Chrysotile

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In 1996, Canadian chrysotile shipments increased a marginal 1% from 1995 levels. Canadian chrysotile mines, which are located in Quebec, operated at an average of 89% of current capacity. A tailings reprocessing operation in Newfoundland is now closed; only a very small amount of fibres from inventory was sold during the year. Average prices increased by about 3%. Total shipments for 1996 were estimated to be 520 500 t valued at $238.1 million, compared to revised shipment figures for 1995 of 515 553 t valued at $234.7 million.

Canadian exports of chrysotile in 1996 were an estimated 501 299 t. This represents a 1.6% decrease in volume from the previous year. The value of these exports increased by an estimated 0.6%. Exports in the January-September 1996 period totalled 375 126 t valued at $229.3 million, compared with 377 694 t valued at $226.9 million for the same period in 1995.

CHRYSOTILE, WORLD PRODUCTION BY COUNTRY, 1996

Country	Tonnes[e]
Commonwealth of Independent States	800 000
Canada	520 500
China	250 000
Brazil	180 000
Zimbabwe	165 000
Republic of South Africa	90 000
Greece	60 000
Swaziland	30 000
India	25 000
United States	9 500
Colombia	5 000
Others	5 000
Total	2 140 000

Sources: Natural Resources Canada; U.S. Geological Survey.
[e] Estimated.

In 1996, world production of chrysotile is believed to have decreased by about 7% to reach a level of 2.14 Mt. Most of this decrease is attributable to lower production in Russia and Kazakstan. However, production in other producing countries seemed to have stabilized when compared to 1995.

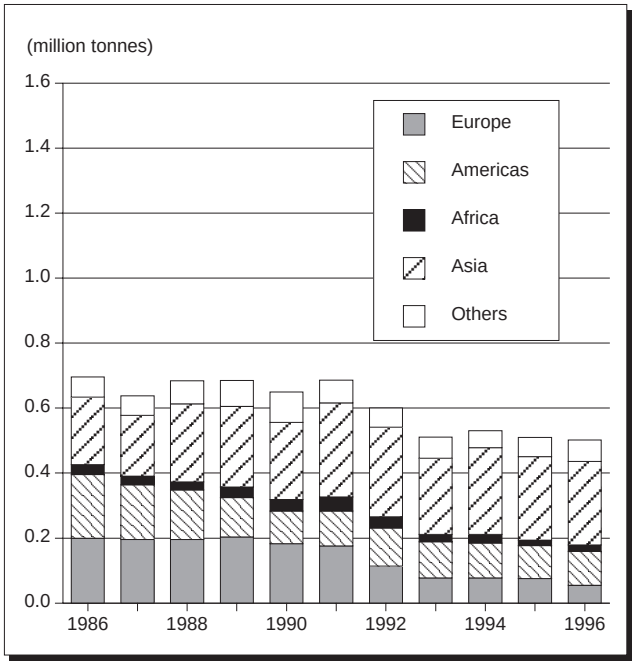
Due to the re-opening of the British-Canadian operations in Quebec, employment in the Canadian chrysotile industry increased by about 300 in 1996.

CHRYSOTILE AND ITS USES

Chrysotile (a natural fibrous hydrated silicate) is the only form of asbestos in the serpentine group. Crocidolite, amosite, anthophyllite, actinolite and tremolite form the amphibole group. Of these minerals, chrysotile is the least dangerous to human health and is the only one extracted in Canada. Chrysotile, which is sensitive to acid, tends to dissolve in the lungs, unless these are overburdened from exposure to excessive levels in the occupational environment. All fibres that enter the lungs cause mechanical irritation. In the past, most of the problems associated with chrysotile have been due to the poor working practices that existed then both in the handling and use of chrysotile. With the marked improvements in today's work practices and the increased protection of workers, the occupational risks associated with chrysotile have been tremendously reduced and are controllable with existing technology.

