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Market study on lumber and wood
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MARKET STUDY ON LUMBER AND WOOD PRODUCTS

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1. BACKGROUND

The forestry and wood industries have an old tradition in Mexico. Ever since before the Spanish conquest of Mexico, the indian population relied on Mexico's vast forests for its food, protection and clothing needs, and, the vast majority of housing was built from wood. During the 16th century, the first regulatory measures were taken to avoid the destruction of forests, including limitations on wood cutting and primitive reforestation measures. During the 17th century, the exploitation of mahogany, cedar and oak were reserved to the Spanish crown, although British and Dutch invasions of tropical forests, for the exportation of wood, were not uncommon.

The massive exploitation and destruction of Mexico's forests began with the flourishing mining industry, led by the Spanish conquerors. The mines themselves were built and reinforced with wood structures, the transformation of the primary product into metals was fueled with wood and the indigenous population, deprived of their lands, increasingly moved into the wooded areas, deforesting them to grow their crops.

Under the new post-independence regime, a series of regulatory measures were taken to control the production of wood products and to protect the forests. During the 19th century, the exploitation of fine woods was subject to a prior permit requirement, the free importation of wood was allowed to avoid the excessive exploitation of local forests, the first inventory of existing resources was made, the cutting and conservation of forests was regulated and national parks were created to protect both the vegetation and the animal life.

Further efforts have been made in the 20th century to regulate the excessive exploitation of forests and to preserve existing resources. In 1926, the First Forestry Law was passed by President Plutarco Elías Calles, in an effort to officially rationalize the exploitation of Mexican forests. This law was reformed in 1942 and again during the administration of President Miguel Alemán (1945-1950). In 1960, President Adolfo López Mateos authorized a new forestry law to meet the requirements of the times. More recently, in April 1986, a Forestry Law came into effect, followed, in July 1988, by the Regulations to the Forestry Law. At present, a new Forestry Law is under consideration and will probably be passed early 1993 since it was recently approved by the Senate. This, in conjunction with the amendments to the Mexican Constitution, will basically translate into greater private and long term investments in the forestry and wood industries. All these measures have had a significant impact on the local production of wood and wood products.

Although the forests of Mexico have been commercially exploited for the past 70 years, both the forestry and wood industries are still considered to be in their infancy with respect to

exploitation and use of up-to-date technology. The national lumber industry began in 1936 with a plywood manufacturing company. By 1959, there were seven companies. The industry continued to grow rapidly in the 60's and 70's to include a total of 49 plants in 1991. Despite the country's rich forestry resources, low yields and insecurity on investment have often made imports of lumber and pulp easier and cheaper than local production. Imports of wood have traditionally contributed to cover Mexico's apparent consumption, and their participation has been increasing rapidly in the past four years, from 3% in 1987 to 20% in 1991 based on volume.

2. ECONOMIC ENVIRONMENT

With the objective of reducing the inflation rate, the Mexican authorities implemented a stabilization program in 1988, called the Economic Solidarity Pact, which features traditional austerity measures, entailing tight fiscal and monetary policies and unorthodox measures, such as price, wage and exchange rate controls. This program has been the cornerstone of Mexico's economic policy over the past four years, and has been extended throughout 1993 under the name of Pact for Stability, Competitiveness and Employment. It has resulted in a drastic reduction of the inflation rate, from an annual rate of 159% in 1987 to 19.7% in 1989. Inflation rebounded to 29.9% in 1990 but was brought down to 18.8% in 1991 and 11.9% in 1992. At the same time, interest rates have increased again to the present 20%, and the peso-dollar devaluation rate has recently been increased to Mex\$0.40 pesos a day or 4.6% per annum.

Along with the objective of consolidating the progress made in price stabilization with a 7% inflation goal through tight monetary and fiscal policies, Mexico's macroeconomic policy in 1993 aims to promote employment, reaffirm gradual and sustained economic recuperation with an estimated GDP growth of 2.5%-3%, basically by establishing the necessary conditions to encourage national and foreign investment and by promoting increased efficiency and competitiveness, and to promote social development and the improvement in living standards of the poorest segment of society through direct government action.

Domestic economic activity recovered for the third consecutive year in 1989, after the 1986 recession, with a gross domestic product (GDP) growth rate of 3.3%. In 1990 it grew 4.4% another 3.6% in 1991 and 2.6% in 1992 to reach \$287.6 billion (1). With an 83 million population, per capita GDP was estimated at \$3,465 in 1992. Additionally, manufacturing output grew by 5.8% in 1990, 3.7% in 1991 and 2.3% in 1992 in real terms, private investment

1. Note: All values in this report, unless otherwise stated (Mexican pesos, Mex\$, Canadian dollars, Cdn\$, etc) are quoted in United States dollar equivalents.

and consumption expanded 13.6% and 5.2% respectively in 1990 and 1991 and public investment was up 12.8%. During the 1992-1994 period, the GDP is expected to maintain an average annual growth rate of 4%-5%, although preliminary figures place GDP growth at 2.7% for 1992 pointing towards a reduction in GDP growth in response to reduced economic activity worldwide and the need for inflation control.

In an effort to revitalize and open the Mexican economy, the Mexican Government undertook a series of structural changes, including the accession to the General Agreement on Tariffs and Trade (GATT) on August 24, 1986 leading to an extensive trade liberalization process: import permits were eliminated on all but 325 of the total 11,950 tariff items based on the Harmonized System adopted in 1989. Official import prices are no longer applicable, nor the 5% export development tax, and import duties were lowered from a maximum of 100% in 1982 to 20% in January 1988. The weighted average tariff rate is now 10.4%. The automotive and computer industries have also been liberalized, through the elimination of prior import permits, to allow free entry of products in these industries. The approval of the North American Free Trade Agreement will further strengthen trade between Canada, the United States and Mexico.

According to official data from the Mexican Secretariat of Commerce and Industrial Development (SECOFI), Mexico's trade balance dropped once again in 1992 to a \$19.8 billion deficit from -\$11.1 billion in 1991, when it had already increased by 145.6%. Exports increased by 3.8% in 1992, from \$27.1 billion to \$28.1 billion, while imports grew 25.6%, from \$38.2 billion to \$48 billion in 1992, having already increased 22.8% in 1991. January-March data for 1993, place total exports at \$7.4 billion and imports at \$12.9 for the first quarter, reflecting a 10.3% and 18.3% growth rate respectively as compared to the same period the previous year.

3. MARKET ASSESSMENT

3.1 APPARENT CONSUMPTION

The Mexican market for wood, wood products and wood prefabricated buildings as analyzed in this report includes:

- Fuel wood, wood in chips or particles, sawdust and wood waste;
- Wood charcoal;
- Wood in the rough;
- Hoopwood, poles, piles, pickets and stakes, sticks for the manufacture of handles and the like;
- Wood wool and flour;
- Railway or tramway sleepers;
- Wood sawn or chipped, sliced or peeled, sanded or finger-jointed;
- Veneer and plywood sheets;
- Wood continuously shaped;
- Particle board;

Fibreboard of wood;
 Plywood, veneered panels and other laminated wood;
 Densified wood;
 Wood frames;
 Casks, barrels, vats and tubs made of wood;
 Tools, tool bodies, handles, shoe lasts and other similar wood products;
 Builder's carpentry;
 Wood table and kitchenware;
 Wood marquetry and inlaid wood and ornaments.

The total market for wood products as described above, amounted to \$898.0 million in 1988 and fell by three percent in 1989 with the decrease in domestic production and an increase in exports. The market increased by 28% in 1990, to \$1.1 billion and another 9.6% in 1991, mostly in response to a growth in imports coupled with a stagnant domestic production. By 1994, the total market is expected to reach \$1.4 billion after an average annual growth of 5%.

The following table reflects total apparent consumption of wood and wood products according to the above listing.

TABLE 1
THE MEXICAN MARKET FOR WOOD
 (VALUE - \$000 U.S. dollars)

	1988	1989	1990	1991	1994p
Production	968.8	945.8	1,073.7	1,091.7	1,178.5
+ Imports	58.6	75.2	111.5	275.5	387.8
- Exports	129.4	149.9	70.0	144.9	158.3
TOTAL	898.0	871.1	1,115.2	1,222.3	1,408.0

p = projected

Source: Based on import and export data by Secretaría de Comercio y Fomento Industrial (SECOFI) and the Economic Memoir of the National Chamber for the Forestry Industry.

The above table is based on import-export data published by SECOFI for definitive imports, excluding temporary imports used as inputs for the in-bond industry. A different estimate is provided by the National Chamber for the Forestry Industry and includes temporary imports. The latter amounted to \$26.1 million in 1988, \$20 million in 1989 and to \$74.4 million in 1990 and are basically composed of continuously shaped wood for the manufacture of frames and mouldings and other wood in the rough.

The following table is defined in volume including temporary imports and therefore import and export data are not comparable

with those listed in Table 1, unless the temporary import component is added into it.

TABLE 2
TOTAL APPARENT CONSUMPTION OF WOOD
(VOLUME - 000 m³)

	1986	1987	1988	1989	1990	1991e
Production	6,095	6,635	6,229	6,096	5,708	5,607
+ Imports	217	173	493	540	826	1,211
- Exports	618	829	955	1,092	692	517
TOTAL	5,694	5,979	5,767	5,544	5,842	6,301

Source: Memoria Económica 1991-1992 - CNIF

Based on these figures, total apparent consumption in terms of volume decreased in 1988 and 1989 as a result of the reduction in domestic production of lumber and wood and despite an increase in imports. The market grew by 5.4% in 1990 and was estimated to have grown 7.9% in 1991. As can be seen, imports began growing significantly starting in 1988 with Mexico's trade liberalization policies. While they represented 2.9% of consumption in 1987, they were estimated to represent 19.2% in 1991 and final data for 1991 point towards an even higher participation. Domestic production, as well as exports, have fallen year after year since 1988 as a result of the inefficiencies and legal difficulties faced by the industry.

