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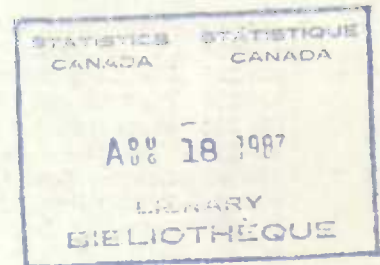
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THE PRIMARY PLASTICS INDUSTRY 1959



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PUBLICATIONS

The results of the annual Census of Industry are published by the Dominion Bureau of Statistics in a series of industry reports which are released each year as the compilations are completed. Reports for industries classified to the **Chemicals and Allied Products** Major Group are listed below, along with current and annual publications of related interest. Similar reports are issued for other industries. A complete catalogue of publications of the Bureau is available on request from the Information Services Division, Dominion Bureau of Statistics, Ottawa, or from the Queen's Printer, Ottawa.

A - Annual	B - Biennial	M - Monthly	S.C. - Special Compilation
Catalogue number	Title		Price
46-201	Chemicals and Allied Products - General Review (A)50
46-202	Acids, Alkalies and Salts Industry (A)50
46-203	Adhesives Industry (A)50
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46-002	Specified Chemicals (10 items) (M)	per year	1.00
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31-201	General Review of the Manufacturing Industries (A)		2.00
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Remittances should be in the form of cheque or money order, made payable to the Receiver General of Canada and forwarded to the Information Services Division, Dominion Bureau of Statistics, or to the Queen's Printer, Ottawa, Canada.

EXPLANATORY NOTES

This report is one in a series of about 130 publications which present the results of the 1959 Census of Manufactures. Most reports in this series refer to specific industries, but there are summary reports for Canada and the provinces and for major industry groups. An annual Census of Manufactures has been carried out by the Dominion Bureau of Statistics since 1916.

Industry statistics given in these reports refer to number of establishments, employees, salaries and wages, cost of materials, supplies, fuel and electricity, gross value of shipments, inventories and value added by manufacturing. Details of materials used and products shipped are also given. Descriptions of the principal industry statistics, with special reference to 1959 are as follows:

Period Covered

Firms are asked to submit figures for the calendar year, if at all possible, and most reports are on this basis. Financial year reports for periods differing from the calendar year are accepted in instances where the firms find it impossible to supply calendar year data from accounting records. However the data on employees, salaries and wages are requested on a calendar year basis in all cases.

Establishment

Data for the annual census is collected on an establishment basis. A firm with more than one plant is required to file a report for each plant. In most cases an establishment is a complete factory. Sometimes, however, a plant is divided into two or more establishments when it carries out operations classifiable to different industries and when separate accounting records are available. Usually the statistics for an establishment relate only to the manufacturing activities. Other activities such as construction at the plant by its own employees, wholesale or retail activities carried on at the plant location, etc., are not included. Plants engaged solely in repair work (except in the case of furniture, shipbuilding, boat building, aircraft and railway rolling stock industries) are not included but plants occupied in assembling parts into complete units are included.

Employees

Administrative and office employees include all executives and supervisory officials such as presidents, vice-presidents, secretaries, treasurers, etc., together with managers, professional and technical employees, superintendents and factory supervisors above the working foremen level and clerical employees. Working owners and partners are also included in this category.

Production and related workers include all other factory workmen whether paid on a monthly, weekly, hourly or piece-work basis. Working foremen doing work similar to that of the employees they supervise are included, as are maintenance, warehousing and delivery staffs. Employees on new construction work, in retail or wholesale operations, on outside piece work etc., are not included.

Production workers are reported by months, an average for the year being obtained by summing the monthly figures and dividing by twelve. This procedure is followed even though the plant did not operate in all months. Figures on employment refer to calendar years whether or not some establishments reported other data on a financial year basis.

Salaries and Wages

Salaries and wages refer to gross earnings of the employees described above, including salaries, wages, commissions, bonuses, the value of room and board where provided, deductions for income tax and social services such as sickness and unemployment insurance, pensions, etc., as well as any other allowances forming part of the employees' wages. Payments for overtime are included.

Salaries refer to amounts paid to administrative and office employees. Withdrawals by working owners or partners for normal living expenses for self and family are included but not their withdrawals for income tax. Wages refer to the amounts paid to production and related workers as defined above. Data on earnings refer to the calendar year whether or not some establishments reported other data on a financial year basis.

Cost of Fuel and Electricity

Figures for fuel refer to amounts actually used, (including fuel used in cars and trucks), not to purchases unless the quantities are the same. Values refer to the laid-down cost at the works, including freight, duty, etc.

