# Asbestos




Published by AsbestosClaims.Law
asbestosclaims.law/library/21290/1

# Asbestos

## Contents


Page

**Asbestos in the world** ..... 2

**The mineral**
Geological formation • The properties of asbestos ..... 3

**Mining**
Historical background ..... 4
Extraction • Processing ..... 5
Mining residue ..... 6
Safety ..... 7
The multiplier effect • The Québec Standard ..... 8

**Applications and products**
Asbestos-cement ..... 9
Papers and felts ..... 10
Friction materials ..... 11
Asbestos textiles • Additives ..... 12

**Asbestos and health** ..... 15

**The asbestos region** ..... 16




Front cover: A blow-up of asbestos fibre, whose special texture earned this mineral the name of "rock cotton".

In its natural state, asbestos is found in cross-fibre veins zigzagging through the mother-rock.

# Asbestos in the world



Asbestos formations are found everywhere in the earth's crust. Asbestos is mined in Australia, Bolivia, Brazil, Canada, China, Colombia, Cyprus, India, Italy, Japan, New Zealand, South Africa, the Soviet Union, Turkey, the United States, Yugoslavia and Zimbabwe-Rhodesia.

The largest Canadian deposits of chrysotile asbestos are found in Québec; Canada supplies almost a third of world asbestos production and is the second largest asbestos producer in the world, after the Soviet Union.



# The mineral

## Geological formation

The word asbestos is a generic term. It applies to six asbestos-like minerals which all have a fibrous structure. These minerals belong to two main groups: amphiboles which include actinolite, amosite, anthophyllite, crocidolite, tremolite, and the serpentine group to which chrysotile belongs.

Geologists believe that asbestos ore as we know it today was formed at a time of intense prehistoric volcanic activity.

When compressed, twisted and scalded by the irresistible forces and steam of volcanic eruptions, what had originally been siliceous rock took on a pearly, greenish color and infiltrated the crevices of adjacent rock formations in zigzagging veins. Serpentinites, commonly and incorrectly called serpentines, got the name from their flaky, reticulated texture which resembles a serpent's skin.

The term applies to several kinds of metamorphic rocks, one of which is chrysotile or white asbestos. From a commercial viewpoint, this type of asbestos is the most important, since it represents 95% of world production, while amosite, crocidolite and tremolite represent only 5%.

## The properties of asbestos

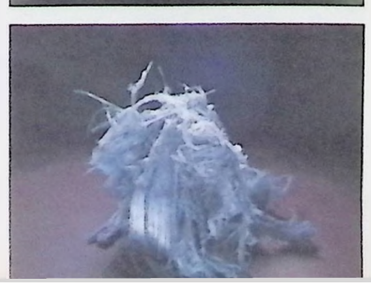
Asbestos is a mineral, just like iron, copper, nickel and zinc. Most asbestos in the world is found in cross-fibre veins embedded in the mother-rock. These flexible and unctuous fibres are in parallel formation and their length varies from 1 to 20mm.

In chemical terms, chrysotile asbestos is a hydrous magnesium silicate whose chemical formula is $3Mg0\ 2Si0_2\ 2H_20$. It is closely allied to soapstone, the rock used by the Eskimos for their carvings.

Asbestos means indestructible, inextinguishable, from the Greek word "asbestos". The word comes from a distorted reference to the action of cold water on quick lime. For asbestos was known in antiquity and was thought to be a magical substance due to its unique properties:

- It is non-combustible, inert and resistant to heat generated by friction.
- Its tensile strength, some 3 000 megapascals, is greater than that of steel.
- It resists corrosion, alkalis and most acids.
- Its dielectric properties make it a good insulator in electrical equipment and circuits.





Chrysotile asbestos finds its way into a number of applications because of the unique properties it provides at relatively low cost.

Extensive research has found no substitute for asbestos as regards performance, quality and reliability. In the production of high tensile strength or high temperature resistant materials particularly, asbestos is irreplaceable.

Top, a block of chrysotile asbestos, also called white asbestos. Bottom, crocidolite, or blue asbestos, fibres.
(Specimens from the Mining and Mineralogical Museum of the Asbestos Region).