3.2 IMPORTS

The large volume of imports is due mostly because local production has been unable to cover demand due to the structural problems of the Mexican forestry and wood industries. This upward trend in imports has been felt since 1982, when imports were at their all time low as a result of the economic crisis and the high import barriers imposed by the government at the time, including import permit requirements and ad valorem duties.

Imports play an important role in total apparent consumption and their participation has increased significantly during the period analyzed. While, in terms of value, they represented only 6.5% of total apparent consumption in 1988, their participation increased to 10% in 1990 and grew to 22.5% in 1991, with the 147% increase in total imports during that year, coupled with a stagnant local production.

The following table shows imports of wood and wood products between 1988 and 1991.

TABLE 3
MEXICAN IMPORTS OF WOOD AND WOOD PRODUCTS
(\$000 U.S. dollars)

	1988	1989	1990	1991
Fuel wood	111.4	10.8	2.1	13.6
Wood in chips or particles	757.3	2,404.8	2,951.8	3,216.9
Sawdust	219.6	84.1	527.7	245.3
Wood charcoal	239.1	208.5	201.7	305.8
SUBTOTAL	1,327.4	2,708.2	3,683.3	3,781.6
WOOD IN THE ROUGH OR ROUGHLY SQUARED				
Treated with preservatives	541.1	1,196.2	4,252.2	12,040.9
Other coniferous	49.1	98.7	22.4	831.1
Of tropical woods	656.7	626.3	1,520.4	1,115.7
Other (oak, beech & other)	1,312.7	835.7	1,101.4	1,549.1
SUBTOTAL	2,559.6	2,756.9	6,896.4	15,536.8
Hoopwood, split poles, piles, pickets, sticks, etc.	429.9	187.6	144.2	428.4
Wood wool & flour	139.5	306.7	199.5	236.5
Wood sleepers	483.5	97.1	581.2	2,003.2
SUBTOTAL	1,052.9	591.4	924.9	2,668.1
WOOD SAWN OR CHIPPED LENGTHWISE OVER 6mm THICK				
Coniferous				
In beams, planks or flitches	1,998.8	2,677.6	2,485.0	4,988.2
Pine or fir planks & beams	12,111.3	12,802.0	20,677.1	99,409.4
Small boards for pencils	2,072.4	2,395.0	2,694.4	1,275.6
Other	45.4	186.2	304.6	485.5
Of tropical woods	6,802.4	6,524.3	5,805.8	11,463.8
Other	3,733.6	5,033.8	8,899.2	17,683.6
SUBTOTAL	26,763.9	29,618.9	40,866.1	135,306.1
VENEER SHEETS & SHEETS FOR PLYWOOD UNDER 6 mm				
Coniferous	322.3	555.2	225.0	1,053.1
Of tropical woods	519.8	651.7	895.2	4,848.2
Other	533.8	716.3	1,094.8	2,934.5
SUBTOTAL	1,375.9	1,923.2	2,215.0	8,835.8
WOOD CONTINUOUSLY SHAPED				
Coniferous				
Panels for pencils	4,457.2	5,347.3	4,206.3	4,500.4
Other (mouldings, etc.)	474.9	1,021.7	559.8	1,095.5
Other	504.6	480.3	1,313.3	1,520.0
SUBTOTAL	5,436.7	6,849.3	6,079.4	7,115.9
PARTICLE BOARD				
Of wood	97	216.3	917.7	1,378.2
Of other ligneous materials	889.4	1,945.7	3,166.3	5,785.7
SUBTOTAL	986.4	2,162.0	4,084.0	7,163.9

	1988	1989	1990	1991
FIBREBOARD				
Density of over 0.8g/cm ³	272.6	817.9	1,067.6	1,230.9
Density 0.5 - 0.8g/cm ³	2.0	34.3	159.3	541.3
Density 0.35-0.5g/cm ³	73.6	171.9	202.8	599.5
Other	360.3	408.4	637.4	1,058.6
SUBTOTAL	708.5	1,32.5	2,067.1	3,430.3
PLYWOOD, VENEERED PANELS & LAMINATED WOOD				
Of sheets of wood under 6mm				
W. min. 1 ply non-coniferous	5,952.9	7,575.7	9,374.8	15,876.2
Coniferous	7,142.3	7,996.5	20,612.2	35,563.6
Other	612.7	323.3	171.1	1,042.0
SUBTOTAL	13,707.9	15,895.5	30,158.1	52,481.8
Densified wood	429.5	191.7	405.4	546.7
Frames	62.2	377.0	420.6	568.5
Packing cases, boxes & crates	386.2	530.8	1,206.8	10,462.7
Casks, barrels, vats & tubs	94.2	128.7	74.3	763.6
Tools, bodies, handles, etc.	300.1	589.3	539.2	1,156.2
Builders' carpentry	605.9	1,658.8	3,019.5	5,463.7
Table & kitchenware	303.8	595.4	498.7	655.9
Marquetry & inlaid wood	269.6	1,030.0	1,892.1	1,918.6
Other articles of wood	1,253.6	2,690.2	3,247.9	6,170.0
SUBTOTAL	3,705.1	7,791.9	11,304.5	27,705.9
Prefabricated buildings	995.6	3,507.9	3,270.2	11,505.6
GRAND TOTAL	58,619.9	75,237.6	111,549.0	275,531.8

Source: Data by Secretaría de Comercio y Fomento Industrial

As can be seen in Table 1, total imports increased by 28.3% in 1989, from \$58.6 million to \$75.2 million. In 1990, they grew by an additional 48.3% and further 147% in 1991. In order to analyze the above listed data by category, the following table shows annual growth rate by subsector and the participation of each category in total imports.

TABLE 4
RELATIVE VALUES OF WOOD IMPORTS
(%)

	88-89 change	89-90 change	90-91 change	1988 participation	1991
Wood materials	104.0	36.0	2.7	2.3	1.4
Wood in the rough	7.7	150.1	125.3	4.4	5.6
Poles, wool, flour, sleepers	(43.8)	56.4	188.5	1.8	1.0
Lumber sawn or chipped	10.7	38.0	231.1	45.7	49.1
Veneer/plywood sheets	39.8	15.2	298.9	2.3	3.2
Cont. shaped wood	26.0	(11.2)	17.0	9.3	2.6
Particle boards	119.2	88.9	75.4	1.7	2.6
Fibreboard	102.2	44.3	65.9	1.2	1.2
Plywood/veneer panels	16.0	89.7	74.0	23.4	19.0
Wood products	110.3	45.1	145.1	6.3	10.1
Prefabricated bldgs.	252.3	(6.8)	251.8	1.7	4.2
TOTAL	26.3	48.4	147.0	100.0	100.0

Source: Based on data from Table 2

As becomes apparent in this table, the largest import category corresponds to wood sawn or chipped lengthwise, sliced or peeled, whether or not planed, sanded or finger-jointed of a thickness exceeding 6mm. (lumber). The largest item within this category corresponds to pine or fir planks, deals or beams (74%), followed by other coniferous in planks or flitches. The second largest category is plywood, veneered panels and similar laminated wood, whereby, within that category, 68% corresponds to plywood consisting solely of sheets of wood, each ply not exceeding 6mm and having two outer plies of coniferous wood; and 30% corresponds to plywood as defined above with at least one ply of tropical woods or other non-coniferous species. The above two categories together accounted for 69.1% of total imports in 1988 and 68.1% in 1991. Wood products have significantly increased their participation in total imports from only 6.3% in 1988 to 10.1% in 1991, in particular with the growth of imports of packing cases, boxes, crates, drums, cable-drums, pallets and other load boards of wood from \$386,200 in 1988 to \$10.5 million in 1991. The next largest import category in 1991 was wood in the rough, whether or not stripped of bark or sapwood, or roughly squared, basically coniferous wood treated with paint, stains, creosote or other preservatives, which accounted for 75% of the total \$15.5 million. In order of importance, the following categories are veneer sheets and sheets for plywood and other wood sawn lengthwise of a thickness not exceeding 6mm, in particular of tropical woods; particle boards, mostly agglomerated panels; continuously shaped wood, basically panels of libocedrus decurrens of 10cmx20cm or less for the manufacture of pencils; wood in chips or particles, sawdust and charcoal;

fibreboard; and sleepers and minimal imports of wood flour and wool, hoopwood, split poles, piles, pickets and stakes of wood pointed, wood sticks and the like for the manufacture of walking sticks, umbrellas, tool handles, and the like.

In terms of growth patterns, the categories with the highest average annual growth rate between 1988 and 1991 were:

Prefabricated bldgs.	165.8%
Veneer/plywood sheets	118.0%
Wood products	100.2%
Particle boards	94.5%
Wood in the rough	94.4%
Sawn or chipped wood	93.3%
Fibreboard	70.8%
Poles, wool, flour, sleepers	67.0%
Plywood/veneer panels	59.9%
Wood materials	47.6%
Cont. shaped wood	31.8%

It is interesting to note how high the average growth rate has been in all categories during this period. Only two categories, wood sleepers and wood planks for the manufacture of pencils showed a negative rate during one year, in response to a fall in an industry-specific demand. Overall, the increase in imports has been very high year after year, in particular those of prefabricated buildings, tropical wood plywood sheets, packing cases and boxes, builder's carpentry, marquetry and inlaid wood, agglomerated panels, treated wood in the rough, fibreboard, sleepers, coniferous and non-coniferous plywood panels, and wood in chips or particles.

