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INTERIM CHEMICAL REVIEW COMMITTEE

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Item 6 (a) of the provisional agenda*

INCLUSION OF CHEMICALS IN THE INTERIM PRIOR INFORMED CONSENT PROCEDURE:
REVIEW OF NOTIFICATIONS OF FINAL REGULATORY ACTIONS TO BAN OR SEVERELY
RESTRICT A CHEMICAL

Asbestos

Note from the Secretariat

1. After the distribution of document UNEP/FAO/PIC/ICRC.3/14 that contains three verified notifications from two PIC regions relating asbestos: Australia (amphibole forms), EU (amphibole forms and chrysotile) and Czech Republic (amphibole forms), the secretariat, on January 11 2002, received from Chile a new notification of final regulatory action on asbestos and its supporting documentation. This notification covers crocidolite, actinolite, anthophyllite, tremolite amosite, and chrysotile; and has been verified to meet information requirements of Annex I of the Convention. Summary of the notification will be published in PIC Circular XV (June 2002).
2. For chrysotile asbestos, as EU has provided the first verified notification, this newly submitted Chilean notification represents the second verified notification from the second PIC region.
3. Considering the potential benefits, such as avoiding a separate process for chrysotile in the future and having a more complete DGD, the secretariat, after discussing with the Chair of the Interim Chemical Review Committee, has informed ICRC members and registered observers in a letter dated 18 January 2002 of including the Chilean notification on the agenda of ICRC3 for review.
4. The notification and its supporting documentation from Chile were submitted in Spanish and have been translated by the secretariat. Attached to this note is the English translation of both the notification and the supporting documentation. The English translation along with the Spanish originals is also available on the web site of the Rotterdam Convention.

* UNEP/FAO/PIC/ICRC.3/1



**FORM
FOR NOTIFICATION OF FINAL REGULATORY ACTION
TO BAN OR SEVERELY RESTRICT A CHEMICAL**

IMPORTANT: See instructions before filling in the form

COUNTRY: CHILE

PART I: PROPERTIES, IDENTIFICATION AND USES

1. IDENTITY OF CHEMICAL		
1.1	Common name	Asbestos
1.2	Chemical name according to an internationally recognized nomenclature (e.g. IUPAC), where such nomenclature exists	Crocidolite, actinolite, anthophyllite, tremolite, amosite, chrysotile
1.3	Trade names and names of preparations	<i>Amianto</i> [asbestos], <i>amianto crocidolita</i> [crocidolite asbestos], <i>asbesto azul</i> [blue asbestos], <i>asbesto</i> [asbestos]
1.4	Code numbers	
1.4.1	CAS number	12001-28-4 Crocidolite 13768-00-8 Actinolite 17068-78-9 Anthophyllite 14567-73-8 Tremolite 12172-73-5 Amosite 12001-29-5 Chrysotile
1.4.2	Harmonized System customs code	National system based on the Harmonized System, section 2524.0000 <i>Amianto</i> (asbestos).
1.4.3	Other numbers (specify the numbering system)	United Nations number: 2212 Crocidolite, Amosite 2590 Actinolite, anthophyllite, tremolite, chrysotile
1.5	Indication regarding previous notification on this chemical, if any	
1.5.1	<input checked="" type="checkbox"/> This is a first time notification of final regulatory action on this chemical.	
1.5.2	<input type="checkbox"/> This is a modification of a previous notification of final regulatory action on this chemical. The sections modified are: _____	
	<input type="checkbox"/> This notification replaces all previously submitted notifications on this chemical.	
	Date of issue of the previous notification: _____	

PLEASE RETURN THE COMPLETED FORM TO:

Interim Secretariat for the Rotterdam Convention
Plant Protection Service
Plant Production and Protection Division, FAO
Viale delle Terme di Caracalla
00100 Rome, Italy
Tel: (+39 06) 5705 3441
Fax: (+39 06) 5705 6347
E-mail: pic@fao.org