Because of their chemical and physical properties, chrysotile fibres are an extremely useful material that has been, and still is being, widely used throughout the world. In Canada, chrysotile fibres are classified into seven groups, each one with its own subcategories, with the longest fibres assigned to Group 1 and the shortest to Group 7. In decreasing length, chrysotile has been used in textiles, clothing, packings, woven brake linings, clutch facings, electrical insulation materials, high-pressure and marine insulation, asbestos-cement pipe, other asbestos-cement products (e.g., sheets and mouldings, shingles), gaskets, paper products, vinyl sheet backings, and millboards. The shortest fibres (Group 7) are used in moulded brake linings and clutches, and as a filler in

Figure 1
Canadian Chrysotile Exports, 1986-96



Sources: Natural Resources Canada; Statistics Canada.

vinyl and asphalt floor tiles, cement, plastics, roof coatings, and caulking compounds. Some 85% of all chrysotile produced globally is used in asbestos-cement products. Low-density and friable products are no longer marketed and are prohibited in Canada under the *Hazardous Products Act*.

CANADIAN DEVELOPMENTS

In 1996, the production levels of LAB Chrysotile Inc. (the largest Canadian chrysotile producer) were lower than in 1995, despite the re-opening of the British-Canadian operations on July 8, 1996. British-Canadian was closed on May 27, 1995, in order to carry out an exploratory program aimed at assessing new reserves capable of improving fibre concentration. Of the 400 workers affected by the indeterminate closure, about 325 were recalled when production re-started. Production at the British-Canadian complex is now limited to the British-Canadian mine; the Beaver mine is no longer producing. The lower production levels at LAB Chrysotile are explained by the build-up of inventory in 1995 that was partly sold in 1996. Production levels are expected to return to their original level in 1997. At the Bell mine, which is the only underground chrysotile operation in Canada, current reserves will permit operations to continue until 1999. However, the drilling program undertaken in 1995 to delineate further reserves will ensure the mine's life into the next century. A new development project at the 1750 level has been announced and is under way. The current production level is 1450. In the meantime, the workers of the Bell mine signed a new five-year long-term contract. At the company's Black Lake operation, reserves are sufficient for the next 14 years at current rates of production. During 1996, LAB Chrysotile was successful in obtaining ISO certification 9002 on quality assurance.

In 1996, J.M. Asbestos Inc. signed a five-year contract with its labour unions. Its 1996 production level remained at 206 000 t, which is comparable to that of 1995. In early 1996, the company announced that it had decided to proceed with the first phase of an underground operation to extend the life of the Jeffrey mine until 2020. The capital cost of this development is estimated to be $125 million. The underground mine project will be financed from the operation's cash flows and a rotation loan of $40 million. In addition, the company has restructured its partnership from 75:25 (Groupe Minier Asbestos-Estrie and COOP des Travailleurs) to 55:30:15 (Groupe Minier, COOP, and Capital d'Amérique). With this new development, production at J.M. Asbestos Inc. will gradually be transferred from the open-pit to the underground mine. Completion of the transition is scheduled for mid-year 2000, which matches the residual life of the ore reserves developed with the last expansion of the open-pit mine. The new underground operation will have a maximum capacity of 250 000 t/y of chrysotile fibre. Construction work for the underground mine officially started on September 17, 1996, and is proceeding on schedule.

As in the previous year, Teranov Mining Corp. of Baie Verte, Newfoundland, did not return to production in the spring due to continuing financial difficulties. Although the future of this operation appears to be uncertain, the provincial government issued a call for proposals that closed on December 20, 1996. Several projects have been received and are currently being studied. Because of potential liability, the bank has not appointed a receiver. This operation was the only tailings reprocessing facility in North America using a wet milling technology to recover the fibre. Teranov Mining Corp. is co-owned equally by Black Hill Minerals Ltd. (under administration) and Cliff Resources Corporation. During the course of 1996, Teranov Mining Corp. sold most of its remaining inventory.