Materials and Supplies Used

Figures represent quantities and laid-down cost values, at the works, of materials and supplies actually used during the year whether purchased from others or received as transfers from other plants of the reporting company. Amounts paid to other manufacturers for work done on materials owned by the reporting company are included. Returnable containers or any other items charged to capital account are not included. Fuels are not included. Goods bought from others or received as transfers from other plants of reporting companies for resale without further processing are not included. Maintenance and repair supplies not chargeable to capital account are included.

Factory Shipments

Factory shipments refer to shipments of goods made from own materials either in the reporting plant or by other manufacturers on the basis of a charge to the reporting plant for work done. All products and by-products shipped from the establishment are included whether for domestic use, export, or for government departments. Transfer shipments to sales outlets, distributing warehouses or to other manufacturing units of the reporting firm are included. Goods bought or received as transfers and resold without further processing are not included. Values are computed on f.o.b. plant or

plant warehouse basis, and do not include sales tax or excise duties. Values of containers not returnable are included. Amounts received in payment for work done on materials owned by others are included.

In a few industries such as shipbuilding, aircraft, etc., where work on principal products extend over a relatively long period, the value of production is recorded rather than the value of shipments. For those industries production is computed from the value of deliveries of complete units during the year plus the value of work done during the year on unfinished units less the value of work done in previous years on finished units delivered in the year under review.

Inventories

Values represent the book values of manufacturing inventories owned and held at the reporting plant. Figures include inventories held in warehouses or selling outlets which have been included with plant operations for purposes of reporting shipments.

Value Added by Manufacturing

Figures are computed from value of shipments plus or minus changes in inventories of finished goods and goods in process less cost of materials, fuel and electricity. This figure is sometimes referred to as net production.¹

Standard Industrial Classification

The Standard Industrial Classification Manual, prepared by the Dominion Bureau of Statistics, provides for 135 three-digit industries in the manufacturing sector, arranged in 17 major groups. Reporting establishments are classified or allotted to specific industries on the basis of the value of principal products made or shipped.

Short Forms

Between 1949 and 1957, in an effort to ease the reporting burden for smaller firms, a short form was used asking for the total value of shipments only or, in a few cases where losses of detail were significant, for quantities and values of principal products. For purposes of publication, missing data were estimated on the basis of appropriate ratios. In general the cut-off point for these short forms was set at \$50,000 value of shipments. About 40% of the total number of establishments reported on the short form and accounted for less than 3 per cent of the total value of shipments.

In 1958, in order to establish a new base year, the small firms were asked to report all items of principal statistics together with some detail on materials and products.

¹ To arrive at the National Accounts concept of "gross domestic product at factor cost", it would be necessary to subtract also the cost of office supplies used, advertising, insurance and other goods and services obtained from other businesses. Data on these inputs are not collected on the annual Census of Manufactures. Value added figures for "The primary industries and construction" are published in D.B.S. publication 61-202, *Survey of Production*.

For the 1959 Census, the short form was used again, but further steps were taken to ease the respondents' burden. First, the general limit for short forms was raised to \$100,000 value of shipments. In addition, a new intermediate form was developed. This form is a shortened version of the long form in that most of the general questions were pared down and the detailed lists of materials and products were limited to the more important items. The general limits for firms in this category were set at between \$100,000-\$500,000 value of shipments, but in the case of both the short and intermediate forms there were lower cut-offs for a number of industries in which the smaller firms accounted for a larger share of total shipments. On the other hand, limits were raised where this could be done without a significant loss of coverage. On most of the short forms for 1959, in addition to total value of shipments, data on principal products were requested. In a few industries, where loss of employment and earnings data were considered too large because of higher cut-offs, a question on total payroll was placed on the short form.

The intermediate and long forms provide complete data for the compilation of all elements of principal industry statistics and the details of materials and products. The one-page short form, although containing data on principal products and total value of shipments, does not request information on other elements of principal statistics such as value of inventories, materials, fuel and electricity and, in most cases, employment and salaries and wages, nor does it contain detailed data on volume and value of materials used. For purposes of compiling aggregates of principal statistics by industry and by geographic location, the missing data for each establishment were estimated for 1959 by using, in general, ratios based on the change in the value of shipments between 1958 and 1959. The proportion of the estimated data was generally less than 5 per cent of the total in each category of principal statistics.

The general request for the principal items of products on the short form for 1959 permitted a fairly complete compilation of the detailed quantities and values of commodity shipments. In the case of the detailed quantities and values of materials, fuel and electricity, however, and the monthly distribution of production workers, only the totals of data actually reported on the intermediate and long forms are contained in published reports and no attempt was made as in past years to estimate the generally small proportion of individual totals represented by detailed items omitted from the short forms.

