

The **BSO Plus Safety Topic** is a review designed from the BSO Plus agenda. This safety topic is your way to stay current on the safety information over the 3 years between BSO Plus and BSR.

## ASBESTOS

### What is it?

Asbestos is the generic name that refers to six types of fibrous minerals that occur naturally in the environment. Its ability to separate into thin, strong particles makes it highly suitable for use as a non-combustible, non-conducting, and chemically resistant material. Unfortunately, its very nature of being virtually indestructible is what makes it such a hazard to humans.



### What are the potential health risks?

The prolonged inhalation of asbestos fibres has been directly linked to the following diseases:



Lung x-ray of mesothelioma

- **Asbestosis:** A chronic lung disease caused by permanent scarring of the lungs. The scarring reduces the healthy breathing area of the lungs, forcing the lungs to work harder to take in oxygen and ultimately leading to difficulty in breathing.
- **Lung Cancer:** Inhalation of asbestos fibres has been linked to an increased risk for lung cancer in workers exposed to asbestos.
- **Mesothelioma:** This is a fairly rare but aggressive form of cancer that affects the lining of the heart, the chest, or the abdominal cavity. It is usually fatal.

Exposure to asbestos does not automatically mean a person will become sick. According to Health Canada, the risk of developing any illness or disease from exposure to asbestos depends on the level and duration of the exposure; the age of the person at the time of exposure; whether or not the person smokes or has smoked tobacco products; and the type and size of the asbestos fibres. Asbestos has a latency period of 5 to 30 years or more, meaning that it may be many years between the first exposure to asbestos and the first symptoms of illness.

### Where is it used?

Although asbestos is now banned for use in most Canadian products, up until the mid-1970's it was still used in over 3000 different uses and applications. Products or materials that consists of 0.5% or more asbestos by dry weight are often referred to as "asbestos-containing material", or ACM. An ACM is categorized as either " friable " or " non-friable " to describe how easily asbestos fibres may become airborne when disturbed.

**Friable** asbestos can be crumbled, crushed, or pulverized by hand pressure and easily released into the environment.

Examples: sprayed fireproofing and thermal insulation on pipes.



**Non-friable** asbestos fibres are locked or bound into the material itself but may still be released through cutting or sanding activities.

Examples: vinyl floor tiles and drywall joint compound.



Some products that may contain asbestos are:



**Building products:** Vinyl floor tiles and wall coverings; cement; shingles; asphalt floor tiles

**Industrial products:** Welding blankets/screens; fire dampers; emergency generators; cooling towers

**Insulation:** Electrical wiring insulation; thermal proofing for pipes and boilers

**Automotive products:** Thermal insulation and exhaust manifolds; brake linings; clutch pads

**Fire-resistant textiles:** Protective gear for firefighters; protective cloths and blankets; oven mitts

## Identification and control measures:

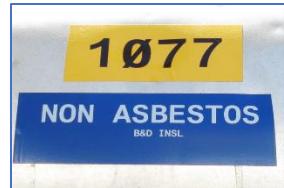
All Ontario workplaces where ACM is known to be present must have Asbestos Management programs. These track and identify the known locations of asbestos in accordance with Regulation 490/09 and, if applicable, Regulation 278/05 under the Occupational Health and Safety Act. In the field, all known ACM will be clearly identified through at least one of the following: signs, tags, stickers, coloured metal banding.

Each work site may have different methods for identifying asbestos. When entering a new work site, find out which colours that site uses to identify asbestos and ACM. Locally, non-asbestos materials are generally identified with blue banding or tags, while red banding or tags indicate that the material contains asbestos.

If you think you may have disturbed and/or been exposed to asbestos, take the following action:

- Stop all work immediately
- If possible, do not leave the area so as not to contaminate other workers or work areas
- Notify your supervisor and area personnel
- Follow site specific procedures

If you are not sure whether or not something contains asbestos, assume it does and contact your supervisor. DO NOT disturb it.



## Regional Municipality of Waterloo Fined \$50,000 After Workers Exposed to Asbestos

In 2014, the municipality of Waterloo had commissioned a designated substance assessment from a hygiene consultant which identified that a well house contained asbestos-containing materials. The employer failed to advise the workers and their supervisors of the presence of asbestos-containing materials in the building prior to the commencement of construction work.

During the work, workers penetrated the interior concrete block walls of the building when they drilled into the walls. These workers were exposed to asbestos when the vermiculite (asbestos-containing material) was disturbed and spilled out from the wall cavities. The workers were not wearing personal protective equipment (PPE) as required when working around asbestos-containing material, nor did they treat the material in the well house as asbestos-containing.

One worker entered the building only once for a two-hour period, another entered for seven hours one day. One of the workers notified their supervisor and the health and safety advisor for the Region of Waterloo that the material encountered in the building could be asbestos-containing. The Ministry of Labour and a hygiene consultant were contacted, and proper clean-up of the spilled materials was done.

**Conviction:** Ontario Regulation 278/05 (the Designated Substance - Asbestos on Construction Projects and in Buildings and Repair Operations Regulation) section 5 (2)