

# ASBESTOS

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**T**he beleaguered asbestos industry has a small glimmer of hope in the past year in that the downward spiral in asbestos production worldwide appears to have abated. Global production over the past five years has levelled off. Production in 2001 is estimated by the United States Geological Survey (USGS) at 2.05 Mt, compared with 2.07 Mt in 2000. Further back, production was 1.77 Mt in 1999, 1.82 Mt in 1998 and 2.15 Mt in 1997. Russia is the largest producer of asbestos, accounting for some 35% of world supply, whilst other important producers include Canada, China, Brazil and Zimbabwe. Smaller producers, however, are fighting for survival owing to the fierce competition and the prevailing weak prices that currently characterise the industry. The major Canadian producers have been losing market share to the low cost-base mines in Russia and Zimbabwe, and recently Brazil, as the Brazilian producer looks to the export markets.

The use of asbestos in developed countries has become increasingly restricted due to a perceived risk to human health. The industry is working tirelessly and diligently to demonstrate that asbestos has a useful place in society and can be used safely. Unfortunately, particularly in North America and Western Europe, the tide of public opinion is against the mineral. Every year, new bans are announced on asbestos use, and many other countries are beginning to re-examine their own bans. However, the work of the asbestos industry means that the erosion of some markets is not as precipitous as some campaigners had predicted, and the viability of the industry continues. Nevertheless, the decline in some world markets now means that the industry is oversupplied, and there is considerable downward pressure on prices.

On a more positive note, in 2001, asbestos production levels increased in China and Russia, showing that there is still some room

for expansion for the industry in some parts of the world. Production in China was 250,000 t in 2001, whilst Russian output was 735,000 t, which together account for approximately 50% of world production. Russian producers, in particular, have taken a very aggressive line in the market place to gain share, undercutting many other producers.

There are three principal sources of the fibres known as asbestos; chrysotile (white asbestos, a form of serpentine), crocidolite (blue asbestos) and amosite. Chrysotile is now the only asbestos to be produced commercially.

## Production

Total Russian asbestos production in 2001 was 735,000 t, which was 2.2% lower than 2000. There are two major asbestos producers: Uralasbest based in Asbest City, Sverdlovsk oblast; and Orenburgasbest in Yasnyy City, in the Orenburg oblast. Orenburgasbest had a production of 290,000 t of asbestos in 2000 and production levels are estimated to be the same in 2001. Orenburgasbest has recently installed facilities including a pneumatic screen, for cleaning commodity asbestos from fine fractions. This will enable the company to produce pure asbestos fibre that will meet world standards.

Russia is a major exporter of asbestos, and in 2001, exports were increasing, particularly to China, which in the first six months of 2001 imported 33.4% of the total first half exports of 163,100 t with a value of US\$27.5 million. In the first half of 2001, asbestos exports were 10.6% up on the same period last year.

In Kazakhstan, Public Jt St.Co. Dzhetygarinskiy Asbestos Mining and Processing Combine (DAGOK Kunstanayasbest) has raised US\$6 million to modernise and upgrade its equipment at its chrysotile-asbestos deposit. The company,

based in Zhitikara City, Kustanay oblast, is planning to spend a total of US\$15 million. between 2001 and 2005. In 2000, Kustnayasbest produced 178,400 t of asbestos, with over 98% exported to Russia, Uzbekistan, Kyrgyzstan, Iran and China. Most of the asbestos is consumed in asbestos-cement pipes and roofing sheets.

China is another significant producer and consumer of asbestos. Production is estimated at 250,000 t/y from various mines in Hebei, Liaoning, Qinghai, Sichuan, and Xinjiang provinces.

Production from Quebec in Canada, was 340,000 t in 2001, slightly higher than the 2000 figure of 320,000 t. There are two main Canadian producers, Mine Jeffery Inc. (formerly JM Asbestos) and LAB Chrysotile Inc. Chrysotile asbestos production from Mine Jeffrey in 2001 was 125,152 t, compared with 130,611 t in 2000. During the year, the company began construction of a new underground mine with a capacity of 250,000 t/y and a proven ore reserve sufficient for 25 years. To date, construction is 90% completed at a cost of C\$130 million.

Brazil's sole asbestos producer is SAMA Mineração de Amianto Ltda, with its Cana Brava operations in Goiás State. In 2000, production was 200,000 t/y, which is estimated to have climbed to 210,000 t/y in 2001. Long fibres are destined for use in flame-retardant textiles and electrolytic fibres, whilst the short fibres are used in brake pads, cardboard and cement. However, some 70% of SAMA's production is for the domestic market which is currently being threatened by campaigns in Brazil to ban asbestos. Already, asbestos has been banned in several cities and states including Sao Paulo in February 2001, which prohibited the use of asbestos in building and construction materials. This was a blow as Sao Paulo was the centre of the asbestos cement industry in Brazil. This has meant that SAMA is increasingly looking to the export market for sales, which has increased competition in the world market.