The new approach has relieved an additional 12,000 establishments from filling out the regular long form. Establishments now receiving the short form number in excess of 20,000 and account for more than 54 per cent of the total number of establishments and a little more than 3 per cent of the total value of shipments.

THE PRIMARY PLASTICS INDUSTRY 1959

The value of factory shipments in 1959 reported by firms in the Primary Plastics Industry in Canada amounted to \$103,538,744 an increase of 5.9 per cent over the 1958 total of \$97,802,453.

This industry covers the operations of establishments engaged chiefly in the manufacture of synthetic resins in the forms of rods, sheets, tubes, granules or liquids for use in further manufacture. Included as well are firms manufacturing transparent cellulose film and certain producers of laminates who make their own synthetic resins. Not all producers of synthetic resins were included in this group as some concerns made synthetic resins as secondary, or minor products, or as intermediates for the further use of the producers. Statistics relating to the latter have been included in the appropriate industries which are reviewed in separate bulletins. Separate figures for many of the synthetic resin types made in Canada cannot be published as for the most part they were made by only one or two firms; however, figures for several types available for publication are shown in Table 5 while a special

compilation which gives a fairly good summary of the total output of synthetic resins, as gathered up from all industries, is shown in Table 4. A list of the products made by the factories in this group is shown in the directory which appears at the back of this bulletin.

Note: Due to lack of inventory data, figures for value added by manufacture prior to 1954 were obtained by subtracting the cost of materials used, including fuel and electricity from the total value of factory shipments. In 1954 and 1955 the "Value added" adjustment incorporated the increase or decrease to shipments values resulting from changes in the value of inventories over the period. For these two years, the adjustments that were made used only the change in finished product inventory owned by manufacturers. Beginning with 1956 the calculation of the "Value added" figure was further adjusted to take into account the "Goods in process" as well as the finished goods held at plant or plant warehouse.

TABLE 1. Principal Statistics of the Primary Plastics Industry, 1948-59

Year	Estab- lish- ments	Em- ployees	Salaries and wages	Cost of fuel and electricity at plant	Cost at plant of materials used	Value added by manufacture ¹	Gross selling value of products ¹
	number			dollars			
1948	12	1,149	2,770,529	331,932	7,630,498	8,478,317	16,440,747
1949	14	1,286	3,496,087	461,318	10,897,184	9,663,717	21,022,219
1954	22	2,808	11,190,653	1,685,824	30,973,562	26,892,324	58,881,800
1955	23	3,036	12,332,507	1,490,621	40,264,982	33,760,502	75,052,166
1956	25	3,260	13,855,172	1,703,084	46,911,807	34,886,821	82,738,552
1957	29	3,443	15,709,733	1,995,912	48,086,585	42,475,576	91,836,820
1958							
Quebec	10	1,933	9,294,540	1,104,559	19,843,819	16,632,328	37,319,695
Ontario	16	917	4,109,114	1,238,239	22,817,341	14,366,404	38,526,771
Alberta	4	496	2,431,585	449,958	5,778,077	9,141,852	15,884,012
British Columbia	4	89	419,992	39,299	3,652,444	2,425,065	6,071,975
Canada	34	3,435	16,255,231	2,832,055	52,091,681	42,565,649	97,802,453
1959							
Quebec	10	1,826	9,105,775	1,148,045	20,163,606	15,892,303	37,558,206
Ontario	17	1,042	4,943,650	1,580,411	26,278,062	15,429,499	42,755,742
Alberta	4	502	2,539,266	561,966	7,868,774	10,417,997	17,642,113
British Columbia	3	99	491,299	39,673	3,492,493	2,039,368	5,582,683
Canada	34	3,469	17,079,990	3,330,095	57,802,935	43,779,167	103,538,744

¹ See note to text.

Note: Separate statistics for this industry were not compiled before 1947.

TABLE 2. Inventories,¹ 1959

Province	Raw materials and supplies	Goods in process	Finished goods of own manufacture	Total
	dollars			
Opening:				
Quebec	2,222,408	739,784	2,670,820	5,633,012
Ontario	2,571,013	409,489	1,911,788	4,892,290
Alberta	1,540,181	38,173	817,638	2,395,992
British Columbia	230,107	1,441	154,140	385,688
Canada	6,563,709	1,188,887	5,554,386	13,306,982
Closing:				
Quebec	2,491,456	338,282	2,718,070	5,547,808
Ontario	3,081,140	440,260	2,413,247	5,934,647
Alberta	1,597,426	71,439	1,990,996	3,659,861
British Columbia	196,997	611	143,821	341,429
Canada	7,367,019	850,592	7,266,134	15,483,745

¹ Book value of all manufacturing inventories owned and held at plant and plant warehouses.