OR

Interim Secretariat for the Rotterdam Convention
UNEP Chemicals

11-13, Chemin des Anémones
CH - 1219 Châtelaine, Geneva, Switzerland
Tel: (+41 22) 917 8183
Fax: (+41 22) 797 3460
E-mail: pic@unep.ch

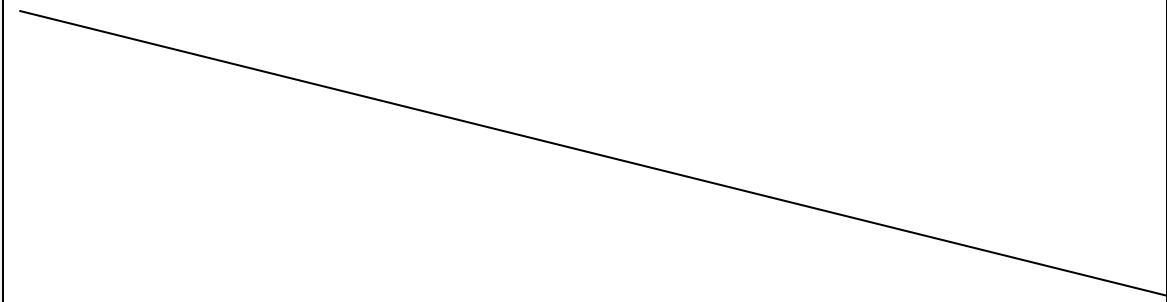
1.6 Information on hazard classification where the chemical is subject to classification requirements	
International classification systems	Hazard class
United Nations	Crocidolite, amosite: miscellaneous hazardous substances (9)
United Nations	Actinolite, anthophyllite, tremolite, chrysotile: miscellaneous hazardous substances (9)
International Agency for Research on Cancer (IARC)	Group 1: Asbestos is carcinogenic in humans. Includes actinolite, amosite, anthophyllite, chrysotile, crocidolite and tremolite.
Other classification systems	Hazard class

1.7 Use or uses of the chemical	
1.7.1	<input type="checkbox"/> Pesticide
	Describe the uses of the chemical as a pesticide in your country:
1.7.2	<input checked="" type="checkbox"/> Industrial
	Describe the industrial uses of the chemical in your country:
	Manufacture of construction materials, in particular asbestos-cement panelling, asbestos pipes, roof tiles, and preformed products such as tanks. Manufacture of brake linings and clutches.

1.8 Properties	
1.8.1	Description of physico-chemical properties of the chemical
	A fibrous mineral whose basic unit is the silicate group. This group forms a variety of polymer structures through the formation of Si-O-Si bonds. The polymer structure consists of a double chain, crystallizes into long, thin, straight fibres and decomposes into pyroxenes and silica. It has high tensile strength, flexibility and chemical and physical stability and is highly resistant to acids and alkalis. Electrical insulator.
1.8.2	Description of toxicological properties of the chemical
	The effects of respiratory exposure to asbestos are subacute or chronic and generally have a long latent period. Neoplastic diseases associated with occupational exposure to asbestos include lung cancer and mesothelioma. Non-malignant respiratory diseases attributable to asbestos exposure include chronic pulmonary fibrosis (asbestosis), fibrotic pleural plaques, pleuritis and diffuse pleural swelling Chronic toxicity: Inhalation may cause pulmonary fibrosis (asbestosis), bronchial carcinoma, mesothelioma of the pleura and peritoneum and possible cancers in other locations.
1.8.3	Description of ecotoxicological properties of the chemical
	Asbestos is a substance which is found in nature associated with serpentine rock. In some natural water sources, high concentrations of asbestos have been found resulting from erosion of natural sources of asbestos. Asbestos fibres are relatively stable and may travel long distances through air and water.

