

### Key Points:

- Asbestos is a naturally occurring mineral
- It was totally prohibited by 1999
- It's useful properties include strength and resistance to heat and electricity
- Asbestos fibres can stay in the air for hours or days
- Asbestos fibres can be up to 700 times smaller than a human hair

### What is Asbestos

Asbestos is a naturally occurring mineral found in various locations around the world. The term 'Asbestos' is an umbrella term for a group of materials, all of which are fibrous in nature.

It was added to a variety of products, mainly in relation to the function of the material. These functions include its incombustibility, strength, resistance to heat and chemical degradation and its electrical resistance.



### Types of Asbestos

- Chrysotile Fibres (White Asbestos) is mainly used in asbestos cements, insulation and vinyl flooring. It is a hydrophilic type of asbestos and was prohibited in 1999
- Crocidolite fibres (Blue Asbestos) is commonly used in ropes, and sprayed coating and cement. The substance has a greater strength than Chrysotile and is similar in strength to steel, and was prohibited in 1985
- Amosite (Brown Asbestos) is primarily used in insulation boards and pipe lagging. It has qualities that make it excellent as a sound and heat insulator, and was prohibited along with Crocidolite in 1985

### Asbestos Fibres

All types of asbestos have a tendency to break into very tiny fibres. These needle like structures are so small they are only identifiable using a microscope, and can be up to 700 times smaller than a human hair. Due to their small size, once released these fibres can stay suspended in the air for hours or even days.

### Common places to find Asbestos

Asbestos was used regularly in the construction industry until it was prohibited. There are several places it is likely to be found, including corrugated roofing sheets, gutters, backs of fire doors and components in machinery where heat will be applied.

Work with asbestos insulation, asbestos coatings and asbestos insulating board must be carried out by a licensed contractor.

### Key Points:

- Asbestos removal must be carried out by a licenced contractor
- A risk assessment must be done prior to removal
- Even after a risk assessment the work may not start if area is deemed unsafe
- All Asbestos related work must comply with relevant legislation

### **Risk Assessment:**

The Employer must assess the risk of the likelihood of anyone being exposed to these materials.

The risk assessment must consider the following:

- Types of asbestos
- Condition and the likelihood of release
- Potential for damage
- Frequency of access by personnel
- The risk assessment findings must then aid the management in the decision regarding the removal of the asbestos



### **Company Responsibilities:**

- To know where asbestos is
- To have policies and procedures in place to manage asbestos, which are understood and implemented
- To undertake work which complies with relevant legislation
- To allocate appropriate resources to manage asbestos
- To provide access to adequate competent persons to manage asbestos issues

### **To be Considered:**

To be taken into consideration before carrying out any work:

- Type or types of asbestos.
- % of asbestos.
- The condition of the Asbestos
- Location / proximity of asbestos to work being undertaken
- Nature of the work
- Likelihood of disturbance / release of fibres

### Key Points:

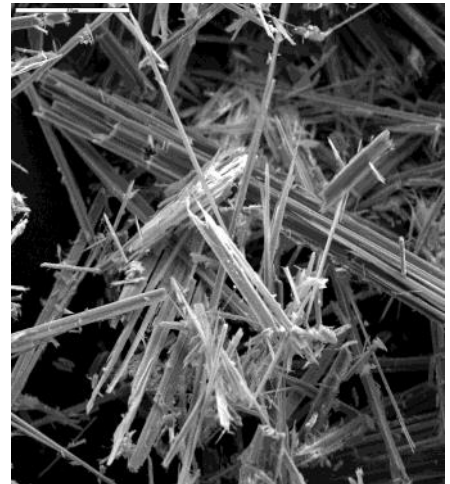
- 25% of ARD sufferers have worked in the construction industry
- Deaths from ARD's could rise to 10,000 per year by 2020
- Asbestos will only release fibres once disturbed
- Damage and deterioration can increase the chance of disturbing asbestos
- Onset of ARD can be can up to 60 years after exposure

### Who is at risk?

25% of people who are now dying from asbestos related diseases once worked in the building and maintenance trades. They have been made at risk from exposure to asbestos by (often unknowingly) cutting, drilling and sawing into ACM's (Asbestos Containing Material). Symptoms can be delayed, as the delay between exposure and the onset of the disease can range between 15-60 years. There is a long list of people who could be affected by ARD's, including:

- Gas Fitters
- Cable Layers
- Plumbers
- Painters and Decorators
- Plasterers
- Carpenters
- Electricians
- Demolition Workers
- Roofing Contractors

As well as anyone else involved in the construction industry.



### Mortality - Current and Future

HSE (Health and Safety Executive) statistics show that ARD's (Asbestos Related Diseases) are responsible for as many as 4000 deaths per year in the UK. These will be predominately as a result of working with asbestos in the past. Predictions have been made that by 2020 this number could rise as high as 10,000 deaths per year as a result of ARD's.

### Exposure to Asbestos

Some forms of Asbestos are friable, meaning they are easily crumbled and release fibres. These tiny fibres can be inhaled to do damage to the lungs. This means anyone in the vicinity of crumbled asbestos is in danger of contracting ARD's. The likelihood is increased if the ACM has been damaged or is deteriorating, as there will be a higher chance of fibre release.



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Friable Asbestos releases fibres into the surrounding area, which are dangerous if inhaled. Because Asbestos is hard to destroy, the body cannot break down and remove them, meaning they remain in place and can cause diseases.

### Determining Factors

The main determining factors of developing Asbestos Related Diseases (ARD's) are the amount of asbestos and the duration of exposure. The more fibres enter the body the higher the chances of ARD's occurring. While there is no safe level of Asbestos exposure, people who are exposed more frequently over a longer period are at a higher risk

### Mesothelioma

Mesothelioma is a rare form of cancer that most often occurs in the thin membrane lining of the lungs, chest, abdomen and (rarely) the heart. There are about 1000 diagnosed cases in the UK each year, and virtually all cases are attributed to asbestos exposure. The disease has an expected delayed onset of around 30 - 40 years.



### Asbestosis

Asbestosis is a chronic, non-cancerous respiratory disease. It is caused by scar tissue in the lungs, which stems from Asbestos fibres aggravating lung tissue. Due to the presence of the scar tissue it reduces the lungs ability to transfer oxygen. Symptoms of Asbestosis include shortness of breath, and in its advanced stages the disease may cause cardiac failure due to lack of oxygen to the heart.. There is no effective treatment of Asbestosis, the disease is usually deadly. The delayed onset between exposure and the onset of the disease can range from approximately 15 - 30 years.

### Lung Cancer

Lung Cancer causes the largest number of Asbestos related deaths of any Asbestos Related Disease. Symptoms of the disease are coughing and a change in breathing, but can also include persistent chest pains and anaemia. Exposure to a secondary carcinogen can significantly increase the risk of developing lung cancer when compared to those who have been exposed solely to Asbestos. One study found that workers that smoked and were exposed to Asbestos were approximately 90 times more likely to develop lung cancer than those that didn't smoke.