The most important supplier of wood and wood products to Mexico is the U.S., with an 86% market share in 1991. Geographical proximity plays a major role in this leadership, since transportation costs can be high. Also, many U.S. firms have established a presence in Mexico through local distributors, representatives or agents or through joint ventures. South and Central American countries, including Guatemala, Belize, Bolivia, Brazil, Chile and Argentina account for most of the balance, together with France. Canadian products account for only 0.8% of total imports based on official Mexican data.

TABLE 5
CANADIAN IMPORTS AND EXPORTS WITH MEXICO
(\$000 Canadian dollars)

	EXPORTS TO MEXICO			
	1989	1990	1991	JAN-NOV 1992
Conif. lumber +6mm	37	6	0	
Oak lumber	0	29	0	
Non-conif. lumber	17	82	0	
Non-conif. veneer-6mm	61	0	8	
Cont. shaped lumber	3	0	0	
Particle board	0	0	0	
Fibreboard	34	14	0	
Plywood	5	0	0	
Cases, boxes, crates	9	0	0	
Tool bodies, handles	13	0	0	
Windows, doors, frames	6	0	0	
Shuttering	157	33	3,927	
Shingles & shakes	18	0	0	
Other builders carpentry	18	0	0	
Other wood articles	4	15	47	
Prefabricated bldgs	18	63	144	
TOTAL	400	242	4,126	
	IMPORTS FROM MEXICO			
	1989	1990	1991	JAN-NOV 1992
Wood charcoal	38	69	33	
Conif. lumber +6mm	0	72	29	
Non-conif. lumber	8	23	14	
Cont. shaped lumber	206	69	42	
Particle board	21	0	0	
Wooden frames	46	36	24	
Cases, boxes, crates	1	1	3	
Pallets, load boards	24	37	119	
Windows, doors, frames	0	3	246	
Other builders carp.	20	0	0	
Table & kitchenware	20	29	10	
Marquetry	27	84	135	
Other wood articles	154	280	235	
TOTAL	565	703	890	

Source: Statistics Canada - International Trade Division

According to official Canadian data, Canadian exports to Mexico increased 38%, from Cdn\$289,000 in 1988 to Cdn\$400,000 in 1989, then fell by 40% in 1990 and increased again 17-fold to Cdn\$4.1 million in 1991. The largest category of Canadian exports to

Mexico was shuttering for concrete constructional work, followed by prefabricated buildings and other articles made of wood. Exports of other items have fallen significantly, in particular those of lumber, veneer, fibreboard and builders' carpentry. Canadian imports from Mexico fell by 7% from Cdn\$606,000 in 1988 to Cdn\$565,000 in 1989 and have been increasing annually to reach Cdn\$890,000 1991. Imports have been varied as can be seen above, but have consisted mostly of articles of wood with some basic manufacturing process rather than of lumber and other wood.

3.3 LOCAL PRODUCTION

3.3.1 RESOURCES

Mexico's wood and forestry sector, comprising wood and wood products, accounted for 1.5% of the country's total GDP and 2.5% of manufacturing GDP in 1991, equivalent to Mex\$31.5 billion 1980 pesos (or roughly \$1.4 billion). During the 1985-1991 period, this sector's GDP decreased at an average annual rate of 4.7%, as compared to a 3.3% annual increase of manufacturing GDP as a whole. Although during the 1981-1986 period the forestry sector followed the general trend of manufacturing GDP, between 1987 and 1991 the latter has experienced moderate to high growth rates averaging 4.6% annually, while the forestry sector has shown a continuing decrease of 8.2% per annum. In 1991 alone, manufacturing GDP grew by 4.5%, while the wood sector fell by 15.1%.

Mexico's total forested areas represent 143.6 million hectares, or 73.3% of the country's total territory. This places Mexico among the 11 countries in the world with the largest forestry resources. Approximately 12 million people live in forested areas and an estimated 300,000 live off primary forestry production.

Mexico's total forested area can be further subdivided as follows:

TABLE 6
MEXICO'S FORESTED AREAS
(million ha./% of total territory)

Wooded areas	forests	coniferae & latifoliate
38.9 ha. (19.9%)	27.5 ha. (14.1%)	18.7 ha. (9.6%)
		latifoliate
		8.8 ha. (4.5%)
	jungles	high
	11.4 ha. (5.8%)	2.1 ha. (1.1%)
		medium
		9.3 ha. (4.7%)
Other forested areas:	shrubs	low jungles
104.7 ha. (53.4%)	29.3 ha. (14.9%)	17.9 ha. (9.1%)
		chaparral
		7.8 ha. (3.9%)
		mesquite
		3.6 ha. (1.9%)
	underbrush	rosetofilo
	56.1 ha. (28.6%)	7.0 ha. (3.6%)
		microfilo
		38.4 ha. (19.6%)
		crasicaule
		10.7 ha. (5.4%)
	disturbed areas	
	17.8 ha. (9.1%)	
	hydrophilous vegetation	
	1.5 ha. (0.8%)	

Source: Memoria Económica 1991-1992
Cámara Nacional de la Industria Forestal

The regional distribution of forestry resources is as follows
(see Map I):

TABLE 6
REGIONAL DISTRIBUTION OF FORESTED AREAS
(thousands of ha.)

REGION	FORESTS	JUNGLES	SHRUBS	UNDERBRUSH	TOTAL
I	6,842	0	7,510	22,374	37,733
II	5,940	980	4,627	6,428	18,925
III	1,509	11	3,576	23,217	29,777
IV	3,422	578	2,091	1,350	8,218
V	2,768	320	1,553	432	7,651
VI	2,536	1,845	2,920	919	12,331
VII	1,419	7,293	4,286		18,507
VIII	2,015	244	1,815	104	5,282
IX	792	135	883	747	4,149
OTHER	239		3	527	1,041
TOTAL	27,482	11,406	29,264	56,098	143,614

Note: Regions - States

- I - Chihuahua, Sonora, Baja California Norte and Sur
- II - Durango, Sinaloa, Zacatecas
- III - San Luis Potosí, Tamaulipas, Nuevo León, Coahuila
- IV - Jalisco, Nayarit, Colima, Aguascalientes
- V - Michoacán, México, Guanajuato
- VI - Oaxaca, Veracruz, Morelos
- VII - Chiapas, Campeche, Quintana Roo, Tabasco, Yucatán
- VIII - Guerrero
- IX - Puebla, Hidalgo, Tlaxcala
- OTHER- Distrito Federal, Querétaro

Source: Memoria Económica 1991-1992
Cámara Nacional de la Industria Forestal

Forests of temperate and cold climates, covering 27.5 million ha. with a log production potential of two billion cubic meters are found (see Map II):

- 48.2% in the Western Sierra Madre
- 20.8% in the neo-volcanic sierra
- 15.6% in the Southern Sierra Madre
- 9.0% in the Eastern Sierra Madre
- 5.1% in the Sierra of Chiapas
- 1.3% in the Baja California peninsula

Forests of tropical and semitropical climates cover 11.4 million ha with a potential log production of 1.1 billion m³ and are found (see Map II):

- 72.5% in the Southeast
- 8.9% along the coasts of the Gulf of Mexico
- 18.6% along the Pacific litoral

3.3.2 FORESTRY PRODUCTION

The exploitation of Mexico's forests is subject to a prior authorization granted by the Secretariat for Agriculture and Hydraulic Resources (Secretaría de Agricultura y Recursos Hidráulicos - SARH) for the specific exploitation of certain areas and varieties. During 1991, a total of 4,585 authorizations were granted, as compared to 2,355 in 1990 and 4,313 in 1989. The following table lists authorized volumes by species and actual production:

SPECIES	AUTHORIZED VOLUME 000 m3 logs			PRODUCTION VOLUME 000 m3 logs		
	1989	1990	1991	1989	1990	1991
Pine	10,823	6,702	9,933	7,462	6,817	6,437
Other coniferae	611	305	533	311	303	303
Oak	3,208	2,279	3,029	438	383	383
Other leafed	330	261	337	170	190	154
Precious	127	14	25	74	40	39
Tropical	794	161	683	433	369	367
TOTAL	15,893	9,722	15,183	8,888	8,102	7,683

Source: Memoria Económica 1990-1991 and 1991-1992 - CNIF

Until 1991, the vast majority of forestry resources, estimated at 80% of total forested areas, were in the hands of ejidos or community properties, which were officially assigned by the Secretariat of Agricultural Reform (Secretaría de la Reforma Agraria - SRA). The remaining 15% was held by small proprietors and the state. This structure of land holdings was mostly intended to distribute the land to a large number of families for agricultural purposes or eventually for cattle raising, both of which are basically short term activities. This created a strong competition to forestry, which has a long term yield and requires large and long term investments. Additionally, agreements for the concession of land for the exploitation of forestry resources were only valid for one year (as opposed to 20 years before President Echeverría). This made investment in the sector riskier and long term exploitation and reforestation more difficult. With the amendments to Article 27 of the Mexican Constitution in 1992, the ejido structure will tend to disappear in favor of small private properties. The new Forestry Law will regulate this new land tenure system and will allow for long term investments in forestry and wood exploitation. Other structural problems the local industry has faced are the high transportation costs since, due to lack of rivers, wood has to be hauled over land on trucks, mostly on narrow mountain roads which do not allow massive transportation. This factor significantly increases exploitation costs and makes competition with imported products difficult.

