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DEPARTMENT OF TRADE AND COMMERCE  
DOMINION BUREAU OF STATISTICS  
CENSUS OF INDUSTRY  
MINING, METALLURGICAL AND CHEMICAL BRANCH  
OTTAWA - CANADA

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ANNUAL INDUSTRY REPORT

CHEMICALS AND ALLIED PRODUCTS GROUP

THE ADHESIVES INDUSTRY, 1935.

The Adhesives Industry covers only the factories which make glue, paste, etc., as their chief products. Seventeen firms were classified to this group in 1935, 8 being in Quebec, 8 in Ontario and 1 in British Columbia.

Compared with 1934 production for the industry increased 10 per cent in 1935 to \$1,436,259, the number of employees advanced 17 per cent to 389 and payments for salaries and wages increased 16 per cent to \$423,513. The capital investment, however, dropped slightly to \$2,086,754 and the cost of materials for manufacturing declined to \$550,700 from \$587,535.

Output of animal glue increased 44 per cent in quantity and 50 per cent in value to 2,073 tons worth \$503,900 from 1,437 tons at \$335,903 in 1934. Other glues declined slightly in value to \$352,186 in 1935 from \$354,598 in 1934 but mucilage and paste advanced to \$203,871 from \$121,075. Some mucilage and paste was made also in other industries, particularly by the manufacturers of writing inks; the total production from all sources was about \$269,525 in 1935 compared with \$190,765 in 1934.

Imports of adhesives into Canada during 1935 were as follows:- vegetable glue, 605 tons at \$44,575; animal glue, 880 tons at \$135,577; liquid glue, 67 tons at \$25,009; mucilage and paste, 155 tons at \$34,046.

Exports of glue amounted to 41 tons valued at \$14,783.

Table 1 - PRINCIPAL STATISTICS OF THE ADHESIVES INDUSTRY, 1920 - 1935.

Years	Number of plants	Capital employed	Average number of employees	Salaries and wages	Cost of fuel and electricity at works	Cost of materials at works	Selling value of products at works
		\$		\$	\$	\$	\$
1920 .....	17	2,233,364	414	480,473	168,601	1,070,493	2,202,059
1921 .....	17	1,898,848	222	252,002	60,951	598,932	1,474,754
1922 .....	17	2,108,688	526	352,124	83,390	643,917	1,537,649
1923 .....	17	1,492,927	228	299,577	57,795	694,507	1,486,807
1924 .....	18	1,648,678	247	303,696	57,350	635,538	1,434,883
1925 .....	16	1,481,916	196	282,012	43,475	660,702	1,443,356
1926 .....	15	1,569,001	240	328,597	52,017	866,464	1,710,095
1927 .....	14	1,595,196	261	357,034	55,261	921,301	1,934,240
1928 .....	14	1,805,399	283	345,152	79,571	984,301	1,956,865
1929 .....	13	1,850,273	267	321,296	68,157	962,940	1,830,644
1930 .....	12	1,921,406	226	286,825	64,380	882,908	1,650,634
1931 .....	13	2,850,507	297	375,598	75,149	877,802	1,742,553
1932 .....	14	2,501,171	229	263,142	53,300	457,146	1,087,215
1933 .....	16	2,271,071	283	314,005	78,712	463,199	1,141,761
1934 .....	16	2,123,205	332	366,008	77,198	587,535	1,307,393
1935 .....	17	2,066,754	389	423,513	114,604	550,700	1,436,259

Table 2 - PRINCIPAL STATISTICS, BY PROVINCES, 1934 and 1935.

Years	Number of plants	Capital employed	Average number of employees	Salaries and wages	Cost of fuel and electricity at works	Cost of materials at works	Selling value of products at works
		\$		\$	\$	\$	\$
<u>1934</u>							
Quebec .....	8	590,227	121	114,432	26,499	190,987	466,842
Ontario .....	8	1,532,978	211	251,576	50,699	396,548	840,551
CANADA ....	16	2,123,205	332	366,008	77,198	587,535	1,307,393
<u>1935</u>							
Quebec .....	8	603,903	118	126,306	31,662	217,338	511,642
Ontario .....	8)	1,462,851	271	297,207	82,942	333,362	924,617
British Columbia 1)							
CANADA ....	17	2,066,754	389	423,513	114,604	550,700	1,436,259

Table 3 - CAPITAL EMPLOYED, BY PROVINCES, 1934 and 1935.