Published by AsbestosClaims.Law
asbestosclaims.law/library/21290/3

# Mining

## Historical background

The Greeks and Romans used asbestos to make wicks for temple lamps. Classical writers of repute such as Pliny, Plutarch and Pausanias wrote about a substance which, when lit, did not burn out, without specifying what it was. Pliny speaks of tablecloths which were cleaned by exposing them to fire. Later, Marco Polo wrote of having seen fireproof sheets in Siberia. It is also known that asbestos was used for medical purposes in the past, as a local remedy against scabies and paralysis, and that in certain countries it was used in the making of light pottery and the building of highly resistant ovens. However, in spite of such varied applications, for centuries, asbestos remained nothing more than a curiosity.

In New France, the first attempts at mining go back to the end of the XVII$^{th}$ century. It was copper, iron and gold prospection which led to the discovery of asbestos deposits. Asbestos, which had been found in the rivière des Plantes area (near Saint-Joseph de Beauce, in Québec) was first brought to public attention in 1862, at an exhibition held in London.

Some years later, a farmer named Fecteau discovered large asbestos deposits in the Coleraine and Thetford townships.

Asbestos mining was carried out in primitive fashion for a long time. In the pits, the rock was first blasted and the asbestos chiseled out. A horse was used to activitate the hoist that brought up the ore from the pit. The fibre was then hand-picked and bagged.



(Johns-Manville Canada Inc.)

In the early days, asbestos mining was done manually and the ore was transported to the mill in horse-drawn carts.

Production was then organized and modernized at such a pace that, a century after the discovery of the first deposits, Québec had become the world's largest producer of chrysotile asbestos, a position it still occupies today in the Western world.

At present, asbestos mining is carried out in Québec's Eastern Townships region by the following companies: Johns-Manville Canada Inc., Lac d'amiante du Québec, Ltée, Société Asbestos Limitée, Carey-Canada Inc. and Les Mines d'amiante Bell Ltée. Other Canadian producers are located in British Columbia and Newfoundland.



## Extraction

Asbestos ore, as found in an open pit or underground mine, cannot be used directly. Producing the finished product, that is the asbestos fibre, requires a number of processing steps.

In Canada, the average asbestos-rock ratio is 5%, which means that enormous quantities of rock have to be handled to produce a reasonable volume of fibre. No matter what extraction method is used, ore processing remains much the same. It always requires large scale facilities and involves the use of constantly evolving technology. With the continuous updating of its equipment, the asbestos industry has become a leader in mining technology.

Like other ores, asbestos ore from different regions and pits has a different yield. Not only does the asbestos content vary from one deposit to another, but the quality of the mineral also varies according to fibre length.

Most asbestos is mined in open pits. However, if the mine is very deep, mining is sometimes carried out in underground excavations. Nowadays the block caving process has replaced more traditional methods in underground mining. The process is based on the fact that, when blasted, rock masses are fragmented, collapse under their own weight and fall into haulage drifts through vertical ore passes. The ore is then taken to the surface where it is carried by conveyers to the processing plant.

Asbestos mining is easier in open pit operations. Though open pit does not involve the same technical difficulties as underground mining, it nevertheless requires adequate equipment to feed the processing plant, meet varied weather conditions and protect the environment while ensuring at all times the safety of both the workers and the population.

Once the overburden is removed, the pit is carved in levels by blasting. The ore liberated during this operation is loaded into trucks by huge mechanical shovels and then taken to the primary crusher.

### Primary processing

The ore is first broken by a primary crusher, and further again by cone crushers. Whether it comes from an open pit or an underground mine, this ore is generally moist. It must therefore go through huge dryers before the asbestos can be separated from the rock.

## Processing

Once dried, the ore is taken to the processing plant or mill. The fibre is then separated from the rock in gyratory crushers which, by progressively reducing the size of the rock, gradually separate the fibre from the latter.

Ore fragments then go on to vibrating screens which make the fibre rise above the rock. This fibre is then drawn up into a cyclone collector from which it is taken to a fiberizer which frees additional fibre.

### Classification

Due to the countless applications of asbestos fibre, processing plants must be able to provide their customers with various grades of fibre for a broad range of different uses. This is why Québec asbestos producers offer some 150 different classes of fibre.

The fibres are classified into 5 basic groups, according to fibre length; each group is further




Published by AsbestosClaims.Law
asbestosclaims.law/library/21290/4

divided into "sub-groups", according to the fibre's "openness", that is, according to how finely the fibres have been broken down. This "openness" has a considerable effect on the properties of the manufactured product in which the fibre is to be used.