Mexico's total production of timber products, in thousands of m³ logs, between 1986 and 1991 was as follows:

TABLE 7
MEXICAN PRODUCTION OF TIMBER PRODUCTS
(000 m³)

PRODUCT	1986	1987	1988	1989	1990	1991
Scantling (1)	5,508	6,137	5,840	5,807	5,487	5,391
Pulp	2,410	2,664	2,591	2,349	1,954	1,631
Posts & piles	173	149	164	156	139	98
Fuel	454	492	495	443	440	445
Sleepers	413	349	224	133	82	118
TOTAL	8,958	9,791	9,314	8,888	8,102	7,683

Note: (1) includes boards, packaging wood, carved wood, wood for veneer, wood waste, pieces for sawmills and veneer and other log products.

Source: Memoria Económica 1991-1992 - CNIF

The decrease in production during the last three years is due to the longstanding and structural problems of Mexico's forestry sector described above, in addition to a lack of policy definitions by the central government, the trade liberalization policies, which have brought about a strong competition of imported wood products, and a decrease in technical services for the forestry sector.

Mexico's total production in tons of non-timber products was as follows between 1985 and 1989:

TABLE 8
MEXICAN PRODUCTION OF NON-TIMBER PRODUCTS
(tons)

PRODUCT	1986	1987	1988	1989	1990	1991
Resins	30,410	44,180	43,443	36,296	32,923	29,797
Fibers	7,394	6,257	6,914	3,047	4,790	2,799
Rhizome	3,912	3,129	1,388	1,081	415	1,391
Wax	2,058	1,387	1,983	1,385	2,205	1,953
Gum	220	392	548	834	415	457
Other	17,055	17,859	52,512	31,445	27,613	40,022
TOTAL	61,049	73,204	106,788	74,088	68,316	76,419

Source: Memoria Económica 1991-1992 - CNIF

3.3.3 MANUFACTURED PRODUCTS

In 1989, there were a total of 2,403 plants in the forestry and wood sector as follows:

INDUSTRY	NBR. PLANTS	INSTALLED CAPACITY million	% used	EMPLOYMT 000	TOTAL INVESTMT million \$
sawmills	954	7.6 m3	76%	23.8	275.9
box manufacturers	1,182	118 units		8.6	14.5
impregnators	21	1.3 m3	40%	2.3	2.4
pulp and paper	73	4.5 ton	79%	34.7	1814.0
board lumber	49	1.4 m3	47%	11.4	720.2
resins	18	0.06 ton	63%	8.0	17.9
secondary workshops	106				

Source: Memoria Económica 1989-1990 - CNIF

Data for 1990 show a total of 2,321 plants, while in 1991 there were 2,837 plants reflecting the following changes:

INDUSTRY	NBR. PLANTS	INSTALLED CAPACITY million	% used	EMPLOYMT 000	TOTAL INVESTMT million \$
sawmills	1,543	12.4 m3	45%	18.5	367.2
box manufacturers	1,144	115 units	NA	8.0	27.4
impregnators	14	0.9 m3	38%	0.3	37.3
pulp and paper	74	4.9 ton	80%	35.4	1889.0
board lumber	49	1.4 m3	47%	11.4	720.2
resins	13	0.042 ton	83%	9.0	8.3

Source: Memoria Económica 1991-1992 - CNIF

Twenty four new sawmill plants were installed in 1990, and another 565 in 1991, increasing capacity by 4.8 million tons but the use of this capacity decreased from 76% to 45%. Capacity also increased for the production of pulp and paper and the utilization also slightly grew as production of the paper, paper products, printing and publishing industry increased 8.6%. In all other areas, installed capacity decreased with the general contraction of the industry, which fell 15% to 20%.

The industrial transformation of wood products has operated at an average 60% of capacity, partially due to the unavailability of raw materials, the exploitation of resources below those authorized by SARH (approximately 50%), the low use of secondary products, the inefficient use of machinery and equipment and the inadequate geographical location of many industrial plants.

The following table lists the number of plants, excluding workshops and small manufacturers, by geographical area in 1991.

TABLE 9
WOOD AND LUMBER INDUSTRIES BY STATE
(number of plants)

	SAWMILLS	BOXES	IMPREG	VENEER	PARTICLE	FIBRE
Baja Cal. N	1	4				
Baja Cal. S	1					
Campeche	29		1	6	1	
Coahuila	10					
Colima	2	25				
Chiapas	23			5		
Chihuahua	231	57	4	6	2	
D.F.	6			1		
Durango	195	177	4	11	2	
Guerreo	54	2			1	
Hidalgo	19	12		2		
Jalisco	70	23		1	1	
México	47	6		9	1	1
Michoacán	575	232		2	1	
Morelos	1	4				
Nayarit	11	22		1		
Nuevo León	26	12				
Oaxaca	98	12	2	3	1	
Puebla	23	30				
Querétaro	5					
Quintana Roo	11			1		
Sn.Luis Potosí	4			1		1
Sinaloa	12	8				1
Sonora	23	6	2			
Tabasco	6			1		
Tamaulipas	10	3		1		
Tlaxcala	6	10				
Veracruz	15	8	1	2		
Yucatán	18			2	1	
Zacatecas	11	6				
TOTAL	1,543	659	14	55	11	3

Source: CNIF - Memoria Económica 1991-1992

The largest companies operating in Mexico in the forestry and woodworking sectors include the following:

COMPANY

PRODUCT

Celulósicos de Chihuahua	WPP
Chapas y Triplay del Sureste	SM, PLY
Cía. Forestal Bosques de Oaxaca	ROL, SM
Cía. Forestal de Oaxaca	ROL, SM, RES
Corporación Emssa	PLY, SM, POL
Doddoli Hermanos	SM, BOX
Duraplay de Parral	PB, PLY
Enchapados Alfa	PLY
Fábrica de Triplay "El Fuerte"	PLY
Fibracel	FIB
Floresta de Oaxaca	SM
Forestal Decorativa	PLY
Forestal Halcón	SM, BOX
Forestal Triplayera México	PLY
Grupo Industrial Comasa	PLY,
Grupo Industrial Durango	PLY, PB
Grupo Industrial Guadiana	SM, PB, MAN, IMP
Industrial de Valles	ROL
Industrial Forestal La Loma	SM
Industrias Resistol	PB
Madera Industrial de Quintana Roo	PLY, SM
Maderas Conglomeradas	PLY, PB
Maderas y Derivados de Cualcomán	SM, WPP
Molduradora de Casas Grandes	SM, MAN
Novopán de México	PB
Paneles Ponderosa	PB
Plywood Ponderosa de Durango	PLY
Plywood Ponderosa de México	SM, PLY
Ponderosa de Chihuahua	SM, BOX, WPP
Ponderosa Dimensional	BOX, MAN
Ponderosa Industrial	SM, MAN
Productora de Triplay	PLY
Triplay de Chihuahua	PLY
Triplay de Oaxaca	PLY
Triplay y Maderas del Norte	PLY
Triplay y Tableros Enchapados de Oaxaca	PLY, SM
Unión de Ejidos de Producción Forestal y Agropecuaria	PLY

Note:

BOX-boxes and packaging	PLY-plywood
FIB-fiber boards	RES-resins
IMP-impregnation	ROL-wood in rolls
MAN-manufactured products	SM-sawmills
PB-particle board	WPP-wood for pulp&paper & particle board

4. PREFABRICATED HOUSING

Wood is still rarely used to build houses or industrial buildings, as is common in the United States or Canada, and prefabricated housing of wood is little known or used in Mexico. The principal reason for this is the longstanding cultural tradition of concrete, cement and brick buildings, as well as the relatively higher cost of wood housing, given the low cost of the traditional labour intensive construction used in Mexico. Wood construction also tends to be seen as inferior to that of harder materials and this, coupled with its higher cost, explains why prefabricated wood housing has only accounted for approximately 3% of housing. On the professional level, little is taught at local universities and training centers on the use of wood in construction. Finally, there is a scarce supply of inputs with the necessary quality and classification.

In order to promote the use of wood in construction, the National Council for Wood in Construction (Consejo Nacional de la Madera en la Construcción A.C.) was created. Through its intervention, a series of training courses have been undertaken and some wood housing projects are under way with government institutions, such as Infonavit and Fovi to use wooden prefabricated housing for low income housing projects.

As could be seen in section 3 of this report, total imports of prefabricated housing have been increasing very rapidly in the past few years. In 1988 imports only amounted to \$995,600 and increased 3.5 times to \$3.5 million in 1989. By 1991, total imports were valued at \$11.5 million, reflecting an overall annual growth rate of 165.8% during that three year period. Most of these imports were from the United States, although Canadian exports to Mexico have also steadily increased in the past few years, from Cdn\$18,000 in 1989 to Cdn\$144,000 in 1991. These statistic point towards an increased interest in the use of prefabricated housing in Mexico.

U.S., Canadian and European companies specializing in prefabricated walls and roofing have made tentative moves to enter the vast Mexican housing market, in particular in response to a new government policy which turns over the construction of low-cost housing to private builders. By reducing the role of the state's numerous housing bodies to that of financial administrators and inviting private building companies to compete for their construction contracts, officials hope to add 320,000 new homes to the country's stock of low-income housing in 1993. A third of these will be commissioned by the Institute for the Workers' National Housing Fund (INFONAVIT), which is set to receive some \$2.1 billion in employers' contributions this year, \$1.9 billion of which will be used for public housing through low-interest loans to working taxpayers and construction credit to private builders. Construction companies will have to use their own initiative in building low-cost, low-profit workers'

housing complexes and selling them directly to Infonavit credit holders. They will therefore have to act as planners, builders and vendors.

Another alternative for more lucrative, middle class housing is given by financial backing from the Official Fund for Housing (FOVI), which offers slightly lower interest rates than private financial groups, under the auspices of the Mexican central bank. Also, banks have begun to promote mortgages in recent years with much success. This will be a very important factor in fostering construction in general, but also prefabricated housing as this becomes more known in Mexico.