Provinces	Present value of lands, buildings, machinery and equipment	Inventory value of materials on hand, stocks in process, finished products, fuel and other supplies	Operating capital (cash, bills and accounts receivable, etc.)	TOTAL CAPITAL EMPLOYED
	\$	\$	\$	\$
<u>1934</u>				
Quebec .....	305,342	136,110	148,775	590,227
Ontario .....	938,181	424,975	169,822	1,532,978
CANADA .....	1,243,523	561,085	318,597	2,123,205
<u>1935</u>				
Quebec .....	342,657	112,150	149,096	603,903
Ontario .....	881,390	388,575	192,886	1,462,851
British Columbia ..)				
CANADA .....	1,224,047	500,725	341,982	2,066,754



Table 4 - SIZE OF ESTABLISHMENTS ACCORDING TO PRODUCTION, NUMBER OF EMPLOYEES AND CAPITAL EMPLOYED, 1935.

	Number of plants	Capital employed \$	Number of employees	Selling value of products at works \$
<b>(a) PRODUCTION</b>				
Under \$10,000 .....	6	36,121	14	27,119
\$10,000 to \$50,000 .....	5	311,944	55	199,200
Over \$50,000 .....	6	1,718,689	320	1,209,940
<b>TOTAL</b> .....	<b>17</b>	<b>2,066,754</b>	<b>389</b>	<b>1,436,259</b>
<b>(b) EMPLOYEES</b>				
1 to 10 .....	9	162,714	28	203,041
Over 10 .....	8	1,904,040	361	1,233,218
<b>TOTAL</b> .....	<b>17</b>	<b>2,066,754</b>	<b>389</b>	<b>1,436,259</b>
<b>(c) CAPITAL</b>				
Under \$25,000 .....	7	42,792	17	37,350
\$25,000 to \$100,000 .....	4	204,376	36	250,485
Over \$100,000 .....	6	1,819,586	336	1,168,424
<b>TOTAL</b> .....	<b>17</b>	<b>2,066,754</b>	<b>389</b>	<b>1,436,259</b>

Table 5 - EMPLOYEES, SALARIES AND WAGES, 1934 and 1935.

Provinces	Average number of employees					Salaries \$	Wages \$	TOTAL SALARIES and WAGES \$
	On salaries		On wages		TOTAL			
	Male	Female	Male	Female				
<b>1934</b>								
Quebec .....	28	4	83	6	121	49,057	65,375	114,432
Ontario .....	22	11	173	5	211	71,798	179,778	251,576
<b>CANADA</b> .....	<b>50</b>	<b>15</b>	<b>256</b>	<b>11</b>	<b>332</b>	<b>120,855</b>	<b>245,153</b>	<b>366,008</b>
<b>1935</b>								
Quebec .....	26	5	81	6	118	48,362	77,944	126,306
Ontario .....	25	13	230	3	271	80,601	218,606	297,207
British Columbia...								
<b>CANADA</b> .....	<b>51</b>	<b>18</b>	<b>311</b>	<b>9</b>	<b>389</b>	<b>128,963</b>	<b>294,550</b>	<b>423,513</b>

Table 6 - WAGE-EARNERS, BY MONTHS, 1934 and 1935. (On 15th or nearest representative date)

Months	1934			1935		
	Male	Female	TOTAL	Male	Female	TOTAL
January .....	227	11	238	308	9	317
February .....	226	14	240	312	10	322
March .....	226	15	241	311	9	320
April .....	231	12	243	315	10	325
May .....	246	12	258	315	9	324
June .....	249	9	258	322	10	332
July .....	244	9	253	302	8	310
August .....	233	10	243	294	10	304
September .....	252	9	261	279	10	289
October .....	290	9	299	279	10	289
November .....	302	10	312	325	11	336
December .....	317	8	325	343	10	353
<b>AVERAGE</b> .....	<b>256</b>	<b>11</b>	<b>267</b>	<b>311</b>	<b>9</b>	<b>320</b>

Table 7 - FUEL AND ELECTRICITY USED, 1934 and 1935.

