have an adverse effect on the environment.

Spoil heaps, these should be seeded if they are going to remain on site for a prolonged period or a means of dousing down the spoil heap should be considered.

Road dust, roads should be swept regularly to prevent the build-up of dust. Damping down using a towed sprinkler should also be considered. On virgin sites leaving vegetation down will also reduce dust from plant machines.

Demolition, dust from demolition processes must be prevented from escaping from the site boundaries. Misting machines, dust busters or water cannons should be considered to dampen down demolition dust.

4. Why does an operative need to wear a mask

When using water suppression or LEV not all the dust particles are controlled by these means and very small particles are not collected. These can still get into lungs and cause damage.

FFP3 face fit tested face masks must be worn by anyone who is generating the dust through their work activity or close by to the person generating dust. Face fit testing must be carried out annually.

5. Type of mask and face fit testing

The minimum standard of mask that is required on site is a FFP3 (Filtering Face Piece 3). If operatives are required to wear a face mask for dust protection then it must be face fit tested for the mask type. Copies of face fit certificates must be supplied to site management upon induction, which must be kept securely on site with a system in place to ensure testing re-done before certificates expire. This includes all contractors, self-employed, directly employed and labour sub-contractors.

If disposable masks are issued then they must be changed at the start of each shift.

For face masks to be effective, the wearer must be clean shaven. If the operative isn't clean shaven then they cannot undertake a dust related activities without a full face power respirator.

To reduce the risk of work delays or operatives being tempted to carry on with work without adequate dust protection it is recommended that each site should have a full-face powered positive pressure respirator that can be loaned to operatives, who arrive on site and have not been face fit tested or are not clean shaven. Arrangements must be in place to clean the equipment before and after use.

6. Monitoring

Due to the high risk nature of construction dust it is essential that dust control measures such as dust suppression, extraction and the use of FFP3 face masks are closely monitored by site management on a daily basis. This includes ensuring that all equipment, including sub-contractor equipment is in good working order. The Group HS&E department will also monitor compliance of this policy during routine HS&E inspections.

7. Further reading

HSE-150
HSE-construction/faq-dust
HSE-H&S in construction
HSE-controlling construction dust with on-tool extraction
HSE-respiratory protective equipment at work

8. Toolbox talk

Refer to HSMS TBT - Dust and Use of Face Masks