5. END USERS

Wood consumption in Mexico can be divided first into two distinct sectors: Firewood and other uses. It is estimated that two thirds of wood consumption is used by fire: natural fires, man-induced fires, mostly to prepare lands for other uses, and firewood for rural homes, since wood continues to be the number one fuel used in rural Mexico. The remaining 35%, which in 1991 corresponded to the 7.7 million m³ noted in Table 7, is for industrial uses. Scantling, which accounted for 5.4 million m³ of this total, is basically used in two industries: construction (60%-70%) and furniture manufacturing (25%-35%), including mouldings. The rest is used for the manufacture of doors, other building products and other wood items, such as pencils, frames, handles, kitchenware, tableware, etc. The 1.6 million m³ of pulp are used in the paper industry, mostly for packaging and fine papers that cannot be made from recycled fibres. Posts and piles (0.1 million m³) are used in the mining industry and in the construction of transportation infrastructure. Fuel wood is used to manufacture coal and sleepers are consumed in 80% by the national railroad company, Ferrocarriles Nacionales de México and the rest by private contractors.

Below is a short overview of the construction and furniture industries, which are the largest users of wood in Mexico.

5.1 CONSTRUCTION

The Mexican construction industry is a very important economic activity, as measured by a 5% participation in the country's total GDP. Additionally, it is one of the most important employment generating activities, since it accounts for 10% of total employment. In the area of construction, there are close to one million workers registered. According to the input-production matrix for the construction industry, wood represents 3.7% of the total production value of the industry. At the same time, construction represents 47% of the total demand for sawmills and plywood and 9% of other wood industries.

The growth of the construction sector is procyclical, since it tends to grow with the economy as a whole but at more pronounced rates. This sector decreased by 10.3% in 1986, at the time of the economic crisis, then recovered by 2.8% in 1987, remained the same in 1988 and grew by 2.1% in 1989. In 1990, it grew at increasingly high rates to reach a global growth of 7.7%, placing itself as the most dynamic sector of the economy during that year. This growth was basically the response to a 9% increase in public investment and 5.4% in private investment.

According to the Secretariat for Programming and Budgeting (SPP), as cited in the 1991 CIHAC construction catalog, in 1990, total gross formation of fixed capital amounted to approximately \$34 billion. The construction industry accounted for 56% of this total (or \$19 billion) and can itself be divided as follows: 50% in residential buildings, 24% in non residential construction, and 26% in self-construction. Additionally, total fixed capital formation by the construction industry can be divided into private construction (60%), of which close to 80% corresponds to residential construction, and public construction (37%), mostly in buildings, for the petroleum industry, transportation infrastructure, electricity and communications.

Private investment in construction has increased from \$11.9 billion in 1988 to \$15.4 in 1990 and another 8.5% in 1991, to \$16.7 million, while public construction fell from \$3.7 billion in 1988 to \$3.6 billion and then grew to \$4.4 billion in 1990.

Total construction of housing is estimated at approximately 675,000 units in 1991, with an estimated annual increase of 3.8% per annum. Of this total, CIHAC considers 381,200 acceptable constructions, while the rest is considered deficient, in particular due to the use of improper materials. Of total acceptable housing, 53% is social interest housing, or subsidized housing built by the formal sector (companies registered with the National Construction Industry Chamber), including mostly public sector institutions. The remaining 47% is built by the informal sector and corresponds mostly to middle class housing and economic housing without financing.

According to data from the 1980 census, the materials most commonly used in the construction of the 12 million private homes then visited were as follows:

On floors:	Cement or concrete	46%
	Earth	26%
	Mosaic & other coverings	26%
	Non specified floors	2%

On roofs:	Concrete or bricks	44%
	Metal or asbestos sheets	17%
	Tiles	13%
	Cardboard	12%
	Palm or wood	10%
	Other	4%
On walls:	Bricks & block	57%
	Adobe	21%
	Wood	9%
	Mud	4%
	Palm or bamboo	3%
	Cardboard	2%
	Metal or asbestos sheets	1%
	Other	3%

Between 1987 and 2000, it is estimated that over eight million new homes will have to be built, or approximately 636,000 per year. Of these, 68% correspond to low income family housing, 17% to low middle income class housing, 7% to high middle class income housing and 2% to high income housing.

The wood used in the construction industry is basically softwood from coniferae. The largest use of wood in construction is of plywood for "cimbra" by which a wood structure is made to contain the concrete structure and is then removed once the concrete or cement are dry. Another frequent use is of posts for foundations and of wood for platforms in the construction of floors and ceilings. These are also usually covered by cement or concrete. Wood, usually plywood or veneer, are used to cover the walls for a decorative finish. Wood is rarely used for the construction of houses, as is the case in Canada or the United States.

5.2 FURNITURE

The domestic wood furniture manufacturing industry represents 1.6% of total manufacturing GDP and only 0.4% of total GDP. Furniture manufacturing is a very fragmented industry. It is estimated that there are a total of approximately 2,200 furniture manufacturers in Mexico, excluding small shops. They are predominantly very small (62%) establishments and small firms (33%). Only 1% of all firms are large and employ 226 workers on average. Most of these manufacturers (40%) are located in the Mexico City area and in the Northern (20%) and Western (20%) regions of the country near Mexico's largest consumer centers, Guadalajara and Monterrey. The Mexican furniture industry still has a very low automation level, in particular in the production of wood furniture, where portable equipment is still predominantly used.

Of total wood furniture manufacturing, approximately 50% is of household furniture (living room, dining room and bedroom furniture), 7% of kitchen furniture, in addition to 25% so called

loose pieces, such as chairs, bookcases, chests of drawers, etc. used in the house. Office furniture represents another 14%, do-it-yourself furniture 1% and components 3%. Within household furniture, 55% corresponds to living room, 28% to dining room and 17% to bedroom furniture. Overall, the industry caters 53% to middle class markets, 26% to high class markets and 9% to institutional ones, such as hotels, schools, etc.

Following are average annual production levels of wood furniture in number of items or sets:

Living rooms	15,600
Bedrooms	8,600
Dining rooms	11,900
Kitchens	2,700
Chairs	19,600
Bookcases	9,200
Desks	7,300
Components	31,700
Loose pieces	414,300

Source: INFOTEC - Industria de Muebles de Madera, 1988

Most wood furniture is made of pine, mahogany and cedar wood as well as of particle board, particularly in kitchen furniture. The following chart shows the use of wood by type of wood and of furniture:

LIVING ROOM	DINING ROOM	BED-ROOM	OFFICE	KITCHEN
-------------	-------------	----------	--------	---------

Source: INFOTEC

The most relevant problems cited in reference to domestic input supply are prices, availability of wood, problems in the distribution and supply of wood, low quality levels and

practically no quality control. This has brought about an increase in the use of imported wood and other inputs by the local furniture manufacturers.

6. REGULATIONS

The Mexican forestry sector is regulated by three major frameworks:

The Mexican Constitution (Article 27)

The Forestry Law (April 1986) and

The Regulations to the Forestry Law (July 1988).

Additionally, the Rural District Development Law and the General Law of Ecological Balance and Environmental Protection influence decisions in this sector.

The Secretariat of Agriculture and Hydraulic Resources (SARH) is the administrative body for the enforcement of the law and the signature of multilateral agreements. It is also responsible for the preparation of an inventory of existing resources (the most recent one was done in 1975) and of statistical data on the sector, as well as of policy guidelines and development programs for the sector. Basically, the SARH is in charge of regulating, developing and overseeing all aspects related with the exploitation, preservation and reforestation of forestry resources, as well as their distribution and industrial transformation.

The exploitation of forestry resources is reserved exclusively to Mexican citizen and is subject to a permit granted by SARH based on "studies for integral management". This includes permanent, temporary, eventual (building a road) exploitation, and that for scientific, construction or plantation purposes. Integral management should consider the use and exploitation of forestry resources with the highest possible productivity and without damage to the environment. No permit is granted without such approved study. Additionally, SARH grants technical services to the forestry sector, mostly through concessions granted to land owners or professionals, which are in charge of overseeing the "integral management" as stipulated in the study and of conducting the exploitation of forestry resources. These services are payable by the exploitation permit holders.

In general terms, it can be said that the regulations are very limiting. Every aspect of forestry exploitation is subject to permits, studies and a myriad of requirements. This has made exploitation difficult and also costly, reason for which imported products are very competitive in Mexico.

7. MARKET ACCESS

As a result of Mexico's accession to GATT, the Mexican government has gradually opened the economy to international markets. Tariffs have been lowered from a maximum 100% in 1983, to 20% since December, 1988. The official price system has been totally eliminated and import permits are required on only 198 of the total 11,812 items in the Mexican Harmonized Tariff System.

The import climate for wood and wood products improved as a result of this commercial liberalization. Therefore, imports in this industry, classified under Chapter 44 of the Harmonized System, are subject to an ad valorem duty of maximum 20% assessed on the invoice value. In addition, a customs processing fee of 0.8% is assessed on the invoice value. A 10% value added tax (recently reduced from 15%) is then assessed on the cumulative value of both taxes in addition to the invoice value. Some manufacturers who use imported inputs for their products under a Mexican Government approved manufacturing plan may have the duty and/or VAT waived or rebated. Raw materials, intermediates and machinery for use in manufacturing or assembling products for export are generally eligible to be imported either duty free or under bond.

Formerly, in order to bid on tenders and sell to a government agency or decentralized company, foreign manufacturers required having a local resident agent and to have the foreign supplier registered and accepted by the Secretariat of Planning and Budgeting (Secretaría de Programación y Presupuesto - SPP). As of July 1991, the above requirement for prior registration with SPP has been eliminated.