Samples from the fibre bags are tested and analyzed for quality control purposes. This is to ensure that fibre produced by the processing plant is consistent with the Québec Standard and the user's requirements.

**Packaging**

Each grade of fibre is first precompressed, to reduce its volume. It is then fed automatically onto a scale which, when loaded up to 50 kg, dumps the fibre into the packer. The asbestos is then compressed a second time and bagged. Three-ply paper bags or woven polyethylene bags are used according to producer or consumer preference. Paper bags are either standard Kraft paper, or of the soluble type so that they can be incorporated into wet mixtures without being opened.

Depending on their destination, shipments are sent by truck or rail throughout North America or exported overseas by boat.

## Mining residue

Asbestos ore processing mills produce millions of tons of mining residue which includes small particles of serpentine and of residual asbestos.

It has been found that part of these tailings can be recycled. Not only will this recycling solve the problem of residue disposal, it will also allow the economical production of a broad range of industrial products.

In asbestos mining regions, tailings are already being used as aggregate in asphaltic concrete and for railroad ballast. Magnesium and magnesium compounds can be extracted from the fine residue fragments for the production of heat refractory materials such as sand and brick.







## Safety

One of the problems which the asbestos industry has had to solve is that of dust control, not only in processing and manufacturing plants but also in the environment. It has succeeded through substantial investments and efforts in the research, design and development of equipment related to air purification in both mines and mills. For the most part, this work has led to the installation of new ventilation equipment and dust elimination systems and to the modernization of certain plant and laboratory facilities.

This makes for optimal dust elimination and a healthy work environment in the mining companies' processing plants and other facilities.

Most ore extraction, routing and processing operations have been automated through the use of highly sophisticated equipment. Thus, drillers now work in air-conditioned cabs, drills are equipped with filter bags and conveyers, screens and dryers are covered.

Asbestos tailings are taken by conveyer to a bin equipped with a vacuum dust collecting system. They are then fed into covered trucks and taken to the waste dumps. During unloading, residues are moistened thanks to a new process which can be used even in winter, preventing tailings from being blown away by the wind. To further protect the environment, companies are now considering the use of alternate layers of tailings and barren rock in the new waste dumps.

All mills in Québec now have air exhaust systems which provide adequate ventilation. Special dust control teams also detect dust emission sources and see to it that air filtering equipment is working properly. Dust levels are constantly monitored at hundreds of different points inside the mills.





Top left, sequential blasting in an open pit. Bottom left, the ore is loaded for transportation to the mill. Top right, one of several operations connected with ore processing: one phase of screening. Bottom right, automatic bagging of the fibre.




Published by AsbestosClaims.Law
**asbestosclaims.law/library/21290/5**

## The multiplier effect

The world economy benefits from the mining industry, of which asbestos mining is an important part. Whether at the fibre production or at the manufacturing stage, the asbestos industry is active on all continents, and almost in all countries of the globe. The welfare of thousands of workers and their families depends, in varying degrees, on the vitality of the asbestos industry. In a number of cases, the opening of the mines was a key factor in the development of territories whose potential had not been realized until then. Mining has brought about the emergence and growth of whole regions and, for a great number of communities in North and South America, Europe, Africa and elsewhere, asbestos is and remains the main driving force of the economy.

In Canada, some 65 000 workers benefit directly or indirectly from the asbestos industry, in the following sectors, among others: machinery and tooling, transportation equipment, explosives, electricity, containers (paper and polyethylene bags), mining services, the rubber industry, construction and banking services.

Exports of Canadian asbestos to 80 countries are also an important source of foreign currency, thus contributing to the balance of payments.

It is interesting to note that, in Québec, the contribution of the asbestos industry to the economy equals that of all other mining sectors combined, since not only does the industry reinvest most of its net income in Québec, but approximately 50% of Québec corporate taxes paid by the mining industry comes from the asbestos sector.

The asbestos industry contributes substantially to the economy throught its 3 000 applications in industrial or consumer products, through the employment it provides, through the scientific research and technological advances it promotes, through the investments it generates.

