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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 REPORTCHEMICALS AND ALLIED PRODUCTS GROUPTHE ADHESIVES INDUSTRY, 1939

Statistics in this report on the Adhesives Industry cover only those factories which make glue, mucilage, paste or special cements as their chief product. During 1939 there were 19 firms operating this group, 10 being located in Ontario, 7 in Quebec and 2 in British Columbia.

Production and employment in this industry rose slightly during 1939 compared with 1938; the value of production was reported at \$2,110,806 compared with \$1,904,137 in the previous year and employees numbered 427 against 415. Capital investment rose 5.9 per cent to \$2,733,476, expenditures for salaries and wages increased 4.8 per cent to \$520,662 and the cost of materials purchased for use in manufacturing operations rose 6.3 per cent to \$905,411.

Production of bone and hide glue decreased in quantity to 2,258 tons from 2,530 tons and in value from \$754,867 in 1938 to \$672,193 in 1939. Output of other glues advanced in value to \$825,811 from \$611,032, and the value of mucilage and paste increased to \$144,808 from \$120,099. Mucilage and paste were also made by concerns in other industries, particularly by the manufacturers of writing inks, the total production from all sources amounting to \$231,813 in 1939 and \$202,088 in 1938.

Imports of adhesives into Canada during 1939 were as follows:- 669 tons of vegetable glues valued at \$47,937; 746 tons of animal glue at \$143,607; 61 tons of liquid glue at \$28,355, and 186 tons of mucilage and paste at \$37,926.

Exports of glue amounted to 233 tons at \$57,113 and exports of glue stock totalled 3,377 tons appraised at \$35,726.

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Table 1 - PRINCIPAL STATISTICS OF THE ADHESIVES INDUSTRY, 1929 - 1939

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 \$	Gross selling value of products at works \$
1929 ...	13	1,850,275	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
1936 ...	19	2,266,199	420	457,170	123,865	813,291	1,799,200
1937 ...	18	2,357,662	416	483,819	116,842	901,194	1,904,137
1938 ...	19	2,580,263	415	496,950	115,972	851,529	1,904,258
1939 ...	19	2,733,476	427	520,662	89,573	905,411	2,110,806
Per cent change 1939 from 1938 ...	...	/ 5.9	/ 2.9	/ 4.8	- 22.7	/ 6.3	/ 10.8

NOTE - Profits or losses cannot be calculated from above figures as data are not available for general expense items such as interest, rent, depreciation, taxes, insurance, advertising, etc.

Table 2 - PRINCIPAL STATISTICS, BY PROVINCES, 1938 and 1939

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 \$	Gross selling value of products at works \$
<u>1938</u>							
Quebec	7)						
British Columbia	2)	629,963	131	142,567	28,700	308,903	591,250
Ontario	10	1,950,300	284	354,383	87,272	542,626	1,313,008
CANADA	19	2,580,263	415	496,950	115,972	851,529	1,904,258
<u>1939</u>							
Quebec	7)						
British Columbia	2)	721,888	142	150,915	30,884	374,977	800,380
Ontario	10	2,011,588	285	369,747	58,689	530,434	1,310,426
CANADA	19	2,733,476	427	520,662	89,573	905,411	2,110,806

Table 3 - CAPITAL EMPLOYED, BY PROVINCES, 1938 and 1939

Provinces	Present value	Inventory value of	Operating	TOTAL
	of lands, build- ings, machinery and equipment	materials, finished products, fuel and other supplies on hand, and stocks in process	capital (cash, bills and accounts re- ceivable	CAPITAL EMPLOYED
	\$	\$	\$	\$
<u>1 9 3 8</u>				
Quebec	315,712	167,198	147,053	629,963
British Columbia)				
Ontario	1,009,364	594,565	346,371	1,950,300
CANADA	1,325,076	761,763	493,424	2,580,263
<u>1 9 3 9</u>				
Quebec	334,219	210,099	177,570	721,888
British Columbia)				
Ontario	1,001,574	516,805	493,209	2,011,588
CANADA	1,335,793	726,904	670,779	2,733,476

Table 4 - EMPLOYEES, SALARIES AND WAGES, 1938 and 1939

Provinces	AVERAGE NUMBER OF EMPLOYEES					Salaries	Wages	TOTAL SALARIES and WAGES
	On Salaries		On Wages		TOTAL			
	Male	Female	Male	Female			\$	\$
<u>1 9 3 8</u>								
Quebec	33	5	81	12	131	64,736	77,831	142,567
British Columbia)								
Ontario	43	14	224	3	284	123,223	231,160	354,383
CANADA	76	19	305	15	415	187,959	308,991	496,950
<u>1 9 3 9</u>								
Quebec	36	6	89	11	142	60,123	90,792	150,915
British Columbia)								
Ontario	47	16	218	4	285	143,829	225,918	369,747
CANADA	83	22	307	15	427	203,952	316,710	520,662