Note: (1). Beginning with 1954, information on the value of year-end inventory holdings at plant and plant warehouses is being collected as part of the annual Census of Industry. These data were formerly collected by a separate survey. The summarized results for the Primary Plastics Industry for the year under review are shown in the above table.

(2). The opening inventory for 1959 does not necessarily agree with the closing inventory for 1958 because of revisions, such as the addition of new plants, the transfer of plants to other industries and plants going out of business, etc. However, the value added figures for the previous year have not been recalculated to allow for the revisions mentioned above.

TABLE 3. Materials and Supplies Used in the Primary Plastics Industry, 1958 and 1959

Materials	1958		1959	
	Quantity	Cost at works	Quantity	Cost at works
		\$		\$
Acetic anhydride..... lb.	135,062	20,872	105,480	13,502
Acid—Adipic..... "	793,252	251,427	948,652	296,886
Fatty—Oleic..... "	3,507	583	4,543	792
Stearic..... "	44,982	6,786	53,619	6,927
Other fatty acids..... "	669,030	92,415	617,723	136,168
Formic..... "	129,686	17,256	107,565	15,613
Hydrochloric (muriatic), 100%..... "	68,959	3,686	213,667	8,731
Sulphuric, all grades, including oleum (as 100%)..... "	35,549,973	514,142	38,781,711	536,195
Other..... "	19,645,606	2,023,784	26,514,591	2,838,586
Alcohol—Ethyl..... Imp. gal.	18,357	17,771	29,942	31,453
Isopropyl..... lb.	995,707	107,267	680,241	73,166
Methyl..... Imp. gal.	1,335,901	440,934	1,443,221	472,957
Other..... lb.	3,763,553	549,172	4,795,375	773,496
Casein..... "	372,600	98,651	282,486	68,430
Chlorine, liquid..... "	533,513	17,113	560,254	18,932
Cresol (including cresylic acid)..... "	720,456	105,112	1,262,121	167,135
Dibutyl phthalate..... "	454,031	131,465	441,810	125,073
Dyes and pigments..... "	—	1,043,016	—	877,509
Ethyl acetate..... lb.	829,050	104,245	1,203,055	138,708
Formaldehyde (100% solids content)..... "	16,655,147	1,703,014 ^r	16,449,671	1,623,491
Glycerine..... "	3,735,910	1,125,786	3,429,811	1,024,779
Glycols—Ethylene..... "	5,387,498	807,306	5,498,600	813,770
Diethylene..... "	86,048	15,333	242,556	43,208
Other grades..... "	694,614	109,455	1,224,456	192,559
Hydrogen peroxide, 100%..... "	..	..	..	..
Maleic anhydride..... "	266,620	67,777	323,618	103,277
Oils, vegetable—Castor..... "	827,296	130,366	64,833	12,686
Chinawood..... "	215,795	34,278	319,606	49,228
Linseed..... Imp. gal.	240,449	364,956	206,308	320,270
Soya bean..... lb.	6,107,494	784,237	7,380,929	849,211
Tall..... "	438,963	37,641	941,149	77,211
Other vegetable oils..... "	—	28,051	—	10,846
Pentaerythritol..... lb.	1,356,148	411,283	1,541,537	454,089
Phenol..... "	21,345,904	3,597,573	21,816,116	3,385,727
Phthalic anhydride..... "	7,603,622	1,201,861	9,351,425	1,476,445
Plasticizers (not elsewhere specified)..... "	5,036,563	1,403,483	6,228,343	1,679,123
Polyethylene type resin (all forms; for compounding only)..... "	10,334,490	2,538,314	9,454,990	2,190,064
Resins, other (all forms; for compounding only)..... "	11,870,324	2,325,241	15,323,684	2,596,801
Resorcinol..... "	78,738	56,664	102,448	74,141
Sodium hydroxide (caustic soda)..... "	24,809,238	620,650	27,504,272	628,248
Toluene (toluol)..... "	702,379	35,004	581,954	27,409
Urea crystals..... "	8,949,247	472,536	7,996,362	429,147
Vinyl monomers..... "	18,580,423	2,512,805	24,238,595	3,380,919
Xylene (xylol)..... "	2,446,277	136,646	2,641,195	117,715
All other materials and process supplies ¹	—	24,138,821	—	27,719,849
Shipping containers and packaging materials.....	—	1,886,903	—	1,922,461
Totals.....	—	52,091,681	—	57,802,935

¹ No detailed information on materials used was collected from firms generally reporting value of shipments of less than \$200,000. The total estimated value of materials used by these firms was \$383,781 and this amount is included in "All other materials and process supplies".

