

UNITED STATES TARIFF COMMISSION

**PRODUCTION AND SALES OF SELECTED ORGANIC CHEMICALS AND
PLASTICS AND RESIN MATERIALS BY THE FOUR LARGEST
U.S. PRODUCERS AND SELLERS, 1958 AND 1959**



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Ben Dorfman, *Chairman*

Joseph E. Talbot

Walter R. Schreiber

Glenn W. Sutton

William E. Dowling

J. Allen Overton, Jr.

Donn N. Bent, *Secretary*

Address all communications to
United States Tariff Commission
Washington 25, D. C.

Production and Sales of Selected Organic Chemicals and Plastics and Resin Materials by the Four Largest U.S. Producers and Sellers, 1958 and 1959

This report gives statistics for the years 1958 and 1959 on the total quantities of selected organic chemicals and synthetic plastics and resin materials produced and sold, and the percentage participation of the four largest producers and the four largest sellers.

The statistics given in this report are based on data supplied to the Tariff Commission by the producers of synthetic organic chemicals and plastics and resin materials listed in the Tariff Commission's annual reports entitled Synthetic Organic Chemicals, U.S. Production and Sales. The four accompanying tables give the total U.S. production and sales of certain organic chemicals and of the major groups of synthetic plastics and resin materials, by type and end use. For each product for which data may be published, the total quantity and the percentage of such total quantity accounted for by the four largest producers and the four largest sellers are also given. For all published figures, the distribution of production and sales among the reporting companies is such that no data for any individual company are revealed.

For the purpose of these statistics, production is the total output of a product by the reporting company's plants, including quantities produced for intracompany consumption, as well as quantities produced for sale; and sales are the shipments of products to other companies for domestic use or for export, accompanied by transfer of title, and shipments to subsidiary or affiliated companies. However, the sales figures for polyethylene and polyvinyl resins include data for intracompany consumption.

The material given in this report was compiled by the Tariff Commission for another Government agency at the direction of the Bureau of the Budget, Executive Office of the President, pursuant to the provisions of the Federal Reports Act of 1942 (5 U.S.C. 139). The Commission believes the data to be of general interest and is therefore releasing them in the form of a report.

Table 1.--Selected organic chemicals: Production and sales by the
4 largest companies in relation to U.S. totals, 1958

Product	Production			Sales		
	Total	4 largest companies		Total	4 largest companies	
		Quantity	Percent of total		Quantity	Percent of total
Phenol, natural-----	42,608	1/30,240	1/71.0	44,120	1/30,080	1/68.2
Phenol, synthetic-----	463,757	325,482	70.2	236,990	187,787	79.2
Phthalic anhydride-----	301,303	230,587	76.5	222,926	182,970	82.1
Phthalic anhydride esters, total-----	237,464	147,751	62.3	197,266	128,713	65.2
Butyl octyl phthalate----	10,573	2/	2/	11,544	2/	2/
Dibutyl phthalate-----	12,902	8,694	67.4	9,026	6,350	70.4
Dicapryl phthalate-----	2/	2/	2/	10,694	3/	3/
Dicyclohexyl phthalate----	6,771	6,771	100.0	3,447	3,447	100.0
Diethyl phthalate-----	14,454	14,454	100.0	10,098	2/	2/
Diisodecyl phthalate----	23,372	18,609	79.6	14,499	11,603	80.0
Di(2-methoxyethyl) phthalate-----	2,702	2,702	100.0	2,150	2,150	100.0
Dimethyl phthalate-----	3,494	2/	2/	2,914	2/	2/
Diocetyl phthalates, total-----	110,840	75,923	68.5	88,155	60,154	68.2
Di(2-ethylhexyl) phthalate-----	76,729	65,516	85.4	56,079	49,451	88.2
Diiso-octyl phthalate and mixtures-----	34,111	26,642	78.1	32,076	28,748	89.6
Octyl decyl phthalate----	10,293	8,359	81.2	9,105	8,175	89.8
All other phthalates-----	42,063	35,475	84.3	35,634	30,780	86.4
Adipic acid esters, total-----	9,459	6,320	66.8	6,544	4,289	65.5
Di(2-ethylhexyl) adipate	1,731	1,586	91.6	1,296	1,176	90.7
Diisodecyl adipate-----	1,963	1,594	81.2	2,292	1,751	76.4
Diocetyl adipate-----	2,134	1,609	75.4	1,290	1,085	84.1
Octyl decyl adipate-----	1,137	2/	2/	784	2/	2/
All other adipates-----	2,494	2,006	80.4	882	804	91.1
Azelaic acid esters-----	6,160	6,010	97.6	5,932	5,797	97.7
Dibutyl maleate-----	4,075	3/	3/	2,579	3/	3/
Glycerol monoricinoleate----	328	2/	2/	338	2/	2/
Oleic acid esters, total-----	6,007	4,812	80.1	4,847	4,410	91.0
Butyl oleate-----	1,179	2/	2/	346	346	100.0
All other oleates-----	4,828	2/	2/	4,501	4,410	98.0
Palmitic acid esters-----	2,606	2/	2/	514	514	100.0

See footnotes at end of table.