## The Québec Standard

Québec asbestos mines produce close to 150 types of fibres. As some fibres are better suited to certain manufacturing processes, it is essential that users have precise knowledge of the various categories and classes of fibres which the asbestos mining producers put on the market.

Hence the importance of a strict and uniform classification system.

The official classification of the Association des mines d'amiante du Québec is recognized and accepted worldwide. It is called the Québec Standard. The Québec Standard for asbestos fibre classifies fibres according to length and distribution. Today, the Québec Standard applies to some 32 types of fibre which are grouped into 4 or 5 categories or grades.

One of the essential tasks of the Association des mines d'amiante du Québec is the monitoring of quality standards which apply to chrysotile asbestos produced in Québec.



# Applications and products

Asbestos is used in New Zealand schools as well as in irrigation systems in Saudi Arabia, in the disc brakes of British racing cars, in a German welder's protective clothing, in the insulation of a Japanese turbo-generator, in a Canadian paper machine, in Brazilian housing projects, in U.S. jumbo jets, in Indian pipelines and in Central African locomotives.

Asbestos fibres are used in the manufacturing of at least 3 000 products which fall into five main categories: asbestos-cement, which is a leading application, papers and felts, textiles, friction materials and additives.

## Asbestos-cement

No more than a 12% to 15% asbestos content is required to manufacture asbestos-cement products with high resistance to tension and corrosion. Thanks to the combination of asbestos and cement, fibrocement does not crack, is non-combustible and can withstand sharp drops and rises in temperature. Though waterproof, it does not hamper water evaporation.

Highly resistant, although its weight is only 10% of that of prefabricated concrete, fibrocement is very economical, since it is light and can be transported at a reasonable cost.

Fibrocement is especially well suited to the manufacture of irrigation, water distribution and sewage pipes, as well as acoustic tile, shingles, window panels and flat and corrugated panels.

Its growing uses now include exterior and interior architectural facings, such as balcony sidings, soffit ceilings and partition walls in office and public buildings, large hotels, etc. This highly decorative material comes in coloured or textured sheets which are more sophisticated than traditional flat or corrugated sheets. The choice of colours and textures available and the low cost of asbestos-cement make this product attractive to architects and builders. Besides, like all asbestos products, it is perfectly safe, since the asbestos fibre is completely sealed in the mix.



Shingles are one of the major applications of asbestos-cement; they are used to cover and protect roofs of all kinds.




Published by AsbestosClaims.Law
asbestosclaims.law/library/21290/6

Asbestos-cement products account for more than one half of all asbestos applications. This material can be put to use in the manufacture of an incredibly broad range of products whose basic properties are the same but which offer a variety of styles, shapes and colours.

Today, asbestos-cement is used, in all styles and types of buildings, whenever durability and safety must be assured. This is why asbestos-cement shingles are equally suitable for the roof of an 18th century French castle or of a modern university in Benin. Fibrocement sheets are in growing use in shopping centres, sports facilities, as well as office and residential towers.

Thanks to asbestos, hundreds of lives have been saved in fires. More will be spared, since asbestos continues to play an important role in construction because, among other reasons, it is the only low cost material which can help prevent the collapse of walls and structural steelwork in the event of a major fire.

The success of asbestos-cement, especially in Europe and the developing countries, is not only due to its properties, but also to the fact that no other product offers the same advantages.



## Papers and felts

Asbestos papers represent 6% to 8% of the world use of average length asbestos fibres. A broad and varied range of products fall into this category. In addition to commercial papers and cardboards, it includes gasket papers which are widely used in the automotive industry, on account of their resistance to heat. Corrugated papers, muffler papers and the special papers used in the manufacture of household appliances indicate to what extent asbestos applications have become part of our day-to-day life. Pipe wrapping papers are used mainly to protect underground or underwater pipelines from corrosion.

But the principal applications of asbestos papers are found in flooring felts and roofing felts.

Roofing felts contain 85% asbestos. Those made for the Canadian market are covered with asphalt.



(Photos Atlas Turner Inc.)

Due to their fireproofing properties and to the strength of the asphalt-asbestos combination, these felts are commonly used as a covering material for the flat roofs of large buildings.

The main user of this kind of product is also the world's leading paper producer: the United States.

In North America, asbestos felt is mostly used in industrial buildings which are exposed to high humidity, since asbestos provides the best protection guarantee against sharp drops or rises in temperature.