In British Columbia, at the site of the old Cassiar Mining Corporation operations, the joint-venture group comprised of Cliff Resources Corporation, Strategic Investments, and Black Hill Minerals Ltd. continued its work on a small mill that is scheduled to become operational in August 1997. At that time, production is expected to be 500 t/m of fibre for test marketing. If successful, production will gradually increase to reach a maximum of 50 000 t/y of fibre. Some new funding comes from Haas Neuveux, a

Denver, Colorado company. The plan calls for the reprocessing of the existing tailings using a wet milling technique and, in the process, rehabilitation of the site. Chrysotile Management Corporation Ltd. will act as the marketing agent for this new operation, in addition to acting as the marketing agent for the inventory of Teranov Mining Corp.

INTERNATIONAL AND REGULATORY DEVELOPMENTS

United States

The U.S. Geological Survey estimated 1996 Canadian chrysotile imports into the United States at about 21 400 t compared to 21 800 t in 1995. Canada remains the largest exporter of chrysotile to the United States. In the United States, asbestos was consumed in roofing products (48%), friction products (32%), packings (12%) and other products (8%). Although no longer manufactured in the United States, asbestos-cement pipes are currently being imported from Mexico into the United States where there remains an important demand for this product. U.S. exports of chrysotile fibres, mainly to Japan, continued to slip, due mainly to reduced demand in that country. The United States is exporting asbestos-containing products to several countries, including Australia, Canada, Germany, Japan, Mexico, the United Kingdom and Venezuela.

The American Conference of Governmental Industrial Hygienists (ACGIH) has again carried forward its notice of intended changes for asbestos in its monograph on Threshold Limit Values. If the values proposed in the notice were to be adopted, organizations following ACGIH guidelines would lower their occupational exposure limit for chrysotile from the current 2 f/cm^3 to 0.2 f/cm^3. The adoption of a single exposure limit for all asbestos fibres would ignore the scientific evidence that chrysotile carries less risk than other asbestos fibres and the growing recognition that all fibrous materials have different health risk implications. At the urging of several groups, the ACGIH is currently studying the latest scientific information available on the subject. A decision is not expected before the fall of 1997.

Latin America

Brazil is an important producer of chrysotile, especially for the increasingly active market of Latin America. Sociedade Anonima Mineraçao do Amianto (SAMA) produced about 180 000 t in 1996, a level similar to 1995. SAMA's mine is located at Minaçu in the state of Goiás. The company has programs for waste site reforestation, the treatment of mine and mill waste-waters, and dust control (through the use of wet recovery processes).

The Asbestos International Association (AIA) regional program for Latin American countries, the AIA/CLAS (Confederación Latinoamericana del Asbesto), was very active and held a meeting in the fall of 1996. The objective of the program is to foster regional cooperation and identify joint priorities for action in Latin America in the context of broader efforts to gain wider global acceptance of the controlled-use approach for chrysotile. It is a firm commitment on the part of industry in all of the participating countries to implement the International Labour Organization Convention 162 on Safety in the Use of Asbestos.

Europe

Greece

The Zidani chrysotile mine in Greece, which returned to production in 1993 under the terms of a renewable five-year lease to Hellenic Mineral Mining Co. Ltd. (HMMC), produced about 60 000 t of chrysotile fibres in 1996.

France

In 1996, the asbestos issue became a political issue in France and, as a result, the French government announced on July 3, 1996, that it was banning the import, manufacture and sale of most asbestos products effective January 1, 1997. This decision followed an intense campaign in all French media with the objective of bringing the issue to the emotional level. The way this issue was raised was, in many respects, very similar to that which resulted in the elimination of the asbestos industry in the United States. The French decision was based on a report from the Institut National de la Santé et de la Recherche Médicale (INSERM).

This decision came amid the signature, in the spring of 1996, of two decrees aimed at dealing with the issue of asbestos in buildings and occupational exposure to asbestos. The decree on occupational exposure had been discussed with the French asbestos industry and, although it was initially acknowledging the difference in potency of the various types of fibres (0.1 f/cm^3 for amphiboles and 0.3 f/cm^3 for chrysotile effective immediately), this difference was to be eliminated with a single occupational exposure of 0.1 f/cm^3 in 1998. The issue of asbestos in buildings was spearheaded by the situation at the Jussieu University, which has a very active anti-asbestos group.