Table 5 - WAGE-EARNERS, BY MONTHS, 1938 and 1939 (On the last work day of each month)

Months	1 9 3 8			1 9 3 9		
	Male	Female	TOTAL	Male	Female	TOTAL
January	308	14	322	310	14	324
February	311	15	326	309	15	324
March	308	15	323	315	15	330
April	307	15	322	328	15	343
May	312	14	326	324	17	341
June	307	15	322	308	15	323
July	295	15	310	263	14	277
August	299	16	315	278	14	292
September	283	17	300	281	14	295
October	299	15	314	288	16	304
November	314	15	329	340	16	356
December	308	14	322	350	15	365
AVERAGE	305	15	320	307	15	322

Table 6 - REGULAR HOURS WORKED PER WEEK BY WAGE-EARNERS, 1939 (In one week of normal employment; overtime not included)

Regular hours worked per week	Number of wage-earners	Per cent of wage-earners	Regular hours worked per week	Number of wage-earners	Per cent of wage-earners
30 hours or less	12	3.3	49 - 50 hours ...	46	12.7
31 - 43 hours ..	25	6.9	51 - 54 hours ...	114	31.4
44 hours	30	8.3	55 hours	7	1.9
45 - 47 hours ..	59	16.2	56 - 64 hours ...	28	7.7
48 hours	25	6.9	65 hours and over	17	4.7
			Total	363	100.0
			Total wages paid in selected week		\$ 7,183

Table 7 - FUEL AND ELECTRICITY USED, 1938 and 1939

Kinds	Unit of measure	1 9 3 8		1 9 3 9	
		Quantity	Cost at works	Quantity	Cost at works
Anthracite coal	short tons	4	\$ 56	4	\$ 49
Bituminous coal - Canadian	short tons	2,109	12,920	2,426	14,969
Foreign.	short tons	12,375	74,276	7,103	40,324
Coke	short tons	62	586	67	604
Gasoline	Imp. gal.	...	...	753	182
Fuel oil	Imp. gal.	210,178	8,917	281,901	12,065
Wood	cords	8	69	7	54
Gas - Manufactured	M cu. ft.	280	296	284	263
Electricity purchased	K. W. H.	1,228,793	18,852	1,331,201	20,463
TOTAL .....	\$	...	115,972	...	89,573

Table 8 - POWER EQUIPMENT, 1938 and 1939

	Ordinarily in use		In reserve or idle	
	Number of units	Total rated horse power	Number of units	Total rated horse power
<u>1 9 3 8</u>				
Steam engines and steam turbines..	7	595	2	260
Hydraulic turbines and waterwheels	1	25	...	...
Total Primary Equipment	8	620	2	260
Electric motors run by purchased power	172	1,529	7	214
TOTAL	180	2,149	9	474
Stationary boilers	13	1,145	...	...
<u>1 9 3 9</u>				
Steam engines and steam turbines..	7	528	1	180
Hydraulic turbines and waterwheels	1	35	...	...
Total Primary Equipment	8	563	1	180
Electric motors run by purchased power	182	1,597	6	211
TOTAL	190	2,160	7	391
Stationary boilers	14	1,236	1	80

Table 9 - MATERIALS USED IN MANUFACTURING, 1938 and 1939

Materials	Unit of measure	1 9 3 8		1 9 3 9	
		Quantity	Cost at works \$	Quantity	Cost at works \$
Bones	ton	7,386	75,416	6,193	68,373
Hides and hide trimmings	ton	13,518	261,538	14,736	211,975
Casein	lb.	104,836	12,448	175,193	15,533
Dextrine	lb.	2,310,858	97,223	2,848,194	133,904
Flour, tapioca	lb.	233,542	11,363	321,847	16,394
Flour, soya bean	lb.	928,737	23,990	1,440,000	37,993
Flour, other	lb.	2,012,487	40,901	2,380,344	47,466
Glycerine	lb.	108,261	16,510	145,359	20,152
Gums	lb.	60,532	5,692	105,019	15,849
Lime	ton	662	5,787	612	6,817
Resin	lb.	74,066	3,542	62,367	3,422
Rubber	lb.	27,666	5,872	75,902	15,979
Solvents (benzol, naphtha, etc.)	gal.	49,102	9,215	74,468	12,825
Starch	lb.	525,416	25,558	500,688	19,696
Sulphur	lb.	141,093	2,487	131,900	1,904
Sulphuric acid, 66° Be	lb.	1,107,636	10,075	625,105	5,911
Tallow and fat	lb.	1,732,061	13,677	2,578,877	28,006
Containers and packing materials	...	...	55,927	...	69,662
All other materials .....	...	...	174,308	...	173,550
TOTAL .....	...	...	851,529	...	905,411

Table 10 - PRODUCTS MADE, 1938 and 1939

Products	Unit of measure	1 9 3 8		1 9 3 9	
		Quantity	Selling value at works \$	Quantity	Selling value at works \$
Bone and hide glue	lb.	5,059,032	754,867	4,515,629	672,193
Vegetable glue, dry and liquid	lb.	8,074,458	436,228	9,918,525	597,138
Other glues (casein, soya bean, fish, flexible, etc.) .....	...	...	174,804	...	228,625
Grease	lb.	3,183,118	84,685	3,470,424	113,057
Mucilage and paste (xx) .....	...	...	120,099	...	144,808
All other products (x) .....	...	...	333,575	...	354,937
TOTAL .....	\$	...	1,904,258	...	2,110,806

(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 \$231,813 in 1939 compared with \$202,088 in 1938.

