

WHAT IS DUST

Frisbee | Mcerts | COSHH

Particulate

Particulate matter is categorised by its size, guidance from the HSE which references ISO 4225:2020 states:

Particulate ranges from. 1 to 75 Micron

Grit:larger than 75 microns

Inhalable dust

This is the size fraction of dust that is typically smaller than 100 microns.It is inhaled through the mouth and the nose. It can cause inflammation so must be regulated

Respirable dust

Very small particulate that is less than 10 micron and can be inhaled deep into the lungs

It can effect the alveoli and cause damage particularly substances such as respirable crystalline silica(RCS)



True Grit

Grit>75 microns

Particulate 1 to 75micron

Smoke: smoke differs from dust because it originates from combustion. Smoke consists of soot (carbon) , ash, organic content, it exists as a suspension of tiny particles and,Iquitos droplets. It is often associated with the combustion of organic materials fossil fuel, wood and cigarettes.

Fume Extremely fine particles formed from condensed vapours. Often metallic. They are very small <than 1 micron this makes them very penetrating

Fine particulate <2.5 micronThe particle size of less than 0.1 microns can be described as **ultra fine** (100 nano meters) UFPTThese can penetrate deep into the lungs and bloodstream and pose a serious health risk.



Particle Type	Size Range	Penetration into Respiratory System
Coarse Dust (PM10)	2.5–10 μm	Upper airways & nose
Fine Dust (PM2.5)	0.1–2.5 μm	Bronchi and bronchioles
Ultrafine Particles	<0.1 μm .	Alveoli & bloodstream
Smoke	0.01–1 μm	Bronchi, alveoli (depending on composition)
Fumes	<1 μm .	Alveoli & potentially systemic

Subheading

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A real time Mcerts dust monitor can accurately measure low levels of pm10, pm2.5 and pm1

To provide an accurate indication of where high risk levels of dust may occur

However if this is for COSHH assessment the correct mdhs method must then be adopted



The personal sampling pump shown complies with the requirements outlined in MDHS 14/4

When used for workplace dust monitoring a standard flow rate of 2.0 litres per minute is used, calibrating before the test and checking at the end of the test .

The sample head is an iom head and must be used together with a filter when calibrating with an in line reference device.