Because the French decision was based on a report from a credible French scientific body, the Government of Canada undertook to have the INSERM report reviewed by a panel of international experts hired by the Royal Society of Canada. The main findings of this review are: (1) that there are no new scientific data that would justify a change in policy; and (2) that the INSERM report over-estimated the real

risks to the French population, mainly because of the lack of realistic exposure data. These findings are very important for Canada as they reinforce its "controlled-use" position that was adopted in the early 1980s.

As a result of the French ban, the headquarters of the Asbestos International Association located in Paris will close on March 31, 1997, and the international asbestos industry will have to decide on a new location, which is expected to be announced sometime in 1997.

European Commission

There is little doubt that the French decision may have some impact on the position of the European Commission on the asbestos issue considering that the current position is one of controlled use. However, on November 7, 1996, a first attempt at a revision of the Commission's position on asbestos met enough resistance from the last European asbestos-consuming countries to be defeated. For the moment, these five countries, Belgium, Greece, Ireland, Portugal and Spain, remain determined to continue using chrysotile.

It is also worth noting that following the French ban announcement, on September 9, 1996, the European Commission (DG V - Employment, Industrial Relations and Social Affairs) issued a press release indicating that current Commission standards on asbestos exposure in the workplace adequately protect workers' safety.

Responsible-Use Policy

As the result of a 1994 meeting, the chrysotile producers and exporters of four countries (Brazil, Canada, Swaziland and Zimbabwe) signed in late 1995/early 1996 a new voluntary policy aimed at increasing workers' protection worldwide. The ultimate objective of this new policy, to be known as the "Responsible Use of Chrysotile," is to supply chrysotile only to those users that are in compliance with their respective national regulations or that have submitted a written commitment with an action plan in order to be in full compliance with their national regulations. The Responsible-Use Policy is based on the recognition and acceptance of the principles of the 1986 International Labour Organization Convention 162 and Code of Practice on Safety in the Use of Asbestos.

The Canadian government, along with Canadian chrysotile producers and the Quebec government, is studying the possibility of signing a memorandum of understanding in support of the Responsible-Use Policy.

OUTLOOK

As a consequence of the French ban, chrysotile consumption in Europe in 1997 will be dramatically reduced, first because France was a major consumer, and second, because of the impact the French decision will have on chrysotile consumption in other European consuming countries. It is, however, comforting to see that the last European countries with a chrysotile industry, particularly Spain, Portugal and Greece, appear determined to continue using the product.

In developing countries, the benefits and safety of chrysotile-cement products continue to be recognized despite increasing competition from substitute fibres and steel. In particular, chrysotile-cement pipes are essential to the distribution of potable water and irrigation in many countries where climatic conditions and economic conditions are not appropriate for substitute products. Asian countries are still the main markets for Canadian fibres, accounting for over 60% of Canadian exports in 1996. Although Japan is still the preferred destination, it is expected that Thailand will join Japan at the top of the list in 1997. In 1996, the market in India retained the same position as in 1995 and is expected to remain strong for the next few years, mainly due to increased demand for infrastructure. Indonesia and Korea continued to be very significant markets in 1996 and are expected to remain so in 1997. The Americas maintained their position as an important destination of Canadian chrysotile, accounting for about 21% of Canada's exports. In 1996, Mexico posted a significant increase as the result of a marked improvement in the economy following the strong downturn of 1995; 1997 should continue to show the strength of the Mexican economy. Canadian exports to Cuba in 1996 more than doubled compared to 1995 levels; in 1997, Cuba should continue to be a growing destination for Canadian chrysotile. Exports to the United States remained at the same level as in 1995 and are expected to remain stable for the coming year. After several years of decrease, markets in Africa and the Middle East are showing some signs of strength after posting a small increase in 1996; this renewed strength is expected to continue in 1997. The aggressive introduction of new chrysotile-containing products to address current health concerns may help turn markets around.

Notes: (1) For definitions and valuation of mineral production, shipments and trade, please refer to Chapter 70. (2) Information in this review was current as of December 31, 1996.