(x) Includes liquid solder, sealing wax, mixed fertilizers, buttermilk powder, rubber and linoleum cements, 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, 1938 and 1939

	1 9 3 8		1 9 3 9	
	Quantity	Value	Quantity	Value
	Lb.	\$	Lb.	\$
(a) <u>IMPORTS</u>				
Glue, vegetable -				
TOTAL IMPORTS	1,149,690	38,373	1,337,544	47,937
From United Kingdom ..	24,690	1,103	11,745	585
United States ...	531,514	27,806	668,544	36,483
Mucilage and adhesive paste -				
TOTAL IMPORTS	160,437	18,906	371,457	37,926
From United Kingdom ..	31,899	5,963	29,176	5,699
United States ...	128,452	12,923	311,855	30,551
Glue, animal, powdered or sheet -				
TOTAL IMPORTS	1,308,994	130,369	1,491,104	143,607
From United Kingdom ..	975,788	94,851	1,202,303	105,233
United States ...	187,455	24,931	218,317	32,778
Glue, liquid -				
TOTAL IMPORTS	175,112	31,608	123,008	28,355
From United Kingdom ..	105,461	18,090	53,562	13,216
United States ...	69,285	13,369	67,713	14,362
(b) <u>EXPORTS</u>				
Glue -				
TOTAL EXPORTS	199,700	33,763	465,800	57,113
To United Kingdom	159,800	28,177	252,100	43,110
United States	16,900	924	178,300	9,081
Glue Stock -				
TOTAL EXPORTS	2,140,900	22,995	6,754,200	35,726
To United Kingdom ....	...	...	46,300	897
United States	2,140,500	22,934	6,707,900	34,829

DIRECTORY OF FIRMS IN THE ADHESIVES INDUSTRY, 1939

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

Name of Firm and Location of Plant	Main Products, 1939
Boston Blacking Co. of Canada, Limited 1505 Cabot St., Cote St. Paul, Montreal, P.Q.	Rubber cement; coated cotton duck.
Bulldog Grip Cement Co. Inc., 2101 Bennett Ave., Montreal, P.Q.	Casein glue; buttermilk powder; casein; liquid paste; liquid vegetable glue.
Butterworth, A. & Son, Butterworth Ave., Scarboro, Ont.	Cement and solvent.

DIRECTORY OF FIRMS IN THE ADHESIVES INDUSTRY, 1939 - (Concluded)

Name of Firm and Location of Plant	Main Products, 1939
Canada Glue Co. Limited, Mohawk Road, Brantford, Ont.	Bone and hide glue; grease; steamed bone; raw bone meal.
Dominion Flour Paste Co., 2122½ Champlain St., Montreal, P.Q.	Size and liquid glue and paste.
Gypsum, Lime & 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; tallow; fertilizers.
Hasco Products Limited, 131-8th St., New Westminster, B.C.	Mariné glue.
Hercules Laux-Merritt Co. Ltd., Stanbridge, P.Q.	Casein glue; size; soya bean glue.
Laucks, I. F., Ltd., Granville Island, Vancouver, B.C.	Casein and dry vegetable glues; casein paints; synthetic resin sealers; liquid paste.
Machon Sealing Wax Co., 678 Parliament St., Toronto, Ont.	Sealing wax.
Marquis, F. Canac, Reg'd. 3 Courcelette St., Quebec, P.Q.	Bone and hide glue; grease and tallow; fertilizers.
Meredith, Simmons & Co. Limited, 5565 Cote St. Paul Road, Montreal, P.Q. and 371 Wallace Ave., Toronto, Ont.	Liquid and dry vegetable glue; size; bone and hide glue; liquid and dry paste; flexible glues.
Reanite Corporation Ltd., Hilton St., Eastview, Ont.	Rubber cement; latexed goods; paints.
Russia Cement Co., 4105 Richelieu St., Montreal, P.Q.	Paste and mucilage; liquid solder; fish glue.
Stuart & Foster, Limited, 361 King St. E., Toronto, Ont.	Vegetable glue; paste; size; casein glue; mucilage.
Toronto Adhesive Co., 27 Jarvis St., Toronto, Ont.	Liquid vegetable glue; laminated board; flexible glue.
Wolverine Cement Co., 99 Grand River Ave., Brantford, Ont.	Linoleum cements.



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