^r Revised figures.

.. Figures not available.

TABLE 4. Factory Shipments of Synthetic Resins¹ in Canada, 1950-59 (from All Industries)

Year	Selling value at works
	\$
1950	19,068,000
1951	23,097,000
1952	19,100,000
1953	26,251,000
1954	36,647,000
1955	49,430,000
1956	50,530,000
1957	54,930,000
1958	66,441,000
1959	73,827,000

¹ (a). Includes casein-type, vinyls, polystyrene, alkyds, phenol-formaldehyde, urea-formaldehyde, sodium carboxymethyl-cellulose, polyethylene, cellulose acetate, nylon flake, etc.

(b). Includes only resins or equivalent forms made for sale as there is no adequate record of resins made for own or captive use.

TABLE 5. Factory Shipments¹ of Specified Synthetic Resins, 1958 and 1959

Type	1958		1959	
	Quantity ²	Selling value at works	Quantity ²	Selling value at works
	lbs.	\$	lbs.	\$
Alkyd (excluding polyester)	15,472,581	5,199,175	16,379,000	5,282,000
Phenol-formaldehyde	49,205,150	9,101,078	50,255,000	8,912,000
Urea-formaldehyde	15,498,768	1,994,833	18,224,000	2,091,000
Vinyl chloride	34,597,118	9,936,395	41,245,000	10,886,000
Polystyrene	44,172,362	10,810,067	52,615,000	10,193,000

¹ Does not include resins made for own or captive use such as alkyds in paints, phenol-formaldehyde in laminates; however, phenol-formaldehydes and urea-formaldehydes sold as glues are included in the relevant categories.

² Includes all forms; moulding powders, solutions, etc. as reported which in some instances (e.g. glues) was gross weight of product and, therefore, quantity data are not necessarily indicative of total net weight of resin produced.

TABLE 6. Principal Statistics of the Primary Plastics Industry, grouped according to Size of Establishment, 1958 and 1959

Establishments reporting a value of factory shipments	Establishments	Em- ployees	Salaries and wages	Cost of fuel and electricity	Cost at plant of materials used	Selling value of factory shipments
	number				dollars	
1958						
\$ 25,000 to \$ 49,999	1	} 24	60,624	7,694	234,123	321,005
50,000 " 99,999	4					
100,000 " 199,999	3					
200,000 " 499,999	3					
500,000 " 999,999	4	57	250,278	41,154	2,312,072	3,228,656
1,000,000 " 4,999,999	12	723	3,140,577	471,539	18,600,461	28,455,282
5,000,000 and over	7	2,332	11,061,995	2,285,622	30,216,671	64,460,961
Head offices	—	253	1,543,638	—	—	—
Totals	34	3,435	16,255,231	2,832,055	52,091,681	97,802,453
1959						
\$ 25,000 to \$ 49,999	1	} 46	124,856	13,604	383,781	626,632
50,000 " 99,999	1					
100,000 " 199,999	3					
200,000 " 499,999	5					
500,000 " 999,999	3	86	426,377	29,515	1,508,424	2,333,697
1,000,000 " 4,999,999	14	787	3,580,927	533,121	21,280,024	31,263,335
5,000,000 and over	7	2,333	11,608,042	2,723,752	33,738,151	67,836,334
Head offices	—	180	1,164,960	—	—	—
Totals	34	3,469	17,079,990	3,330,095	57,802,935	103,538,744

TABLE 7. Employees and their Earnings in the Primary Plastics Industry, 1958 and 1959

Province	Employees					Earnings		
	Supervisory and office		Production workers		Total	Supervisory and office	Production workers	Total
	Male	Female	Male	Female				
	number					dollars		
1958								
Quebec	572	213	1,101	47	1,933	4,375,355	4,919,185	9,294,540
Ontario	220	66	613	18	917	1,477,202	2,631,912	4,109,114
Alberta and British Columbia	221	59	299	6	585	1,390,657	1,460,920	2,851,577
Canada	1,013	338	2,013	71	3,435	7,243,214	9,012,017	16,255,231
1959								
Quebec	512	182	1,092	40	1,826	4,028,245	5,077,530	9,105,775
Ontario	247	70	706	19	1,042	1,684,557	3,259,093	4,943,650
Alberta and British Columbia	226	63	309	3	601	1,447,191	1,583,374	3,030,565
Canada	985	315	2,107	62	3,469	7,159,993	9,919,997	17,079,990

TABLE 8. Production Workers, by Months, 1959

Month	Establishments reporting monthly detail ¹	
	Male	Female
January	1,943	63
February	1,960	66
March	2,010	71
April	2,043	69
May	2,089	66
June	2,110	65
July	2,140	69
August	2,157	60
September	2,126	62
October	2,113	53
November	2,117	51
December	2,091	57
Average for establishments reporting monthly detail	2,075	62
Average estimated for small establishments ²	32	—
Average for all establishments	2,107	62

¹ The number of production workers, by months, was collected only for establishments generally reporting value of shipments of \$200,000 and over.