TARIFFS

Item No.	Description	Canada			United States
		MFN	GPT	USA	Canada
2524.00.10	Crude asbestos	Free	Free	Free	Free
2524.00.90	Other asbestos	Free	Free	Free	Free
6811.10	Corrugated sheets of asbestos-cement, of cellulose fibre-cement or the like	6.4%	3%	Free	Free
6811.20	Sheets n.e.s., panels/tiles etc. of asbestos-cement, cellulose fibre-cement, etc.	6.4%	3%	Free	Free
6811.30	Tubes, pipes, and tube or pipe fittings of asbestos-cement, of cellulose fibre-cement, etc.	6.4%	3%	Free	Free
6811.90	Articles n.e.s. of asbestos-cement, of cellulose fibre-cement, or the like	6.4%	3%	Free	Free
6812.10	Fabricated asbestos fibres; mixtures with a basis of asbestos or with a basis of asbestos and magnesium carbonate	Free	Free	Free	Free
6812.20	Asbestos yarn and thread	Free	Free	Free	Free
6812.30	Asbestos cords and string, whether or not plaited	Free	Free	Free	Free
6812.40	Asbestos woven or knitted fabric	Free	Free	Free	Free
6812.50	Asbestos clothing, clothing accessories, footwear and headgear	19.4%	x	Free	Free
6812.60	Asbestos paper, millboard and felt	Free	Free	Free	Free
6812.70	Compressed asbestos fibre jointing, in sheets or rolls	Free	Free	Free	Free
6812.90.10	Asbestos belting	Free	Free	Free	Free
6812.90.90	Other asbestos fabricated products n.e.s.	Free	Free	Free	Free
6813.10.10	Asbestos brake linings and pads for motor vehicles of heading nos. 87.02, 87.03, 87.04 or 87.05	9% BPT-Free	Free	1.1%	Free
6813.10.90	Other asbestos brake linings and pads	6.4%	5%	0.8%	Free
6813.90.10	Asbestos clutch facings for motor vehicles of heading nos. 87.02, 87.03, 87.04 or 87.05	9%	7.5%	1.1%	Free
6813.90.90	Other asbestos friction material and articles n.e.s.	7.3%	Free	0.9%	Free

Sources: Customs Tariff, effective January 1997, Revenue Canada; Harmonized Tariff Schedule of the United States, 1997.
BPT British Preferential Tariff; n.e.s. Not elsewhere specified; x The Governor in Council may substitute a custom duty rate.