## Friction materials

Due to its high heat absorption and excellent resistance to high temperatures, corrosion and acids, asbestos in an ideal friction material both for brake and clutch facings. This is why asbestos-based brake linings are in such widespread use, from snowmobiles to airplanes, in both heavy machinery and private cars.

Whether people drive their own cars or ride in buses, fly to holiday resorts or walk in the street, their safety depends on good braking capability. And no other product than asbestos can do the job right. Ever increasing speeds call for fail-safe braking which only asbestos can achieve.

No substitute brake lining material can provide the same cost/quality advantage as asbestos. Besides its high friction level, thermal stability and reinforcing properties, asbestos costs less than any possible substitute. Tests also show that its use in brake and clutch linings is perfectly safe since the asbestos is retained in the lining's baked resin, which reduces dust emission to almost nil.

Friction linings can be woven and wire reinforced. They can also be moulded, in which case the asbestos content is approximately 40%. Moulded brake linings for cars are the most popular, as applied to both disc and drum brakes, as well as to clutch assemblies.





Top left, decorative flower pots made of fibrocement. Bottom left, installation of an asbestos-cement pipe for a water distribution system. Top right, polished asbestos-cement sheets used as exterior architectural facings. Bottom right, in an office, walls are elegantly covered with textured asbestos-cement sheets.







Published by AsbestosClaims.Law
asbestosclaims.law/library/21290/7

## Asbestos textiles

Chrysotile asbestos fibres are particularly well suited to weaving due to their length, tensile strength and low magnetic particle content. The resistance of asbestos textiles ranges between 200C and 480C according to the asbestos content of the finished product (from 75% to 99%).

Wherever the threat of fire and intense heat must be faced, asbestos serves as a protective agent. It is used in protective clothing for welding shop and foundry workers, firemen and racecar drivers.

These textiles are made from yarn which is a blend of asbestos fibre and rayon and which can be woven into tapes, tubings or cloth. For specific uses such as friction linings, asbestos yarn can be wire reinforced. For other applications, cloth can be aluminized to reflect radiating heat and infrared rays.

The main applications of asbestos textiles are woven friction materials, gaskets, joint materials, thermal and electric insulation, drying felts, protective clothing and plastic laminated fabrics. Asbestos is still the only material with proven efficiency for the production of textiles which can resist extreme temperatures and corrosion.

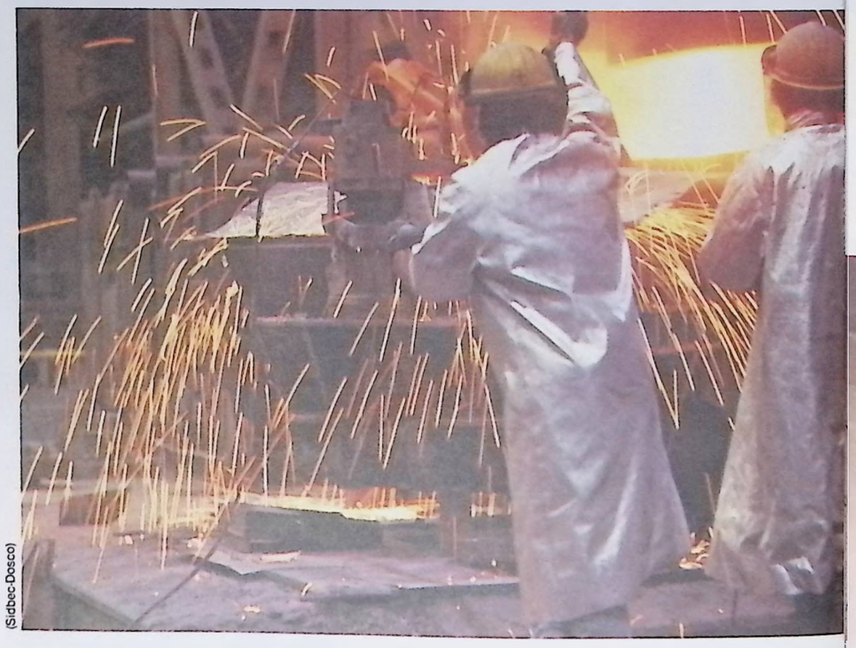
## Additives

This category includes a diversity of products in which asbestos is used for reinforcement and filling applications. Belonging to this category are asbestos-vinyl tile and a number of plastic products such as paints, caulking putties and other compounds.

