Topic

PM and its components, origin and Health Hazard

What is PM, and how does it get into the air?

PM stands for particulate matter (also called particle pollution): the term for a mixture of solid particles and liquid droplets found in the air. Some particles, such as dust, dirt, soot, or smoke, are large or dark enough to be seen with the naked eye. Others are so small they can only be detected using an electron microscope.

Facts about PM pollution

PM is one of the six EPA 'criteria pollutants. PM has no fixed composition. The particles may consist either of only one chemical (e.g. sulphate, sulphuric acid, or lead oxide) OR a number of pollutants (organic chemicals, metals, dust). US EPA described PM pollution as 'mixture of mixtures'.PM is among the most harmful of all air pollutants.

Types of PM particles

Primary particles

Directly emitted from sources

Secondary particles

Form as a result of the interaction of chemicals such as SO2, NOx and VOCs with other compounds in the air.

Characteristics of particles

PM10

• Inhalable coarse particles, Diameter range 10 -2.5 microns.

• Undergo rapid sedimentation

• Occur near roadways and dusty industries.PM10

• Bypass the body's natural defenses in the nose and throat and enter lungs.

PM2.5