PART II: FINAL REGULATORY ACTION

2. FINAL REGULATORY ACTION	
2.1	The chemical is: <input type="checkbox"/> banned OR <input checked="" type="checkbox"/> severely restricted
2.2	Information specific to the final regulatory action
2.2.1	<p>Summary of the final regulatory action</p> <p>Production, importation, distribution, sale and use of crocidolite and any material or product containing it is prohibited.</p> <p>Production, importation, distribution, sale and use of construction materials containing any type of asbestos is prohibited.</p> <p>Production, importation, distribution, sale and use of chrysotile, actinolite, amosite, anthophyllite, tremolite and any other type of asbestos, or mixture thereof, for any item, component or product that does not constitute a construction material is prohibited, with certain specific exceptions.</p>
2.2.2	<p>Reference to the regulatory document</p> <p>SUPREME DECREE NO. 656 OF 12 SEPTEMBER 2000, PUBLISHED IN THE OFFICIAL JOURNAL ON 13 JANUARY 2001.</p>
2.2.3	<p>Date of entry into force of the final regulatory action</p> <p>SUPREME DECREE NO. 656 ENTERED INTO FORCE 180 DAYS AFTER ITS PUBLICATION IN THE OFFICIAL JOURNAL, I.E. ON 12 JULY 2001.</p>
2.3	<p>Was the final regulatory action based on a risk or hazard evaluation? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p>
	<p>If yes, give information on such evaluation</p> <p>A hazard evaluation was carried out based on a compilation of bibliographic sources and verification of adverse chronic effects in exposed workers in the asbestos cement industry.</p>
	<p>Reference to the relevant documentation</p> <p>Technical Report by the Environmental Health Division of the Ministry of Health. Environmental Health Criteria 53, "Asbestos and Other Natural Mineral Fibres", IPCS, IOMC. Environmental Health Criteria 203, "Chrysotile Asbestos", IPCS, IOMC.</p>

2.4	Reasons for the final regulatory action
2.4.1	Is the reason for the final regulatory action relevant to the human health? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
	<p>If yes, give summary of the known hazards and risks presented by the chemical to human health, including the health of consumers and workers</p> <p>All types of asbestos are hazardous to health to varying degrees depending on the form of exposure (it has been shown that the risk is from inhalation), the class of asbestos (blue asbestos is the most toxic), the size of the fibres, fibre concentration and interaction with other factors (tobacco smoking potentiates the effects). Generally speaking, the highest exposures are amongst the working population whether during manufacture of materials containing asbestos or during installation or demolition.</p> <p>Asbestos causes three diseases:</p> <ul style="list-style-type: none"> • Asbestosis: Asbestosis is a chronic, diffuse, interstitial pulmonary fibrosis whose seriousness varies with the duration and intensity of exposure. In its initial stages, the disease is asymptomatic; in advanced cases, however, the affected worker presents signs and symptoms of chronic respiratory insufficiency. • Bronchopulmonary cancer: Lung cancer related to asbestos cannot be clinically differentiated from other forms of cancer of the lung. A higher incidence of adenocarcinoma has been recorded amongst workers exposed to asbestos. • Mesothelioma: Mesothelioma is a malign tumour of the pleura or peritoneum associated exclusively with asbestos exposure. In both cases, the progress of the disease is rapid, with death usually occurring within a year of the first symptoms appearing.
	<p>Reference to the relevant documentation</p> <p>Environmental Health Criteria 53, “Asbestos and Other Natural Mineral Fibres”, IPCS, IOMC. Environmental Health Criteria 203, “Chrysotile Asbestos”, IPCS, IOMC. International Agency for Research on Cancer (IARC)</p>
	<p>Expected effect of the final regulatory action</p> 

2.4.2	Is the reason for the final regulatory action relevant to the environment?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	If yes, give summary of the known hazards and risks to the environment		
Reference to the relevant documentation			
Expected effect of the final regulatory action			

2.5 Category or categories where the final regulatory action has been taken			
2.5.1	Final regulatory action has been taken for the chemical category	<input checked="" type="checkbox"/> Industrial	
	Use or uses prohibited by the final regulatory action		
	Crocidolite: all possible uses prohibited.		
	All types of asbestos: use as an input to the manufacture of construction materials is prohibited without exception.		
All types of asbestos: use for any item, component or product that does not constitute a construction material is prohibited unless excepted.			
Use or uses that remain allowed			
Any type of asbestos except crocidolite: the use of asbestos may be authorized in the manufacture of products or components that are not construction materials so long as the interested parties can prove that there is no technically or economically feasible substitute for it.			