The new procedures now in force require the foreign supplier to have a local agent or representative and it has to be registered through his local representative as an accepted supplier with each government ministry and/or decentralized agency according to the international tender requirements under review.

International tenders financed by the World Bank or the International Development Bank are open to all member countries of these institutions. More recently, the World Bank, where its credits are involved, has required that bid documents should also include an affidavit confirming that the Canadian company is a bona fide Canadian company with an official residence in Canada and that Canada is recognized as a contributing member to the World Bank.

There are no official metric requirements applicable to imports into Mexico. However, since the metric system of units is, by law, the official standard of weights and measures in Mexico, importers will usually require metric labeling for packaged goods, although the English system is also used. Dual labeling is acceptable. Imported products should be labeled in Spanish containing the following information: name of the product, trade

name and address of the manufacturer, net contents, serial number of equipment, date of manufacture, electrical specifications, precautionary information on dangerous products, instructions for use, handling and/or product conservation and mandatory standards. Mexico adheres to the International System of Units (SI). Electric power is 60 cycles with normal voltage being 110, 220 and 400. Three phase and single phase 230 volt current is also available.

Prepared by:
Caroline Verut
for the Canadian Embassy
Mexico City
December 1992

INDUSTRIAL CHAMBERS AND ASSOCIATIONS
SERALIMIS Y ASEREBAN AIRTEPME LA ENOYANAA
ASOCIACION DE INDUSTRIALES FORESTALES DE DURANGO, A.C. (FOREST INDUSTRY ASSOCIATION OF DURANGO)
Independencia 135 Sur
Durango, D.F.
Phone: (181) 22-712
Fax: (181) 24-432

ASOCIACION NACIONAL DE DISTRIBUIDORES DE MADERA Y PRODUCTOS DE MADERA Y PASTICO, A.C. (NATIONAL LUMBER, WOOD AND PLASTIC DISTRIBUTOR ASSOCIATION)
Inapientes Sur 525 - 502ano
Col. del Valle
03100 México D.F.
Phone: 543-98-19
Fax: 543-98-19
Contact: Sr. Adolfo López
President

ASOCIACION NACIONAL DE FABRICANTES DE PAPELOS DE MADERA (NATIONAL WOOD BOARD MANUFACTURERS ASSOCIATION)
Viaducto Miguel Alemán S.A. (PAPINI) S.A. (PAPINI) S.A. (PAPINI) S.A.
11800 México D.F. (INDUSTRIA Y MAQUINARIA DE MADERA)
Phone: 273-0986 273-0004
Fax: 273-0933
Contact: Sr. Carlos Balanz Diaz
President
Lic. Armando Benítez
Director General

CAMARA NACIONAL DE LA INDUSTRIA FORESTAL (NATIONAL CHAMBER FOR THE FORESTRY INDUSTRY)
Viaducto Miguel Alemán 297
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Contact: Lic. Heliodoro Valero
President

11-02-61 (41)
77-10-41 (41)

To call all telephone and fax numbers listed below from Canada, unless they are preceded by a different area code, dial 011-525 first, otherwise dial 011-52-(area) number.

NOTE: The information on companies not located in Mexico City was not confirmed.

**APPENDIX I:
INDUSTRIAL CHAMBERS AND ASSOCIATIONS**

ASOCIACION DE INDUSTRIALES FORESTALES DE DURANGO, A.C.

(FOREST INDUSTRY ASSOCIATION OF DURANGO)

Independencia 135 Sur

Durango, Dg.

Phone: (181) 29-712 19-690

Fax: (181) 24-435

ASOCIACION NACIONAL DE DISTRIBUIDORES DE TABLEROS Y LAMINADOS DE MADERA Y PLASTICO, A.C.

(NATIONAL LUMBER, WOOD AND PLASTIC BOARD DISTRIBUTOR ASSOCIATION)

Insurgentes Sur 598 - Sótano

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Contact: Sr. Adolfo López
Presidente

ASOCIACION NACIONAL DE FABRICANTES DE TABLEROS DE MADERA

(NATIONAL WOOD BOARD MANUFACTURERS ASSOCIATION)

Viaducto Miguel Alemán 277

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Contact: Sr. Carlos Balanzá Díaz
President

Lic. Armando Santiago Pineda
Director General

CAMARA NACIONAL DE LA INDUSTRIA FORESTAL

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Viaducto Miguel Alemán 277

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Phone: 273-0986 273-0004

Fax: 273-0933

Contact: Lic. Heliodoro Vallejo Lascano
President

**CAMARA NACIONAL DE LAS INDUSTRIAS DERIVADAS
DE LA SILVICULTURA**
(NATIONAL CHAMBER OF INDUSTRIES DERIVED FROM FORESTRY)
Baja California 255 edif. A piso 12
Col. Hipódromo Condesa
06170 México D.F.
Phone: 584-4044 584-4155 584-4133
Contact: Ing. Juan Escobedo Berns

CAMARA NACIONAL DE LA INDUSTRIA MADERERA Y SIMILARES
(NATIONAL WOOD CHAMBER)
Santander 15-301
Phone: 598-67-25
Fax: 598-69-32
Contact: Sr. Oscar Gonzalez Cabrera
Director General

**CONSEJO NACIONAL DE LA MADERA
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Quintana Roo 141-603
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President
Arq. Manuel Elorza Wershoffen
general Manager

**INSTITUTO NACIONAL DE INVESTIGACIONES FORESTALES
Y AGROPECUARIAS (INIFAP)**
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Insurgentes Sur 694
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UNION DE MADEREROS DE DURANGO, A.C.
(DURANGO FOIRESTERS UNION)
Fanny Anitua 1474
Durango, Dgo.
Phone: (181) 33-311 15-375

**UNION DE PRODUCTORES E INDUSTRIALES
FORESTALES DE CHIHUAHUA, A.C.**
(CHIHUAHUA FOREST INDUSTRY PRODUCERS UNION)
Juárez 8
Chihuahua, Chih.
Phone: (14) 16-20-11 16-20-88
Fax: (14) 14-01-71

**APPENDIX II:
USEFUL GOVERNMENT MINISTRIES AND
DECENTRALIZED AGENCIES**

SECRETARIA DE AGRICULTURA Y RECURSOS HIDRAULICOS

Av. Insurgentes Sur 476 - Piso 13
Col. Roma Sur
06768 México D.F.
Phone: 584-00-96 584-02-71
Fax: 584-26-99

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Secretario de Agricultura y Recursos Hidráulicos
Phone: 584-00-96

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Subsecretario Forestal
Phone: 584-73-30

Lic. José Andrés Casco Flores
Director General de Estudios del
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Phone: 523-86-47

Ing. Jesús Cardeña Rodríguez
Director General de Política Forestal
Phone: 554-56-20

Lic. Juan Manuel Flores Athiè
Director General de Recursos Materiales
y Servicios Generales
Phone: 589-12-11

**INSTITUTO DEL FONDO NACIONAL DE LA VIVIENDA
PARA LOS TRABAJADORES (INFONAVIT)
(INSTITUTE FOR THE NATIONAL FUND FOR WORKER'S HOUSING)**

Barranca del Muerto 280
Col. Guadalupe Inn
México D.F. 01020
Phone: 651-9400 651-8177 ext. 1361
Contact: Arq. Ernesto Velazco León
Technical Deputy Director

**FONDO DE OPERACION Y DESCUENTO BANCARIO
A LA VIVIENDA (FOVI - BANCO DE MEXICO)
(HOUSING OPERATION AND BANK DISCOUNT FUND)**

Ejército Nacional 187 piso 7
Col. Anzures
México D.F. 11590
Phone: 255-3644 250-2224
Contact: Lic. Manuel Zepeda Payeras
Ing. Victor Rubio Flores

**APPENDIX III:
POTENTIAL DISTRIBUTORS AND REPRESENTATIVES**

CENTROMAC, S.A.

Blvd. Avila Camacho 140
53560 Naucalpan, Edo. de Méx.
Phone: 394-88-93 394-56-93
Fax: 576-41-50
Contact:

EUROMEX, S.A.

Calz. de las Armas 18
Fracc. Industrial Las Armas
54080 Naucalpan, Edo. de Mex.
Phone: 394-88-93 394-56-93
Fax: 394-48-34
Contact:

IMPORTACION Y SERVICIO PROAL, S.A.

Calz. Azcapotzalco La Villa 1015-B
Col. Industrial Vallejo
02300 México D.F.
Phone: 587-03-91 587-06-88
Fax: 587-54-97
Contact: Ing. Carlos Proal
Director General

MEXICO VIRUTEX, S.A. DE C.V.

Blvd. M. Avila Camacho 120-A
53390 Naucalpan, Edo. de Mex.
Phone: 576-03-61 358-86-60

MOTOSIERRAS INTERNACIONALES, S.A. DE C.V.

Fray Servando Teresa de Mier 1030
Col. Jardín Balbuena
15900 México D.F.
Phone: 762-82-90 762-83-71
Contact: Sra. Patricia Landin
Director General

REIMAQ, S.A. DE C.V.

Calle 4-A No. 2152
Col. Ferrocarriles
Guadalajara, Jal.
Phone: (36) 12-56-19 12-56-20
Fax: (36) 12-42-57
Contact:

SIERRAS Y MAQUINARIAS, S.A. DE C.V.

Efrén Rebolledo 41
Col. Obrera
06800 México D.F.
Phone: 761-59-28 588-93-52
Fax: 588-56-53
Contact: Ing. Arturo Puente
Director General

TALLERES BOLIVAR, S.A.