² For establishments generally reporting value of shipments of less than \$200,000 no data on number of workers were collected. Average was estimated by using change in value of shipments to arrive at value of payroll which was then used in conjunction with estimated average earnings to arrive at number of workers.

TABLE 9. Capital and Repair Expenditures in the Primary Plastics Industry, 1955-59

Year	Capital expenditures			Repair and maintenance expenditures			Total capital and repair expenditures
	Construction	Machinery and equipment	Sub-total	Construction	Machinery and equipment	Sub-total	
	thousands of dollars						
1955	682	1,918	2,600	291	1,834	2,125	4,725
1956	1,978	4,809	6,787	320	1,754	2,074	8,861
1957	1,645	4,602	6,247	373	2,896	3,269	9,516
1958	3,268	6,564	9,832	363	2,460	2,823	12,655
1959 ^P	2,809	12,169	14,978	341	3,104	3,445	18,423

^P Preliminary figures.

TABLE 10. Imports¹ into Canada of Plastics and Manufactures thereof, 1958 and 1959

Item	Value	
	1958	1959
	dollars	
Casings, synthetic, for meats and meat products	431,348	507,004
Esters, or ethers, or combinations thereof, of cellulose, without admixture	1,952,160	2,075,852
Esters, or ethers, or combinations thereof, of cellulose, compounded with other materials, for moulding, casting, extruding or pressing	1,012,304	1,459,551
Foamed and expanded cellulose plastics in blocks, boards, granules or powder	68,929	29,484
Compositions of esters or ethers of cellulose with other materials, n.o.p.	64,819	53,311
Cellulose plastic plates, sheets, strip, film, blocks, bars, rods, tubes or other primary shapes	1,597,659	2,044,837
Reinforced or supported cellulose plastic plates, sheets, strip, tubing, blocks, bars, rods, in which is incorporated a layer of paper, fibreboard or textile fabric, or a core of fibres, whether matted or otherwise	431,681	638,162
Laminated moulded plastic products having cellulose plastics as the chief binding agents	160,494	189,936
Cellulose nitrate sheets with turned edges, for the production of printers' engravings	156,584	149,261
Manufactures of cellulose plastics, n.o.p.	2,127,650	2,110,178
Manufactures of regenerated cellulose, n.o.p.	1,726,252	1,781,830
Synthetic resins without admixture	19,613,146	19,947,446
Synthetic resins in solutions or solvents	5,815,803	6,259,078
Synthetic resins compounded with other materials for moulding, casting or extruding, including uncured preforms or blanks for compression moulding	5,989,208	8,248,129
Foamed and expanded synthetic resins in logs, blocks, boards, flakes, granules or powder	1,735,820	967,330
Synthetic resin composition, n.o.p.	2,211,500	2,585,748
Synthetic resins or protein plastics in bars, rods, sheets, plates, strip, film, tubing or other primary shapes, n.o.p. whether coated or decorated or not	9,735,548	10,633,620
Reinforced or supported synthetic resin plates, sheets, strip, blocks, tubing, bars, rods, in which is incorporated a layer of paper, fibreboard or textile fabric, or a core of fibres, whether matted or otherwise	2,209,129	3,266,416
Laminated moulded plastic products having synthetic resins as the chief binding agents	788,567	985,055
Manufactures, n.o.p. of synthetic resins, or of protein plastics	20,313,023	23,690,440

¹ Source: *Trade of Canada - Imports.*

TABLE 11. Exports¹ from Canada of Synthetic Resins and Synthetic Resin Products, 1958 and 1959

Item	1958	1959
Synthetic resins, n.o.p. lb.	21,288,680	23,367,732
..... \$	8,591,321	8,594,430
Synthetic resins, manufactures of	2,376,932	4,393,635
Polystyrene resin	26,952,000	33,903,300
..... \$	7,405,673	8,382,237

¹ Source: *Trade of Canada - Exports.*

TABLE 12. Exports of Synthetic Resins and Plastics from the United States to Canada, 1958 and 1959