TABLE 1. CANADA, ASBESTOS PRODUCTION AND TRADE, 1995 AND 1996

Item No.		1995		1996[p]	
		(tonnes)	($000)	(tonnes)	($000)
PRODUCTION (Shipments)					
	By type				
	Crude, groups 1, 2 and other milled	–	–	. .	. .
	Group 3, spinning	6 600	6 186	. .	. .
	Group 4, shingle	125 897	89 123	. .	. .
	Group 5, paper	123 124	61 701	. .	. .
	Group 6, stucco	162 789	55 737	. .	. .
	Group 7, refuse	97 143	21 983	. .	. .
	Total	515 553	234 730	520 500	238 060
	By province				
	Quebec	511 904	233 747	519 000	237 680
	Newfoundland	3 649	983	1 500	380
	Total	515 553	234 730	520 500	238 060
EXPORTS					
2524.00.10	Crude asbestos				
	Japan	709	406	612	238
	United States	212	59	206	55
	Venezuela	47	25	17	6
	Total	968	490	835	299
2524.00.21	Asbestos milled fibres, Group 3 grades				
	EC countries (12)[1]				
	Spain	353	456	106	137
	Portugal	166	223	43	57
	Germany	33	43	11	14
	United Kingdom	404	527	4	5
	France	1	1	–	–
	EC countries, subtotal	957	1 250	164	213
	Mexico	1 226	1 573	1 280	1 656
	Thailand	377	489	1 680	1 584
	Turkey	582	754	532	691
	Peru	254	332	456	596
	South Korea	344	445	449	580
	India	556	740	408	534
	Brazil	357	479	364	491
	Israel	625	812	275	357
	Other countries	1 350	1 351	1 035	1 146
	Total	6 628	8 225	6 643	7 848
2524.00.22	Asbestos milled fibres, groups 4 and 5 grades				
	EC countries (12)[1]				
	Spain	10 508	9 964	10 033	9 597
	France	20 985	17 052	10 768	9 018
	United Kingdom	5 743	5 166	3 860	3 427
	Belgium	3 401	3 158	2 521	2 347
	Portugal	2 282	2 201	2 346	2 215
	Ireland	1 395	871	1 121	770
	Denmark	50	36	13	9
	Germany	24	29	23	29
	EC countries, subtotal	44 388	38 477	30 685	27 412
	Thailand	45 384	34 309	41 596	31 956
	Japan	36 702	31 577	33 207	30 293
	India	17 857	14 202	17 636	14 152
	Mexico	7 018	6 193	13 458	11 765
	Indonesia	15 105	10 302	14 905	10 356
	Colombia	12 130	10 868	11 535	10 094
	Algeria	6 446	4 875	7 800	6 805
	Sri Lanka	3 887	3 601	6 057	5 857
	Cuba	2 656	1 857	6 687	5 071
	Brazil	7 517	6 580	5 554	4 992
	Chile	5 274	4 393	5 363	4 647
	Egypt	854	810	3 300	3 505
	Morocco	2 649	2 341	3 756	3 445
	Malaysia	9 781	7 426	4 097	3 443
	Pakistan	2 107	1 695	3 922	3 408
	United Arab Emirates	1 809	1 767	2 747	2 802
	South Korea	5 122	3 187	3 228	2 102
	Peru	3 449	2 914	2 521	2 094
	Tunisia	911	954	1 850	1 899
	Other countries	13 577[r]	11 293[r]	12 564	10 518
	Total	244 623[r]	199 621[r]	232 468	196 616

TABLE 1 (cont'd)

Item No.		1995		1996[p]	
		(tonnes)	($000)	(tonnes)	($000)
EXPORTS (cont'd)					
2524.00.29	Asbestos shorts, groups 6, 7, 8 and 9 grades				
	EC countries (12)[1]				
	Spain	2 939	1 259	4 692	2 034
	France	8 992	2 730	3 135	974
	United Kingdom	2 283	806	2 640	941
	Belgium	3 535	1 394	1 870	829
	Ireland	1 575	639	1 279	539
	Portugal	1 737	561	1 409	429
	Denmark	295	143	213	111
	Germany	36	11	48	26
	Greece	72	15	18	4
	EC countries, subtotal	21 464	7 558	15 304	5 887
	Japan	47 667	19 521	51 493	20 946
	Thailand	30 137	13 264	40 595[r]	19 496
	South Korea	38 956	14 881	38 630	14 495
	India	24 523	10 448	24 645	10 815
	United States	21 094[r]	6 264[r]	20 879	6 157
	Indonesia	11 016	4 427	12 756	5 371
	Colombia	10 253	4 137	7 835	3 287
	Mexico	7 289	2 333	9 577	3 197
	Malaysia	7 528	2 883	6 045	2 437
	Brazil	6 826	2 175	5 885	2 197
	Taiwan	3 477	1 430	3 885	1 561
	Sri Lanka	1 053	536	2 086	1 081
	Other countries	26 073	9 887	21 738	8 167
	Total	257 356[r]	99 744[r]	261 353[r]	105 094
Grand total, crude, milled fibres and shorts		509 575	308 080[r]	501 299	309 857
6811.10	Corrugated sheets of asbestos-cement, of cellulose fibre-cement, or the like				
	United States	. .	1 578	. .	1 543
	People's Republic of China	. .	11	–	–
	Total	. .	1 589	. .	1 543
6811.20	Sheets n.e.s., panels/tiles, etc., of asbestos-cement, cellulose fibre-cement, etc.				
	United States	. .	1 570	. .	2 123
	Philippines	–	–	. .	158
	Finland	–	–	. .	21
	Australia	–	–	. .	11
	Cuba	. .	65	–	–
	Total	. .	1 635	. .	2 313
6811.30	Tubes, pipes and tube or pipe fittings of asbestos-cement, of cellulose fibre-cement, etc.				
	Libyan Arab Jamahiriya	–	–	. .	19
	United States	. .	4	–	–
	Total	. .	4	. .	19
6811.90	Articles n.e.s. of asbestos-cement, of cellulose fibre-cement, or the like				
	Croatia	–	–	. .	17
	United States	. .	34	. .	16
	People's Republic of China	–	–	. .	4
	Taiwan	. .	86	–	–
	Total	. .	120	. .	37
6812.10	Fabricated asbestos fibres; mixtures with a basis of asbestos or with a basis of asbestos and magnesium carbonate				
	United States	. .	16	. .	7
	Total	. .	16	. .	7