In Zimbabwe, the political instability has affected supply from the country's sole producer, African Associated Mines. Output in 2001 is estimated at 115,000 t by the USGS. South African producer, Msauli Asbes Beperk, produced 20,000 t of asbestos in 2001 from its operations in Barberton, Eastern Transvaal, which is slightly down on production levels in 2000. Despite the fact that there is a need for affordable, durable construction materials in the region, the stigma attached to asbestos has started to undermine demand for asbestos cement products in southern Africa.

### Consumption

In terms of demand, global asbestos consumption is an estimated 950,000 t/y outside Russia and China. Most is consumed in fibre reinforcement building materials. Fibrocement (chrysotile asbestos cement) is still widely used in developing countries and considered the best cost/benefit construction material. However, the competition from coloured iron sheets and the pressures of the ban-asbestos movement are continuing to erode the market.

The main markets for asbestos, and accounting for some 90% of production, are in the construction industry, particularly asbestos cement products. Roofing shingles, guttering, water tanks, pipes and silos have all traditionally been made from asbestos cement. Pipe and sheet asbestos products are strong, relatively low cost, corrosion resistant and easily manufactured with simple equipment. This explains the continued popularity of asbestos cement products in developing countries in Latin America, the Middle East and Asia. In the construction industry, asbestos faces substitution and competition from a wide variety of other minerals. For example, PVC and fibre glass reinforced products are used instead of asbestos cement products. This substitution is driven by legislation, as the mineral remains a relatively inexpensive product. Chrysotile also finds niche applications in friction products, fire-resistant applications, and as a reinforcing agent.

The European Union placed a total ban on the use of all types of asbestos with effect from 2005, following a directive issued in 1999. This will have an impact on the chrysotile market, which was an estimated 25-30,000 t in 2001 in Europe. The only exception to this will be the use of chrysotile in diaphragms used in electrolysis in some chlorine operations.

The EU decision is now having a knock-on effect on the Asian market, particularly Japan. Demand for chrysotile in southeast Asia in 2001 remained static, whilst markets in Taiwan, Japan and Korea all declined. Fibrocement is very suitable for use in hot and humid climates, and because of this, it is still widely used in India, Thailand, Indonesia, and Vietnam. The one region where fibrocement is not yet widely used is Africa, where the level of development and construction is relatively low compared with Asia.

Substitute materials for chrysotile are much more expensive and the fibrocement produced is not as resistant to weather. These advantages are ensuring that the chrysotile market will survive until the competition can come much closer in terms of quality and price.

### Chrysotile Prices Mid-2001

	Canada ex-mine (C\$/t)	South Africa ex-mine (US\$/t)	Greece (fob Port) (US\$/t)
Grade 3	1,494-1,803		
Grade 4	1,030-1,442		675-750
Grade 5	684-950	360-440	525-625
Grade 6	425-610	300-350	325-500
Grade 7	210-435	200-290	200-300

Source: Mineral PriceWatch, July 2001

Chrysotile prices have essentially remained stagnant over the past five years, owing to the competition throughout the industry. Prices for asbestos are usually fixed by annual contracts, and discount schemes are in place for bulk customers.

Asbestos litigation claimed further corporate victims in 2001. In July, building materials producer, USG Corp. filed for a voluntary petition for reorganisation under chapter 11 of the US Bankruptcy Code. Asbestos litigation, particularly in the US appears, to be almost out of control, with a high rate of law suits, some filed by people who are not even sick. Between the beginning of 2000 and June 2001, eight companies in the US filed for Chapter 11 protection to resolve asbestos claims including major companies such as Owens Corning, Armstrong World Industries and W.R. Grace.

The escalation in claims is due to the principle of joint and several liability. Plaintiff's lawyers include as many companies as possible in their lawsuits, regardless of their relative responsibilities in order to maximise the settlements. But as more companies file for bankruptcy, joint and several liability means that the remaining companies are required to pay the share of the missing defendants. The lawyers also take advantage of the fact that companies find it cheaper to settle out of court rather than incur costly trial costs. According to USG, even the US Supreme Court is quoted as saying that "... the elephantine mass of asbestos litigation demands a legislative solution" such is the volume of claims. The saga continues and as it does, the volume of negative publicity is a headache the asbestos industry could well do without.