(From the "United States Exports of Domestic and Foreign Merchandise")

Item	1958		1959	
	Quantity	Value	Quantity	Value
	pounds	\$	pounds	\$
Ester gums, except laminated	3,700,000	822,000	3,675,000	825,000
Styrene polymer and copolymer resins, 60 per cent or more styrene	10,900,000	3,320,000	13,468,000	3,711,000
Alkyd resins	7,665,000	2,228,000	8,772,000	2,538,000
Vinyl and vinyl copolymer resins, uncompounded	9,794,000	2,725,000	11,096,000	3,193,000
Vinyl and vinyl copolymer resins, compounded	4,896,000	1,785,000	6,723,000	2,323,000
Vinyl and vinyl copolymer resins, semi-finished	665,000	583,000	1,073,000	653,000
Tar acid resins, powder, flake, lump, etc.	8,978,000	2,686,000	9,163,000	2,597,000
Urea-formaldehyde, melamine-formaldehyde and other amine resins	11,748,000	3,914,000	14,475,000	5,094,000
Resins, n.e.c., unfinished and semi-finished	11,581,360	3,156,000	11,895,000	3,269,000
Film and sheeting, synthetic resin	9,169,000	7,906,000	10,113,000	9,035,000
Cellulose ethers and derivatives in all unfinished forms	436,000	345,000	308,000	223,000
Regenerated cellulose, excluding rayon, in rolls and sheets	1,083,000	687,000	701,000	560,000
Vulcanized fiber sheets, rolls and other shapes made therefrom ...	1,167,000	597,000	1,511,000	764,000
Polyethylene, unfinished and semi-finished	21,442,000	4,839,000	17,131,000	4,856,000
Acrylic and methyl methacrylate unfinished and semi-finished	6,400,000	2,310,000	4,912,000	1,402,000
Ion exchange resins	1,928,000	747,000	2,238,000	680,000
Polyethylene film and sheeting except laminated	1,097,000	690,000	951,000	669,000
Laminated shapes, synthetic except, molded and decorative	1,275,000	1,141,000	2,004,000	1,444,000
Laminated shapes, synthetic molded, except decorative	623,000	550,000	948,000	768,000
Laminates synthetic decorative	380,000	357,000	799,000	715,000
Cellulose ester moulding and extrusion compositions	1,964,000	1,096,000	2,730,000	1,534,000
Cellulose ester plastic	20,000	4,000	1,000	800
Cellulose ester, plastics except mouldings extrusions and scrap	2,691,000	2,640,000	3,031,000	3,384,000
Plastics except synthetic resins semi-finished or unfinished	1,163,000	893,000	1,140,000	873,000

TABLE 13. Fuel and Electricity Used in the Primary Plastics Industry, 1959

Kind	Quantity	Cost at plant
		\$
1. Establishments reporting commodity detail: ¹		
Bituminous coal:		
(a) From Canadian mines	ton 18,535	215,117
(b) Imported	" 4,331	48,737
Gasoline (including gasoline used in cars and trucks)	Imp. gal. 168,526	61,758
Fuel oil including kerosene or coal oil	" 2,776,977	253,692
Gas:		
(a) Liquefied petroleum gases	Imp. gal. 66,393	14,771
(b) Other manufactured gas	Mcf. 3,102	3,922
(c) Natural gas	" 3,493,908	540,203
Other fuel .....	...	28,312
Electricity purchased	kwh. 204,280,720	853,192
Steam purchased .....	..	1,296,787
2. Estimate for establishments for which no data were collected: ²		
Cost of fuel and electricity .....	...	13,604
3. All establishments:		
Total cost of fuel and electricity .....	...	3,330,095

¹ Establishments generally reporting value of shipments of \$200,000 and over.

² Establishments generally reporting value of shipments of less than \$200,000.

.. Figures not available.

... Figures not appropriate or not applicable.