TABLE 1 (cont'd)

Item No.		1995		1996p	
		(tonnes)	($000)	(tonnes)	($000)
EXPORTS (cont'd)					
6812.20	Asbestos yarn and thread				
	Brazil	59	265	44	211
	Iran	–	–	47	127
	United States	8	77	7	96
	United Kingdom	1	6	14	83
	Morocco	–	–	13	47
	Colombia	36	164	9	39
	Philippines	10	62	4	27
	Other countries	54	293	5	20
	Total	168	867	143	650
6812.30	Asbestos cords and string, whether or not plaited				
	United States	..	2	..	30
	Italy	..	7	–	–
	Total	..	9	..	30
6812.40	Asbestos woven or knitted fabric				
	United Kingdom	128	938	91	745
	United States	43	564	30	391
	Other countries	15	116	1	6
	Total	186	1 618	122	1 142
6812.50	Asbestos clothing, clothing accessories, footwear and headgear				
	Japan	–	–	..	20
	Cuba	–	–	..	17
	Other countries	..	5	..	24
	Total	..	5	..	61
6812.60	Asbestos paper, millboard and felt				
	Switzerland	–	–	..	56
	United States	..	9	..	5
	South Korea	..	199	–	–
	Other countries	..	44	–	–
	Total	..	252	..	61
6812.70	Compressed asbestos fibre jointing, in sheets or rolls				
	United States	..	1 020	..	945
	Other countries	..	101	..	139
	Total	..	1 121	..	1 084
6812.90.10	Asbestos building material, n.e.s.				
	Saint Pierre and Miquelon	–	–	..	30
	Other countries	..	113	..	8
	Total	..	113	..	38
6812.90.90	Other asbestos fabricated products n.e.s.				
	United States	..	76	..	107
	Other countries	..	169	..	16
	Total	..	245	..	123
6813.10	Asbestos brake linings and pads				
	United States	..	40 744	..	35 483
	Other countries	..	62	..	478
	Total	..	40 806	..	35 961
6813.90	Asbestos friction material and articles n.e.s.				
	United States	–	–	..	31
	Peru	–	–	..	9
	People's Republic of China	–	–	..	4
	Total	–	–	..	44
Total exports, asbestos manufactured		..	48 400	..	43 113

TABLE 1 (cont'd)

Item No.		1995		1996p	
		(tonnes)	($000)	(tonnes)	($000)
IMPORTS					
2524.00.10	Crude asbestos	252	289	242	55
2524.00.90	Other asbestos	45	40	111	133
6811.10	Corrugated sheets of asbestos-cement, of cellulose fibre-cement, or the like	175	123	168	147
6811.20	Sheets n.e.s., panels/tiles, etc., of asbestos-cement, cellulose-fibre cement, etc.	1 193	1 516	1 278	1 424
6811.30	Tubes, pipes, and tube or pipe fittings of asbestos-cement, cellulose fibre-cement, etc.	655	526	498	438
6811.90	Articles n.e.s., of asbestos-cement, cellulose fibre-cement or the like	138	533	104	427
6812.10	Fabricated asbestos fibres; mixtures with a basis of asbestos or with a basis of asbestos and magnesium carbonate	35	121	14	79
6812.20	Asbestos yarn and thread	5	25	3	17
6812.30	Asbestos cords and string, whether or not plaited	12	99	8	54
6812.40	Asbestos woven or knitted fabric	55	729	52	763
6812.50	Asbestos clothing, clothing accessories, footwear and headgear	11	281	8	211
6812.60	Asbestos paper, millboard and felt	. .	201	. .	224
6812.70	Compressed asbestos fibre jointing, in sheets or rolls	129	1 512	109	1 246
6812.90.10	Asbestos belting	. .	5	. .	2
6812.90.90	Other asbestos fabricated products n.e.s.	. .	2 146r	. .	2 001
6813.10	Asbestos brake linings and pads	. .	59 137r	. .	60 847
6813.90	Asbestos friction material and articles n.e.s.	. .	7 679	. .	7 092