Kinds	Unit of measure	1934		1935	
		Quantity	Cost at works	Quantity	Cost at works
Anthracite coal .....	short tons	4	56	6	85
Bituminous coal - Canadian ....	short tons	1,837	10,501	2,048	11,448
Foreign .....	short tons	7,178	41,945	12,487	75,326
Coke .....	short tons	108	419	11	87
Gasoline .....	Imp. gal.	12	3	...	...
Fuel oil .....	Imp. gal.	187,131	9,186	205,111	9,809
Wood .....	cords	6	48	6	43
Gas - Manufactured .....	M cu. ft.	60	48	70	61
Electricity purchased .....	K.W.H.	538,047	14,992	614,403	17,745
TOTAL .....	xxx	...	77,198	...	114,604

Table 8 - POWER EQUIPMENT, 1934 and 1935.

	1934		1935	
	Number of units	Total rated horse power	Number of units	Total rated horse power
Steam engines and steam turbines .....	6	555	6	580
Gasoline, gas and oil engines .....	1	2	..	...
Total Primary Equipment .....	7	557	6	580
Electric motors run by purchased power .	112	839	133	1,018
TOTAL .....	119	1,396	139	1,598
Boilers .....	20	2,255	19	2,000

Table 9 - MATERIALS USED IN MANUFACTURING, 1934 and 1935.

Materials	Unit of measure	1934		1935	
		Quantity	Cost at works	Quantity	Cost at works
Bones, hides and glue stock .....	ton	12,517	86,539	18,598	163,673
Dextrine .....	lb.	2,260,648	98,106	1,196,700	56,372
Flour, tapioca .....	lb.	228,177	10,449	328,554	16,199
Flour, other .....	lb.	1,323,022	30,319	1,648,193	42,960
Glycerine .....	lb.	54,636	6,350	85,414	11,916
Gums .....	lb.	25,001	1,913	48,461	5,228
Lime .....	ton	477	3,643	740	11,628
Resin .....	lb.	6,854,736	103,855	37,398	1,201
Rubber .....	lb.	23,696	3,350	26,361	4,946
Shellac .....	lb.	8,400	2,095	11,100	1,720
Soda ash .....	lb.	600,100	9,401	7,250	142
Solvents (benzol, naphtha, etc.) .....	gal.	45,017	10,206	50,548	8,094
Starch .....	lb.	582,315	33,886	685,175	35,391
Sulphur .....	lb.	93,446	1,538	134,000	2,187
Sulphuric acid, 66° Be. ....	lb.	309,571	5,830	505,936	6,870
All other materials (x) .....	xx	...	145,285	...	142,953
Bottles, tops, brushes, boxes, etc. ...	xx	...	34,770	...	39,220
TOTAL .....	xxx	...	587,535	...	550,700

(x) Includes horses, tallow, miscellaneous chemicals, milk, etc.



Table 10 - PRODUCTS MADE, 1934 and 1935.

Products	1 9 3 4		1 9 3 5	
	Quantity	Selling value at works \$	Quantity	Selling value at works \$
Bone and hide glue .....	lb. 2,873,936	335,903	4,145,216	503,900
Fish, casein and vegetable glues ..	xx ...	354,598	...	352,186
Mucilage and paste (xx) .....	xx ...	121,075	...	203,871
All other products (x) .....	xx ...	495,817	...	376,302
TOTAL .....	xx ...	1,507,393	...	1,436,259

(xx) In addition to the output here reported, there was some mucilage and paste made in other industries. The total output of mucilage and paste from all industries was about \$269,525 compared with \$190,765 in 1934.

(x) Includes liquid solder, rubber cement, sealing wax, mixed fertilizers, poultry food, fox food, raw bone, steamed bone, and other such products which were reported by only one or two firms in this industry.

Table 11 - IMPORTS INTO CANADA AND EXPORTS OF GLUE, MUCILAGE AND PASTE, 1934 and 1935.