List of Firms in the Primary Plastics Industry, 1959

Name and location of plant	Principal product made
Quebec:	
Canadian Plastics Limited, 1850 St., Antoine St., Montreal	Synthetic resin (Casein type)
Carlew Chemicals Limited, 115 Station Rd., St. Remi de Napierville	Synthetic Resin (compounded only) (vinyl type)
Cyanamid of Canada Limited, 2055 Peel St., Montreal	Synthetic resin (for own use) (phenol-formaldehyde type); laminated plastic sheets, rods and tubes; door panels
Du Pont of Canada Limited, Shawinigan Falls	Cellulose film ("Cellophane")
Monsanto (Canada) Limited, 425 St. Patrick St., Ville La Salle	Synthetic resin (polystyrene, urea-formaldehyde, vinyl chloride, phenol-formaldehyde, resorcinol and melamine types); plasticizers; varnish; rubber chemicals; oil additives; sodium benzoate; Phenacetin; synthetic adhesives
Northern Resins Limited 23 Champlain Berthierville	Plastic products
Reichhold Chemicals (Canada) Limited, Ste. Therese de Blainville	Synthetic resin (phenol-formaldehyde and urea-formaldehyde types); phthalic anhydride
Shawinigan Chemicals Limited, Canadian Resins Division, Shawinigan Falls	Synthetic resin (vinyl chloride type); vinyl film, sheeting and granular; dioctyl phthalate; 2 ethyl hexanol; vinyl chloride monomer; di isodecyl phthalate; dioctyl adipate; dioctyl azelate; plasticizers
Trilon Chemical Limited, 260 Victoria St., Lachine	Synthetic resin (urea-formaldehyde type) (silicone type-compounded only); textile specialties
Waldor Enterprises Ltd., 7498-19th Ave., Ville St. Michel	Synthetic resin (compounded only)
Ontario:	
Bakelite Company, Division of Union Carbide Canada Limited, Belleville	Synthetic resins (phenol-formaldehyde type); phenolic impregnated and laminated sheets; formaldehyde
Canadian General Electric Co. Ltd., 940 Lansdowne Ave., Toronto	Synthetic resin (alkyd type); ready mixed paints; thinners; varnish
Chemical Oil and Resin Co. 82 Peter St., Toronto	Synthetic resins (polyester type); varnish, processed oils
Dow Chemical of Canada Limited, Sarnia	Synthetic resin (polyethylene and polystyrene type; latex; styrene; toluene; polystyrene foam)
Du Pont Co. of Canada Ltd., Whitby	Polyethylene film
Goodrich, B.F. Chemical Co., 251 King St. W., Kitchener	Synthetic resin (compounded only) (vinyl chloride type)
Goodrich, B.F. Chemical Co., Port Robinson	Synthetic resin (vinyl chloride type)
Hysol Canada Limited, 44 Beechwood Drive, Toronto	Synthetic resin (compounded only) (epoxy type)
Kayson Rubber & Plastics Limited, 1790 Eagle St. N., Preston	Synthetic resin (compounded only) (cellulose acetate, polyethylene, polystyrene and vinyl chloride types)
Kaydot Chemical Ltd., 1790 Eagle St. N., Preston	Synthetic resin (polystyrene type)
Perkins Glue Co. of Canada Limited, 629 Queen St. S., Kitchener	Synthetic resin (urea-formaldehyde type) casein glue
Polyresins Limited, Beechwood Drive, Toronto	Synthetic resin (alkyd, polystyrene and vinyl acetate types); processed vegetable oils
Reichhold Chemicals (Canada) Limited, 1919 Wilson Ave., Weston	Synthetic resin (alkyd, phenol-formaldehyde, melamine, polyester, urea-formaldehyde, vinyl acetate types).
Rohm & Haas Company of Canada Ltd., 2 Manse Rd., West Hill	Synthetic resin (alkyd, acrylic and polyester types) agricultural dusts & sprays, epoxidized fatty esters
Schenectady Varnish Canada Ltd., 309 Comstock Rd., Scarborough	Synthetic resin (alkyd and phenol-formaldehyde types); insulating varnish
T C F of Canada Ltd., Cornwall	Cellulose film
Varcum Chemical Corp. (Canada) Ltd., St. David St., Lindsay	Synthetic resin (compounded only)

List of Firms in the Primary Plastics Industry, 1959 - Concluded

Name and location of plant	Principal product made
Alberta:	
Canadian Chemical Co. Ltd., Box 99, Edmonton	Synthetic resin (cellulose acetate type)
Canadian Industries Limited, HWY. 160, Edmonton	Synthetic resin (polyethylene type)
Canadian-Marietta Ltd., Edmonton	Synthetic resin (phenol-formaldehyde and urea-formaldehyde type)
Monsanto Canada Limited, Clover Bar	Synthetic resin adhesives
British Columbia:	
Canadian-Marietta Ltd., Kerry St., New Westminster	Synthetic resin (phenol-formaldehyde and urea-formaldehyde type)
Monsanto Canada Limited, West 75th Ave., Vancouver	Casein glues, wood preservatives, weed killers, synthetic resin glues
Reichhold Chemicals (Canada) Limited, Foot of Douglas St., Port Moody	Synthetic resins (phenol-formaldehyde, urea-formaldehyde and alkyd types); adhesives; blown linseed oil

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