Sources: Natural Resources Canada; Statistics Canada.
– Nil; . . Not available or not applicable; n.e.s. Not elsewhere specified; p Preliminary; r Revised.
1 EC includes Belgium, Denmark, France, Germany, Greece, Ireland, Italy, Luxembourg, the Netherlands, Portugal, Spain and the United Kingdom.
Note: Numbers may not add to totals due to rounding.

TABLE 2. CANADIAN CHRYSOTILE PRODUCERS, 1996

Producers	Mine Location	Normal Mill Capacity Ore/Day	Normal Mill Capacity Fibre/Year	Remarks
		(tonnes)		
Teranov Mining Corp.	Baie Verte, Nfld.	6 000	20 000	Wet-processing of tailings started in July 1991. Jointly owned by Black Hill Minerals Ltd. (50%) and Cliff Resources Corporation (50%). Did not produce in 1995.
LAB Chrysotile Inc.[1]				Partnership owned 55% by LAQ and 45% by Mazarin Mining Corporation Inc.
- Lac d'Amiante du Québec, Ltée (LAQ)	Black Lake, Que.	9 000	185 000	Open-pit. Since September 1989, LAQ has been owned by Jean Dupéré (President of LAB Chrysotile) and Connell Bros. Company, Ltd. of the United States.
- Asbestos Corporation Limited British Canadian mine	Black Lake, Que.	7 000	55 000	Sold to Mazarin Mining Exploration Inc. on September 2, 1992. Open-pit. Re-opened on July 8, 1996, but on a slightly smaller scale.
- Bell Asbestos Mines, Ltd.	Thetford Mines, Que.	2 700	100 000	Sold to Mazarin Mining Exploration Inc. on September 2, 1992. Underground. Mine re-opened January 1989.
J.M. Asbestos Inc. Jeffrey mine	Asbestos, Que.	15 000	250 000	Open-pit (effective capacity reduced by one half since 1982).
Total of four producers at year-end			590 000	

[1] A partnership involving three operating companies.

TABLE 3. CANADA, ASBESTOS PRODUCTION AND EXPORTS, 1985-96

	Crude Asbestos	Milled Fibres	Short Fibres	Total
		(tonnes)		
PRODUCTION[1]				
1985	–	397 729	352 461	750 190
1986	–	332 092	330 289	662 381
1987	–	365 144	299 402	664 546
1988	14	399 550	310 793	710 357
1989	–	410 588	303 448	714 036
1990	–	379 047	306 580	685 627
1991	–	335 506	350 502	686 008
1992	–	259 819	327 175	586 994
1993	–	235 908	287 059	522 967
1994	–	249 862	280 995	530 857
1995	–	255 621	259 932	515 553
1996[p]	. .	. .	. .	520 500
EXPORTS				
1985	44	395 158	326 311	721 513
1986	127	375 948	341 609	717 684
1987	1 696	353 321	293 808	648 825
1988	11 288	381 561	292 236	685 085
1989	17 198	379 601	312 915	709 714
1990	1 469	378 074	269 942	649 485
1991	2 302	353 391	330 360	686 053
1992	1 489	272 013	327 075	600 577
1993	1 739	229 000	279 695	510 434
1994	2 155	248 804	280 394	531 353
1995	968	251 251[r]	257 356[r]	509 575
1996[p]	835	239 111	261 353[r]	501 299

Sources: Natural Resources Canada; Statistics Canada.
– Nil; . . Not available; [p] Preliminary; [r] Revised.
[1] Producers' shipments.