	1 9 3 4		1 9 3 5	
	Quantity	Value \$	Quantity	Value \$
<b>(a) IMPORTS</b>				
Glue, vegetable -				
TOTAL IMPORTS .....	968,159	36,905	1,210,897	44,575
From - United Kingdom .....	28,738	1,732	5,366	363
United States .....	696,931	28,738	678,648	29,833
Mucilage and adhesive paste -				
TOTAL IMPORTS .....	194,321	23,793	309,595	34,046
From - United Kingdom .....	44,729	6,973	37,237	5,952
United States .....	141,994	16,310	269,370	27,883
Glue, animal, powdered or sheet -				
TOTAL IMPORTS .....	1,259,786	100,600	1,760,814	135,577
From - United Kingdom .....	1,006,962	73,148	1,429,907	101,380
United States .....	121,237	15,606	179,225	22,022
Glue, liquid -				
TOTAL IMPORTS .....	165,544	28,094	133,571	25,009
From - United Kingdom .....	98,384	15,712	73,208	13,749
United States .....	66,431	12,125	60,323	11,226
<b>(b) EXPORTS</b>				
Glue -				
TOTAL EXPORTS .....	73,300	11,684	82,700	14,783
To - United Kingdom .....	51,800	8,526	64,200	11,435
United States .....	10,100	905	7,500	695
Glue stock -				
TOTAL EXPORTS .....	2,284,500	9,276	7,767,700	57,072
To - United Kingdom .....	414,000	2,069	...	...
United States .....	1,870,500	7,207	7,767,700	57,072



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Table 12 - PRODUCTION OF ANIMAL GLUES IN CANADA, 1926 - 1935.

Years	Short tons	Selling value		Years	Short tons	Selling value	
		at works	\$			at works	\$
1926 .....			583,928	1931 .....	Not available		659,410
1927 .....	Not		726,915	1932 .....	1,215		361,201
1928 .....			759,977	1933 .....	1,181		302,013
1929 .....	available		723,315	1934 .....	1,437		335,903
1930 .....			737,117	1935 .....	2,073		503,900

DIRECTORY OF FIRMS IN THE ADHESIVES INDUSTRY, 1935

NOTE - The Adhesives Industry includes only the concerns which made adhesives as their main products. Some concerns in other industrial groups made paste, mucilage and glue as minor products but these works are not listed in this directory.

<u>Name of Firm</u>	<u>Location of Plant</u>	<u>Main Products, 1935</u>
Auger, F. X.	2 Garagonthie St., St. Malo, P.Q.	Bone and hide glue; grease and tallow.
Boston Blacking Company of Canada, Limited	1505 Cabot St., Cote St. Paul, Montreal, P.Q.	Rubber cement and coated cotton duck.
Bulldog Grip Cement Co. Inc.	2101 Bennett Ave., Montreal, P.Q.	Casein glue; milk powder; casein.
Canada Glue Co. Limited	Brantford, Ont.	Bone and hide glue; grease; steamed bone; raw bone meal.
Dominion Flour Paste Co., The	2122½ Champlain St., Montreal, P.Q.	Flour paste; size and vegetable glue.
Gypsum, Lime and Alabastine, Canada, Ltd.	1 Strange St., Kitchener, Ont.	Hide glue; grease.
Harris, W., & Co. Limited	200 Keating St., Toronto, 2, Ont.	Bone and hide glue; grease; tankage; fox food; poultry food; hides; fertilizers.
Hercules Glue Co.	Stanbridge, P.Q.	Casein glue; size.
Laucks Laboratories Ltd.	1206 Homer St., Vancouver, B.C.	Casein glue.
Machon Sealing Wax Co.	Rear 47 St. James Ave., Toronto, 5, Ont.	Sealing wax.
Marquis, F. Canac, Reg'd.	3 Courcelette St., Quebec, P.Q.	Bone and hide glue; grease and tallow; fertilizers; tankage.
Meredith, Simmons & Co. Limited	Canal Bank, Cote St. Paul, Montreal, P.Q., and 371 Wallace Ave., Toronto, Ont.	Liquid and dry vegetable glue; size; bone and hide glue; liquid and dry paste.
Metalite Products	347 Main St., Toronto, Ont.	Liquid solder and cement.
Russia Cement Co.	4105 Richelieu St., Montreal, P.Q.	Fish glue; paste and mucilage; liquid solder.
Stuart & Foster, Limited	361 King St. E., Toronto, Ont.	Vegetable glue; paste; size; casein glue; binders.
Wolverine Cement Co.	145 Dalhousie St., Brantford, Ont.	Linoleum cement, and plastic wall finish.