Anthophyllite

Anthophyllite as mentioned earlier is similar to amosite in chemical composition. Its empirical formula is $(Mg,Fe)_7Si_8O_{22}(OH)_2$. It is mined mainly in Finland. The fibers are usually brittle and relatively weak. However, they do have good heat and acid resistance.

(Asbestos properties are summarized in table on page 7.)

Application of Asbestos

After reviewing some of the properties of asbestos, it can be seen how it improves upon the materials with which it is combined. It can be woven. It is resistant to heat, fire, weather, acids and alkalies. When used with other materials, its strong flexible fibers interlock to form reinforcing webs within the composition. The end result is a gain in durability and toughness as well as increased resistance to breakage, abrasion and wear.

Other materials can be found which have better insulating properties than asbestos. However, these materials usually lack the physical and chemical attributes of asbestos. Asbestos, in addition to being stronger and less sensitive to decomposition than either cork or magnesia, also incorporates tiny air cells within its structure. This can be seen when a comparison is made of its surface area with some other materials.

Fiber	Surface Area (sq cm per gram)
Nylon	3100
Acetate rayon	3800
Cotton	7200
Wool	9600
Viscose rayon	9800
Chrysotile	130,000 to 220,000

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