### Asbestos-vinyl tile

This sector uses approximately 10% of the world's fibre, mostly of the shortest grades. Its resistance to smoke, flame, humidity and mildew, as well as its dimensional stability, make asbestos the additive most widely used by producers of vinyl floor tile for commercial and industrial buildings or heavy traffic locations.

Asbestos-vinyl tiles are made of 15% vinyl and a homogeneous mix of a thermoplastic binder, 10% to 20% asbestos, mineral additives and pigments. In this kind of tile, there is no substitute for asbestos with comparable characteristics, especially from the standpoint of dimensional stability and durability. Floor coverings with 85% asbestos backings also fall into this category. Asbestos-vinyl tile provides a diversity of color and design, to the point where a single manufacturer can offer 150 different floor covering samples.



(Sidbec-Dosco)

### Plastics

Most of these products are mixtures of resins and short asbestos fibres. Different products are obtained depending on the kind of resin used. These come mostly in the form of protective coatings; some are fire resistant and are applied to metallic pipes, others are acid resistant or have applications in electric insulation, gaskets or brake linings.

Although fibreglass or talc are sometimes used as substitutes in plastics, asbestos is, once again, the only tried and tested material for the manufacturing of products that must offer high corrosion and heat resistance.

### Asphalt coatings

The combination of asphalt and asbestos produces coatings that have a high resistance to water, frost and corrosion.

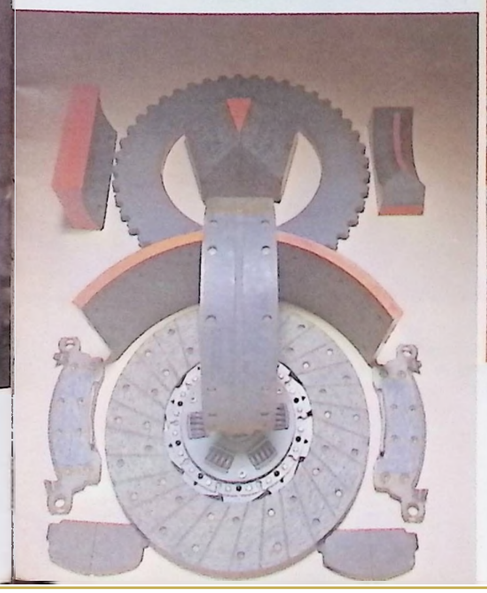
These are mainly used for covering and for rustproofing metal surfaces. They are also used to fill and seal joints and to waterproof concrete or masonry walls.

Both liquid coatings and mastic-like coatings generally combine 2% to 15% asbestos with crude asphalt which is cut with solvents, or with an asphalt emulsion in soap and water.

A compound of mortar, aggregates, asphalt and asbestos is used to extend the life of road surfaces. Though the asbestos content is only 2% to 3%, this agent plays an essential role as an asphalt stabilizer and makes it possible to increase the asphalt content while ensuring the cohesion of the mixture, since it absorbs and disperses the energy produced by impact from traffic.

Anyone who drives a car or a truck knows how quickly road surfaces can be worn out, especially in cold countries where corrosion caused by melting ice and chemical de-icing products is added to the wear and tear of traffic. Road maintenance is therefore a never-ending process which, in the long run, can prove very costly.







Left, protective asbestos clothing is worn by foundry workers. Top centre, asbestos is an indispensable element in some applications where safety is a major factor, as in aeronautics, for example. Bottom centre, brake and disc linings used in vehicles and heavy machinery. Right, floor covering of asbestos-vinyl tiles.







Published by AsbestosClaims.Law
asbestosclaims.law/library/21290/8

This is why the use of asbestos in asphalt coverings is so effective. Asbestos coatings have proven their worth and asbestos is now incorporated in bituminous concrete mixtures used for roads, bridge roadways and even airport runways.

**Other compounds**

Short asbestos fibre or residue is incorporated into a number of products to improve their consistency, to make them more homogeneous or waterproof, to increase their dimensional stability or their resistance to heat, to lessen their conductivity, to increase their tensile strength and prevent cracking, and, finally, to lower their production cost.