2.5.2	Final regulatory action has been taken for the chemical category	<input type="checkbox"/> Pesticide
	Formulation(s) and use or uses prohibited by the final regulatory action	
	Formulation(s) and use or uses that remain allowed	

2.5.3 Estimated quantity of the chemical produced, imported, exported and used, where available.		
	Quantity per year (MT)	Year
Produced	0	-
Imported	Asbestos: 202,664 kg Products containing asbestos: 1,308,676 kg	1998
Exported	No data	-
Used	0	-

2.6	Indication, to the extent possible, of the likely relevance of the final regulatory action to other states and regions
	The regulatory action prohibits imports of asbestos in general, whatever the country of origin. Therefore no country may export asbestos to Chile except in specific cases, which exclude materials and inputs for construction material and must be expressly authorized by the Health Authority.

2.7	Other relevant information that may cover:	
2.7.1	Assessment of socio-economic effects of the final regulatory action	
	None	
2.7.2	Information on alternatives and their relative risks	
	None	
2.7.3	Relevant additional information	

	None
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PART III : GOVERNMENT AUTHORITIES

Ministry/Department and authority responsible for issuing/enforcing the final regulatory action	
Institution	ISSUANCE: MINISTRY OF HEALTH ENFORCEMENT: CHILEAN HEALTH SERVICES
Address	MINISTRY OF HEALTH ESTADO NO. 360, OFICINA NO. 801 SANTIAGO CHILE
Telephone	+56 2 6641244/ 6649086
Telefax	+56 2 639 7110
E-mail address	jmonreal@netline.cl
Designated National Authority	
Institution	MINISTRY OF HEALTH HEALTH SUBSECRETARIAT ENVIRONMENTAL HEALTH DIVISION
Address	ESTADO NO. 360, OFICINA NO. 801 SANTIAGO CHILE
Name of person in charge	MR. JULIO MONREAL URRUTIA
Position of person in charge	HEAD, DEPARTMENT OF ENVIRONMENT PROGRAMMES
Telephone	+56 2 6641244/ 6649086
Telefax	+56 2 639 7110
E-mail address	jmonreal@netline.cl

[Sealed and signed by the Subsecretary of Health, Ministry of Health]

Date, signature of DNA and official seal: _____

Dr. MARIA SOLEDAD BARRIA I.
SUBSECRETARIAT OF HEALTH (S)
DESIGNATED NATIONAL AUTHORITY

TECHNICAL REPORT FOR THE PROPOSED DECREE PROHIBITING THE USE OF ASBESTOS IN CERTAIN PRODUCTS

Background

In 1999, the Environmental Health Division - taking into account the known risk to workers' health of exposure to asbestos fibres, the promulgation in Chile of International Labour Organization (ILO) Convention 162, the concerns of former employees of companies which used to make products containing asbestos and have presented with asbestosis and mesotheliomas, the conclusions and proposals of the Ministry of Housing and Urban Affairs Committee studying the use of asbestos in construction - decided to form a technical group to formulate draft regulations on asbestos.

After compiling bibliographical sources and after technical discussions with asbestos cement panelling producers and studying the technical feasibility of replacing asbestos, the group concluded that the use of asbestos in construction materials must be prohibited and that its other uses must be severely restricted and subject to health authorization.

Health effects

All types of asbestos are hazardous to health to varying degrees depending on the form of exposure (it has been shown that the risk is from inhalation), the class of asbestos (blue asbestos is the most toxic), the size of the fibres, fibre concentration and interaction with other factors (tobacco smoking potentiates the effects).