Dr. Liceaga 7
Col. Doctores
06720 México D.F.
Phone: 578-34-11
Fax: 588-18-40
Contact: Sr. Edgar Rodríguez
Director General

TALLER M. MARTINEZ

Alonso Capetillo 138
Col. Ampliación Sn. Pedro Xalpa
02710 Azcapotzalco, México D.F.
Phone: 556-05-66 358-83-50
Fax: 358-47-30
Contact: Sr. Martínez
Director General

TECNOPLAN, S.A. DE C.V.

Río Guadalquivir 50
Col. Cuauhtémoc
06500 México D.F.
Phone: 514-18-03 511-14-88
Fax: 208-24-02
Contact: Sr. Dirk Johannsen
Director General

TECNICENTRO MADERERO, S.A. DE C.V.

Venustiano Carranza 2419
Chihuahua, Chih.
Phone: (14) 12-47-78 12-97-85
Contact: Ing. Héctor O. Abbud

**APPENDIX IV:
PRINCIPAL MEXICAN FORESTRY DEVELOPERS
AND SAWMILL MANUFACTURERS**

ARTEFACTOS DE MADERA DE CAMPECHE S.A.

Ecuador 99
Campeche, Campeche
Phone: (981) 628-01
Fax: (981) 651-25
Contact: Carlos Maury Lanz

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Cuaptitzio 128
Uruapan, Mich.
Phone: (452) 39-585

CELULOSICOS DE CHIHUAHUA S.de R.L. de C.V.

Independencia 1403-5
Chihuahua, Chih.
Phone: (14) 16-3101 16-3733
Contact: C.P. Manuel Araujo Hernández

CIA. SILVICOLA INDUSTRIAL S. DE R.L.

Apdo Postal 87
Morelia, Mich.
Phone: (451) 48-363 47-066

CIA. FORESTAL DE OAXACA, S. DE R.L. DE C.V.

Monte Elbruz 132 - Piso 1
Col. Lomas de Chapultepec
11000 México D.F.
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Fax: 202-43-98
Contact: C.P. Alfonso Pandal Gras
Director General

CORPORACION EMSSA S.A. de C.V.

Ejército Nacional 904
Col. Polanco
México D.F.
Phone: 395-9200
Contact: Lic. Manuel Zichlin G

CORPORACION INDUSTRIAL MADERERA S.A.

Insurgentes Sur 686-304
México D.F.
Phone: 543-9428
Contact: Rodolfo Echeverría Pérez

DODDOLI HERMANOS S. de R.L.

km. 2.5 carr. Uruapan-Calzontzin
Uruapan, Mich.
Phone: (452) 324-44
Contact: Pablo Doddoli Murguía

DURAPLAY DE PARRAL, S.A. (COMACO)

Rosales 1313
Chihuahua, Chih.
Phone: (14) 15-1180
Contact: Lic. Rogelio González Russek
Ing. Luis Jaime González Russek

DURAPLAY DE PARRAL, S.A. (COMACO)

Barrio de España S/N
Hidalgo del Parral
Chihuahua 33870
Phone: (152) 261-54
Fax: (252) 289-45
Contact: Ing. Mario González Lardizábal

DURAPLAY DE PARRAL, S.A. (COMACO)

Londres 161 torre A suite 3A
Col. Juárez
México D.F. 06600
Phone: 207-1812 207-2989
Fax: 516-0160
Contact: Ing. Luis Jaime González Russek

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Lerdo de Tejada 4
Col. Marina Nacional
San Juan Ixhuatepec
Estado de México
Phone: 569-6315 569-4255
Contact: Ing. Guillermo Robert Botello

FIBRACEL S.A. de C.V.

Monte Elbruz 132 - 1er piso
Col. Lomas de Chapultepec
México D.F.
Phone: 540-6725 to 28
Contact: C.P. Gerardo Pandal Graf

FLORESTA DE OAXACA, S. DE R.L. DE C.V.

Curidurías 313 - Int. A
Oaxaca, Oax.
Phone: (951) 531-78
Contact: Jaime Escarpita Herrera

FORESTAL CHAPULTEPEC, S.A. DE R.L. DE C.V.

Av. Universidad 1507
Chihuahua, Chih.
Phone: (181) 19-535

FORESTAL DECORATIVA S.A. de C.V.
km. 2.5 Carr. Cuauhtémoc
Chihuahua, Chih.
Phone: (14) 18-6843 18-6244
Contact: Esteban González Heiras

FORESTAL DE CHIGNAHUAPAN S.A.
Paseo de la Reforma 403-405
México D.F.
Phone: 514-7501 514-0067
Contact: Lic. Fernando Fernández de C.

FORESTAL HALCON S.de R.L. de C.V.
Matamoros 324
Col. Tierra Blanca
Durango, Dgo.
Phone: (181) 115-19 149-66 303-16
Contact: Francisco Javier Pérez Gavilán

FORESTAL MADERERA DEL SURESTE S.R.L. de C.V.
Calle 27 - 21A
Escárcega, Campeche
Phone: (981) 403-46
Contact: L.A.E. Eduardo Casares Espinoza

FORESTAL SARAYA S.de R.L. de C.V.
Av. Chapultepec 405-409
México D.F.
Phone: 533-2098
Contact: Ing. Juan Manuel Batres

GRUPO INDUSTRIAL GUADIANA, S.A. DE C.V. (COMACO)
Carretera Panamericana Km 959
34000 Durango, Dgo.
Phone: (181) 33-322 33-682 33-442
Fax: (181) 33-525
Contact: Ing. Gilñberto Rosas Solórzano

GRUPO INDUSTRIAL GUADIANA, S.A. DE C.V. (COMACO)
Reforma 155 1er piso
Col. Polanco
México D.F. 11000
Phone: 570-8933
Contact: Lic. Gustavo Quiroz Mendoza

GRUPO INDUSTRIAL DURANGO S.A.
Carr. Panamericana km. 959
Durango, Dgo.
Phone: (181) 338-22
Fax: (181) 333-25
Contact: Ing. Wilfrido Rincón

GRUPO INDUSTRIAL GUADIANA S.A.

Carr. Panamericana km. 959
Durango, Dgo.
Phone: (181) 338-22
Fax: (181) 333-25
Contact: Lic. Alfredo Acle

INDUSTRIAL DE VALLES S. de R.L.

Prol. Pedero Antonio de los Santos s.n.
Cd. Valles S.L.P.
Phone: (138) 210-46
Contact: T.F. José Avalos Recio

INDUSTRIAL FORESTAL LA LOMA S. de R.L.

H. Colegio Militar 64
Morelia, Mich.
Phone: (451) 363-09 563-90
Contact: Ing. Tobías F. García Pérez

INDUSTRIAS RESISTOL S.A.

Abasolo 41 2o piso
Cd. Hidalgo, Mich.
Phone: (725) 403-56
Contact: Ing. Alberto Villarreal

MADERAS CONGLOMERADAS S.A. de C.V. (COMACO)

Av. San José 2
San Juan Ixhuatepec
Estado de México
Phone: 569-0133
Contact: Ing. Juan Manuel Batres
Sr. Carlos Balanza Díaz

MADERAS Y DERIVADOS DE COALCOMAN S.A.

Cupatitzio 25-307
Uruapan, Mich.
Phone: (452) 302-46 341-34
Contact: Carlos Valdés Sandoval

NOVOPAN DE MEXICO S.A. de C.V.

Monte Elbruz 132 - 1er piso
México D.F. 11000
Phone: 540-6725 to 28
Contact: C.P. Alfonso Pandal Graf

PANELES PONDEROSA S.A. de C.V.

km. 2.5 carr. aeropuerto
Chihuahua, Chih.
Phone: (14) 20-0417 20-0597
Contact: Lic. Guillermo Bilbao González

PLYWOOD PONDEROSA DE DURANGO S.A.

Potasio 150
Cd. Industrial
Durango, Dgo.
Phone: (181) 803-44 803-18
Contact: Ing. Wilfrido Rincón

PLYWOOD PONDEROSA DE MEXICO S.A. de C.V.

Av. Universidad 2505
Chihuahua, Chih.
Phone: (14) 14-2666
Fax: (14) 14-3411
Contact: Ing. Enrique Escalante Ochoa

PLYWOOD PONDEROSA DE MEXICO S.A. (COMACO)

Saltillo 19 - 10o piso
Col. Condesa
México D.F. 06140
Phone: 286-5898 553-9111 211-0111
Contact: Jorge Avila

PONDEROSA DE CHIHUAHUA, S. DE R.L.

Av. Universidad 1507
Chihuahua, Chih.
Phone: (14) 13-15-18 13-37-84

PONDEROSA DIMENSIONAL S.A. de C.V.

km. 2 carr. la Esmeralda
Parral, Chih.
Phone: (152) 207-30 207-60
Contact: Lic. Sergio Ayoub Touche

PONDEROSA INDUSTRIAL S.A. de C.V.

km. 2 carr. la Esmeralda
Parral, Chih.
Phone: (152) 207-72
Contact: Lic. Ricardo Ayoub Touche

PRICECA S. de R.L. de C.V.

Vallarta 1 606-B
México D.F. 06800
Phone: 585-5022
Contact: Lic. Martín Puente Arteaga

PRODUCTORA DE TRIPLAY S.A. de C.V.

Estroncio y Selenio
Cd. Industrial
Durango, Dgo.
Phone: (181) 808-03
Fax: (181) 813-45
Contact: Ing. Juan Ramón Mijangos

TRIPLAY DE CAMPECHE S.A. de C.V.