These products have many different consumer and industrial applications.

They are used as rust protection for car undercarriages and fire protection on brick walls. Asbestos powder, for example, is used as an ingredient in a number of lubricants, to help control their fluidity and heat resistance.

Long or short asbestos fibres can be mixed with various resins or cements to produce gaskets, the amount of asbestos depending on the desired rigidity of the product.

Asbestos is without doubt foremost among the products which contribute to the progress and development of the modern world. Thanks to its exceptional properties, which no other natural or man-made substance can duplicate, it furthers the well-being, safety and protection of man.



Asbestos-reinforced gaskets commonly used in all kinds of industrial equipment.



# Asbestos and health

Asbestos, for which there is no real substitute in a large number of applications, is useful in countless ways and saves thousands of lives each year, thanks to its fireproof and thermal insulation properties. Besides being a unique product, a natural substance whose characteristics no other natural or man-made material can duplicate, asbestos is, without the shadow of a doubt, one of the safest products on the market today, in the applications for which it is intended.

Scientific and medical research and studies on asbestos, which have been carried out for a longer period of time and more intensively than for any other substance used in the manufacturing of substitute products, have demonstrated that asbestos exposure levels to which the general public and the consumer can be subjected are, at worst, infinitesimal and involve no significant health hazard.

The results of an epidemiological study bearing on the populations of several towns in various regions and carried out according to rigorously scientific methodology by the Québec Department of Social Affairs have clearly shown that mortality rates due to respiratory deficiencies, lung diseases or other ailments which asbestos could possibly be associated with, among a number of other causes, are no higher in asbestos mining communities than elsewhere.

If people who have been living in asbestos mining towns for generations are not especially prone to the illnesses which are presumably related to a prolonged exposure to concentrations of fibre dust, it follows that asbestos involves no risk whatsoever for the public at large.

Neither do consumers and users of asbestos products risk exposure levels which are harmful to their health. A team of scientists from McGill University, in Montréal, has established that the risk of lung cancer for asbestos workers who would continually be exposed to levels of one airborne asbestos fibre per cubic centimetre is equivalent to the risk involved in smoking two cigarettes a week. By definition, asbestos workers are the people most likely to be exposed to high fibre concentrations and, outside the asbestos industry's working environment, levels of exposure to asbestos dust never reach anywhere near one fibre per cubic centimetre.

In fact, as unexpected as it may seem, researchers have even demonstrated that asbestos can be the best protective agent against... the dangers of asbestos. Thus, to lessen the natural fibre content of water or wine, no filter is more efficient than an asbestos filter.

Asbestos-based products involving a possible risk have been taken off the market and the public can rely with confidence on current asbestos products in which the fibre is literally bonded in cement, resins or asphalt, so that dust emissions are nil or negligible. In friction products, the rise in temperature within the mass chemically modifies the fibre, transforming it into inert and completely harmless particles.

In the case of other mineral fibres, including fibreglass, and the various substitutes which are being tried in certain applications, practically nothing is known as regards their biological effects on man and their possible harmfulness. On the other hand, the technical and medical data available on asbestos and the technological improvements applied to its utilization make it possible to benefit fully from its numerous advantages in complete safety.




Published by AsbestosClaims.Law
asbestosclaims.law/library/21290/9

# The asbestos region

The Eastern Townships lie along the south shore of the St. Lawrence River, between Montréal and Québec City, among the magnificent and picturesque old Appalachian mountain range. At the heart of this vast territory, five mining towns — Asbestos, Black Lake, Coleraine, Thetford Mines and East Broughton — make up what is called the Québec asbestos region.

The region's rolling wooded hills, where lakes and rivers abound, are a sportsman's year-round vacationland. Skiers from all over Québec come to enjoy its winter resorts while its fish and game make it a hunter's and fisherman's paradise. Québec's asbestos region bears witness to the fact that mining operations are in no way incompatible with a pleasant environment.










(SERA)





Published by the Association
des mines d'amiante du Québec

Les Mines d'amiante Bell Ltée
Carey-Canada Inc.
Johns-Manville Canada Inc.
Lac d'amiante du Québec, Ltée

Legal deposit
Bibliothèque nationale du Québec



Published by AsbestosClaims.Law
**asbestosclaims.law/library/21290/10**