Asbestos causes three diseases:

- **Asbestosis:** Asbestosis is a chronic, diffuse, interstitial pulmonary fibrosis whose seriousness varies with the duration and intensity of exposure. In its initial stages, the disease is asymptomatic; in advanced cases, however, the affected worker presents signs and symptoms of chronic respiratory insufficiency;
- **Bronchopulmonary cancer:** Lung cancer related to asbestos cannot be clinically differentiated from other forms of cancer of the lung. A higher incidence of adenocarcinoma has been recorded amongst workers exposed to asbestos;
- **Mesothelioma:** Mesothelioma is a malign tumour of the pleura or peritoneum associated exclusively with asbestos exposure. In both cases, the progress of the disease is rapid, with death usually occurring within a year of the first symptoms appearing.

Asbestos use in Chile

Chile is not a producer of asbestos, so it must be imported in order to manufacture construction materials and brake and clutch linings; other uses do exist, but the quantities used are smaller.

The construction products currently being manufactured in Chile are of the following types:

1. Asbestos cement pipes for drain and sewer pipes and water pipes and conduits for gases and other liquids. Asbestos content varies between 8 per cent and 20 per cent by weight;
2. Asbestos-cement sheeting, flat and corrugated, for roof and side cladding in dwellings. Contains between 8 per cent and 10 per cent asbestos;
3. Tiles for roof cladding, with characteristics similar to corrugated sheeting;

4. Preformed products such as water tanks, sanitation fittings, window-boxes, architectural sun-screens and so on. Asbestos content 10 per cent approx.

At-risk population

The foreign literature and analysis of domestic cases of asbestosis and mesothelioma indicate that those at greatest risk are workers who handle asbestos fibres for various uses.

In Chile, this means in particular those workers who have been exposed to fibres from the manufacture of construction materials.

No epidemiological precedents are known which show that there is a risk to the population from asbestos which is already included within a cement matrix in sheeting used in construction, given that the asbestos fibres are not easily released from the matrix. Nor is there any significant known risk from consuming water piped through asbestos cement piping.

Nevertheless, people who cut or trim such sheeting using high-speed tools (circular saws or sanders) are exposed to risk from the asbestos-fibre-containing dust given off.

In the case of brake linings or parts which contain asbestos, not only the workers who handle asbestos during manufacture are exposed to high risk, so are brake repair workshop mechanics who blow off the dust produced by wear. It should be noted that health controls over this activity are very difficult to implement because of its very nature. In many cases, the workshops involved are small ones that do not have the occupational health means to control the risks.

Asbestos substitution

It has been proved that it is feasible to replace asbestos with other fibres in manufacturing fibre-cement materials and still obtain products of similar quality. In fact, the company producing the greatest quantity of panels and sheeting for dwellings in Chile has replaced asbestos with other fibres such as cellulose.

In the case of brake parts, asbestos-containing and asbestos-free brake pads and linings are in use and on sale.

Department of Occupational Health
Environmental Health Division

PROHIBITS THE USE OF ASBESTOS IN LISTED PRODUCTS

No. 656/

SANTIAGO, 12 September 2000

NOTING articles 2, 3, 82, 90 and Section X of the Health Code, approved by Decree with force of law No. 725 of 1967, of the Ministry of Health; Decree No. 1,907 of 1998, of the Ministry of External Relations, which promulgates Convention 162 of the International Labour Organization on the safe use of asbestos; and articles 1, 4 and 6 of Decree-Law No. 2,763 of 1979; in exercise of the powers conferred on me by articles 24 and 32 No. 8 of the Political Constitution of the Republic, and

CONSIDERING

That it is the duty of the Ministry of Health to protect public health and take the necessary steps to avoid exposing people to agents which may cause disease, pursuant to its obligation to safeguard the health of the population,

That asbestos is a mineral known to be harmful to health when inhaled as free asbestos fibres which may cause serious diseases such as asbestosis, primary cancer of the lung and mesotheliomas, which are all highly lethal diseases,

That the groups at greatest risk of contracting those diseases are workers who handle asbestos or work in environments contaminated with this type of fibre,

That International Labour Organization Convention 162, whose articles 10 and 11 recommend the total or partial prohibition of the use of asbestos where necessary to protect the health of workers and where technically possible, has been promulgated in Chile, and

That in our country the technology to replace asbestos in the manufacturing processes for fibre cement and other construction materials currently exists,

DECREE AS FOLLOWS:

ARTICLE 1

The production, importation, sale and use of crocidolite (blue asbestos) and any material or product containing it is prohibited in Chile.