Av. Agustín Melgar s.n.
Campeche, Campeche 24030
Phone: (981) 645-11
Fax: (981) 104-03
Contact: Ing. Jorge M. Castillo López

TRIPLAY DE CHIHUAHUA S. de R.L.

Villa Escobedo y Manzanas
Col. La Huerta
Parral, Chih.
Phone: (152) 231-38 258-50
Contact: Lic. Jacobo Ayub Touche

TRIPLAY DE OAXACA S.A. de C.V. (COMACO)

Monte Elbruz 132 - 1er piso
México D.F.
Phone: 540-6725 to 28
Contact: C.P. Alfonso Pandal Graff

TRIPLAY PLYWOOD PONDEROSA DE DURANGO S.A.

Antimonio 120
Cd. Industrial
Durango, Dgo.
Phone: (181) 800-78
Fax: (181) 807-97
Contact: Lic. José Ignacio Rivas Gómez

TRIPLAY Y MADERAS DEL NORTE S.A.

km. 960-1 Carr. Matamoros-Mazatlán
Durango, Dgo.
Phone: (181) 810-92 813-30
Contact: LAE Leonel Núñez Domínguez

TRIPLAY Y TABLEROS ENCHAPADOS DE OAXACA S.A. de C.V.

Calz. Porfirio Díaz 124
Col. Reforma
Oaxaca, Oax.
Phone: (95) 505-06 567-42 566-31
Contact: Manuel E. García M.

APPENDIX V
PREFABRICATED HOUSING DISTRIBUTORS

CASAS PREFABRICADAS

Shakespeare 6-405
Col. Anzures
México D.F. 11590
Phone: 207-0542
Contact: Arq. René Sánchez Hernández

CASAS PREFABRICADAS LAYGO

Coahuila 171-3
Col. Roma
México D.F.
Phone: 564-0141

DYASA

Av. Cuauhtémoc 153
Col. Roma
México D.F.
Phone: 564-8421 564-8274 584-4564 584-4784
Fax: 564-8274

PANELES ESTRUCTURALES MICSА

Patriotismo 56
Col. Escandón
México D.F. 11800
Phone: 277-5366 277-5651 515-9522
Fax: 515-9522 or 23
Contact: Lourdes Lauriano
Purchasing Manager

PANEL INGENIERIA S.A. de C.V.

Guillermo Prieto Mz 131 LT 1791
Col. Sta. María Aztahuacan
México D.F. 09500
Phone: 693-7621
Contact: Esteban Salazar

PANELES DE MADERA Y CONCRETO S.A.

Av. San Esteban 6-1er piso
Col. El Parque
Naucalpan, Estado de México 53398
Phone: 359-1443 300-6888 300-4246
Fax: 576-3074
Contact: Ing. Sergio Peralta Navarrete
General Director

PRACTICASA S.A. de C.V.

Av. Constituyentes 206-513
Querétaro, Qro.
Phone: (42) 16-5114
Fax: (42) 16-5176

PROVEEDRORA DE CASETAS S.A. de C.V.

Nueces 99
Col. Nueva Santa María
México D.F. 02800
Phone: 355-3073 355-3881
Fax: 355-2778
CVonactct: Alfredo herrera Zavala

URBINA S.A.

Matamoros 319
Col. Tlalpan
México D.F. 14090
Phone: 573-0095 655-1950
Fax: 573-4654
Contact: Sra. Concepción Urbina

URBINA SISTEMAS PREFABRICADOS S.A.

Violeta 7
Col. San Pedro Mártir
México D.F. 14650
Phone: 655-8958 655-0294
Fax: 655-8958
Contact: Arq. Rafael Urbina

MEMBERS OF THE NATIONAL COUNCIL FOR WOOD IN CONSTRUCTION

Note: Some companies that are members of this council are listed in Appendix IV and are earmarked with (COMACO). The others are listed below.

AUTOCONSTRUCCION S.A. de C.V.

Barranca del Muerto 530
Col. Los Alpes
México D.F.
Phone: 651-2482 651-7295
Contact: Lic. Jesús Tam Lee

CHAPAS Y TRIPLAY DEL SURESTE S.A. de C.V.

Lago Cuitzeo 181
Col. Anáhuac
México D.F.
Phone: 260-0863 260-4653
Fax: 260-2565
Contact: Manuel P. García Becerra

CINDU DE MEXICO S.A. de C.V.

Bosque de Ciruelos 140-705
Col. Bosques de las Lomas
México D.F.
Phone: 596-6808 596-7046 596-7057
Contact: Ing. Eduardo Williams

COMPONENTES Y DERIVADOS DE MADERA S.A.

Lázaro Cárdenas 133
México D.F.
Phone: 578-4714
Contact: Ing. Francisco Borbolla

CONSTRUCTORA RADIAL S.A. de C.V.

Palomas 62
México D.F. 02460
Phone: 787-0996 787-0106
Fax: 787-0996
Contact: Lic. Julián Ranz Casanova

DIVAKA S.A.

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Col. Roma
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Phone: 564-1426 514-2193
Contact: Sr. Joaquín Avila Farfán

GRUPO DIBOSA S.A. de C.V.

Zuazua y Mina 200
Mexicali, Baja California
Phone: 53-5819
Contact: Sr. Marco A. Sandoval

GRUPO PEMBA S.A. de C.V.

Cuauhtémoc 982-7
Col. Vértiz Narvarte
México D.F. 03100
Phone: 575-9907
Contact: Arq. Alfonso Ruiz Rebollar

EUREKA S.A. de C.V.

Aniceto Ortega 1230
Col. del Valle
México D.F.
Phone: 534-4788 726-1400
Contact: Arq. Julio Armendariz

INDUSTRIAS PAPANOA S.A. de C.V.

Periférico Sur 6501 PB
Col. Tepepan Xochimilco
México D.F. 16020
Phone: 676-5555 676-4074
Fax: 676-4845
Contact: Ing. Gianni Bellasina
Ing. Guillermo Sánchez González

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Papanoa, Guerrero
Phone: (742) 70-492
Contact: Arq. Héctor Goss Cortés

INFOGRO O.P.P.S.

Eugenia 251
Col. Narvarte
México D.F.
Phone: 536-0243 682-6651
Contact: Lic. Jorge Labra Gómez

ITALCASA S.A. de C.V.

Patriotismo 95
Col. Escandón
México D.F.
Phone: 516-0622 516-0623 516-2510
Contact: Sr. Italo della Valentina
Arq. Eduardo Alamán

LOBA SISTEMA DE ACABADOS S.A. de C.V.

Vito Alesio Robles 38
Col. Florida
México D.F. 01030
Phone: 661-2340 661-5161 661-7297
Contact: Dr. Franz Steden Huetter

MADERAS E IMPLEMENTOS S.A. de C.V.

Prol. Madera 3827 Ote.

Col. Fierro

Monterrey, N.L.

Phone: (83) 54-6612 54-8287 55-0419

Fax: (83) 54-0308

Contact: Ing. Roberto Reyes Casas

MADERAS "MI CASA" S.A. de C.V.

Querétaro 502

Col. Obrera

Tampico, Tamaulipas

Phone: (121) 16-6346 16-3157

Fax: (121) 16-3037

Contact: C.P. Sergio Martínez

MADERAS PINELLI S.A.

Apartado Postal 522

Durango, Dgo.

Phone: (181) 24-911 24-627

Mexico City 536-3913

Contact: Ing. Eduardo Furkhen Pinelli

MATERIALES CONSTRUCENTRO S.A. de C.V.

Alemán 40

Col. Ampl. Granada

México D.F.

Phone: 255-5136 255-4950 255-8070

Contact: Arq. Carlos Villar

MEXALIT INDUSTRIAL S.A.

Horacio 1855 5o piso

Col. Anzures

México D.F.

Phone: 202-4133 202-4991

Contact: Arq. Rq. y Tardán Waltz

MODULOS MOVILES DE MADERA S.A. de C.V.

Sierra Nevada 23

Col. Parque Industrial

Ciudad Neza, Estado de México

Phone: 765-0184

Contact: Juan Manuel Díaz Torres

NACIONAL DE AUTOCONSTRUCCION S.A. de C.V.

Oaxaca 69

Col. Roma

México D.F.

Phone: 514-6967

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PANELES DE MADERA Y CONCRETO S.A.

San Esteban 66 esq. Zoquiapan
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Naucalpan, Estado de México
Phone: 300-5098 300-6888 300-4246
Contact: Ing. Sergio Peralta Navarrete

PANEL REY S.A. de C.V.

Emerson 304 8o piso
Col. Polanco
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Fax: 531-9199
Contact: Arq. Roberto Velázquez

PENTAFLOROFENOL S.A.

Av. Ceylan 529-Q
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México D.F. 02300
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Contact: Dr. José A. Cáceres Mancilla

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Efrén Rebolledo 8 L.C.
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México D.F. 06800
Phone: 588-5655 578-7480
Fax: 575-3534
Contact: Ing. David A. Saloma Orozco
Ing. Jorge Leyva

TIRADO Y ASOCIADOS CONSTRUCCIONES S.A. de C.V.

Barranca del Muerto 32
México D.F.
Phone: 524-5246 524-2722 524-1488
Contact: Arq. Edgardo Tirado
Arq. Felipe Barbosa Rivera

ITALCASA S.A. de C.V.

Patriotismo 25
Col. Secundaria
México D.F.
Phone: 516-0622 516-0623 516-0624
Contact: Sr. Israel de la Cruz
Arq. Manuel Díaz Torres

LOSA SISTEMAS DE ACEROS S.A. de C.V.

Vito Alejo Obregón 32
Col. Florida
México D.F.
Phone: 514-6957
Contact: Ing. Luis Carlos Hernández

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