ARTICLE 2

The production, importation, sale and use of construction materials containing any type of asbestos is prohibited also.

ARTICLE 3

The production, importation, sale and use of chrysotile, actinolite, amosite, anthophyllite, tremolite and any other type of asbestos or mixture thereof for any item, component or product that does not constitute a construction material is prohibited, with the exceptions set forth in article 5 below;

ARTICLE 4

For the purposes of implementing this regulation, the meanings of the following terms shall be:

- (a) Asbestos: The fibrous form of the silicate minerals belonging to the serpentine groups of metamorphic rocks, that is, chrysotile (white asbestos), and to the amphiboles, that is, actinolite, amosite (brown asbestos, cummingtonite-grunerite), anthophyllite, crocidolite (blue asbestos), tremolite, and any asbestos mineral not specified and any mixture containing one or more of those minerals;
- (b) Friable asbestos: Exposed and crumbling asbestos mineral in lagging or jacketing;
- (c) Asbestos fibres: Asbestos particles suspended in air and deposited asbestos particles which may become airborne.

ARTICLE 5

Without prejudice to the provisions of article 3 above, the Health Authority may authorize the use of asbestos in the manufacture of products or components that are not construction materials so long as the interested parties can prove that there is no technically or economically feasible substitute for it.

To obtain such authorization, the manufacturer shall provide technical reports which describe the characteristics of the component to be manufactured, the types of asbestos which will be used, the measures taken to control the risk to workers' health, the manner in which wastes generated by the industrial processes and dust-capture systems will be disposed of, and the technical justification for why another type of fibre cannot be substituted for asbestos.

To import such materials, the interested party must obtain prior authorization by submitting to the Health Authority details of the type and quantity of asbestos, the place and conditions in which it will be stored, the conditions in which it will be handled, the conditions and manner in which wastes will be disposed of and the safety measures to be taken to protect workers.

ARTICLE 6

The manufacture of the products or components and the importation of asbestos to which article 5 above refers may take place only if strict health and safety measures for the workplace are taken; in every case, such measures shall be stipulated and authorized expressly by the competent Health Service, which must verify that the risks to workers' health have been controlled.

ARTICLE 7

In the event that asbestos is held in stock to be marketed or for manufacturing products, in conformity with the norms set forth above the holder of the corresponding authorization shall inform the relevant Health Service on a biannual basis as to the quantities being moved into and out of stock, indicating the suppliers and consignees thereof.

ARTICLE 8

Storage of asbestos as a raw material shall be effected in such a manner as to ensure that asbestos fibres will not be dispersed into the working environment at levels above the maximum limits permitted by the regulations in force. Also, dust-capture systems must have capture efficiencies of at least 99 per cent of the total dust in areas where asbestos is handled.

ARTICLE 9

On demolition of buildings containing friable asbestos-fibre insulation with the resultant risk that asbestos dust may spread, the company responsible for demolition must have express authorization for the demolition work from the competent Health Service. Such authorization shall stipulate the measures which must be taken to protect the health of workers and the surrounding population. The same procedure shall be followed in the event that friable asbestos is found during the course of demolition which was not known to be present when the demolition work began.

ARTICLE 10

Enforcement of this regulation shall be the responsibility of the Chilean Health Services and, in the Metropolitan Region, of the Environmental Health Service.

Breaches of this regulation will be penalized in accordance with the Section X of the Health Code.

ARTICLE 11

This regulation shall enter into force 180 days after its publication in the Official Journal, on which date any other norm, resolution or provision which might run counter to or be incompatible with the contents of this Supreme Decree shall be considered repealed.

LET IT BE INSCRIBED, LET NOTE BE TAKEN AND LET IT BE PUBLISHED IN THE OFFICIAL JOURNAL

**RICARDO LAGOS ESCOBAR
PRESIDENT OF THE REPUBLIC**

**MICHÈLLE BACHELET JERIA
MINISTER OF HEALTH**