Table 1.--Selected organic chemicals: Production and sales by the
4 largest companies in relation to U.S. totals, 1958--Continued

Product	Production			Sales		
	4 largest companies			4 largest companies		
	Total	Percent	Total	Percent	Total	Percent
	Quantity	of	Quantity	of	Quantity	of
	total	total		total	total	
	1,000	1,000		1,000	1,000	
	pounds	pounds		pounds	pounds	
Phosphoric acid esters:						
Cresyl diphenyl phosphate:	7,222	3/	3/	7,418	3/	3/
Tricresyl phosphate-----:	26,463	2/	2/	26,244	2/	2/
Triphenyl phosphate-----:	8,023	8,023	100.0	2/	2/	2/
All other phosphates-----:	7,327	3/	3/	5,768	3/	3/
Sebacic acid esters-----:	11,635	10,938	94.0	10,455	10,066	96.3
Stearic acid esters, total-:	5,648	4,191	74.2	4,751	3,982	83.3
n-Butyl stearate-----:	2,426	2,111	87.0	2,030	2/	2/
All other stearates-----:	3,222	2,799	86.9	2,721	2/	2/
Triethylene glycol						
di(caprylate-caprate)----:	1,659	3/	3/	1,633	3/	3/

1/ Based on data reported to the U.S. Tariff Commission only.

2/ Withheld to avoid disclosing figures for individual companies.

3/ 3 companies reporting.

Table 2.--Selected organic chemicals: Production and sales by the
4 largest companies in relation to U.S. totals, 1959

Product	Production			Sales		
	Total	4 largest companies		Total	4 largest companies	
		Quantity	Percent of total		Quantity	Percent of total
	1,000 pounds	1,000 pounds		1,000 pounds	1,000 pounds	
Phenol, natural-----	40,005	1/28,905	1/72.2	40,594	1/29,058	1/ 71.6
Phenol, synthetic-----	651,982	458,123	70.3	373,670	279,245	74.7
Phthalic anhydride-----	357,871	277,159	77.4	261,829	211,438	80.8
Phthalic anhydride esters,						
total-----	306,415	180,303	58.8	275,875	170,356	61.8
Dibutyl phthalate-----	15,130	9,248	61.1	11,652	7,381	63.3
Dicyclohexyl phthalate-----	6,683	6,683	100.0	3,461	3,461	100.0
Dicapryl phthalate-----	2/	2/	2/	9,604	3/	3/
Diethyl phthalate-----	16,128	2/	2/	10,615	10,615	100.0
Diisodecyl phthalate-----	28,777	20,651	71.8	26,126	21,318	81.6
Di(2-methoxyethyl)						
phthalate-----	2,991	2,991	100.0	2,805	2,805	100.0
Dimethyl phthalate-----	3,318	2/	2/	3,582	2/	2/
Dioctyl phthalates, total--	152,702	94,762	62.1	132,215	88,517	66.9
Di(2-ethylhexyl)						
phthalate-----	106,575	79,176	74.3	88,703	72,677	81.9
Di-n-octyl phthalate and						
mixtures-----	46,127	28,661	62.1	43,512	31,393	72.1
Octyl decyl phthalates,						
total-----	20,466	14,393	70.3	21,015	16,604	79.0
Iso-octyl isodecyl						
phthalate-----	4,722	4,134	87.5	5,783	4,872	84.2
n-Octyl n-decyl phthalate	10,291	9,403	91.4	10,136	9,363	92.4
All other-----	5,453	2/	2/	5,096	2/	2/
All other phthalates-----	60,220	50,958	84.6	54,800	53,031	96.8
Adipic acid esters, total----	14,035	8,353	59.6	11,274	7,403	65.7
Di(2-ethylhexyl)adipate----	1,850	1,445	78.1	1,826	1,500	82.1
Di-isodecyl adipate-----	2,989	2,536	84.8	3,055	2,388	78.2
Dioctyl adipate-----	3,561	2,908	81.7	1,952	1,447	74.1
Octyl-decyl adipate-----	1,770	1,586	89.6	1,506	1,377	91.4
All other adipates-----	3,865	3,079	79.7	2,935	2,354	80.2
Azelaic acid esters-----	8,078	7,864	97.4	6,744	6,581	97.6
Glycerol monoricinoleate----	430	2/	2/	436	2/	2/

See footnotes at end of table.

Table 2.--Selected organic chemicals: Production and sales by the 4 largest companies in relation to U.S. totals, 1959--Continued

Product	Production			Sales		
	Total	4 largest companies	Percent of total	Total	4 largest companies	Percent of total
	Quantity	Quantity	of	Quantity	Quantity	of
	: total	: total	: total	: total	: total	: total
	: 1,000	: 1,000		: 1,000	: 1,000	
	: pounds	: pounds		: pounds	: pounds	
Oleic acid esters, total-----	7,309	4,881	66.8	5,018	3,958	78.9
Butyl oleate-----	2,101	1,693	80.6	686	639	93.1
All other-----	5,208	4,887	93.8	4,332	4,051	93.5
Palmitic acid esters-----	2,904	2/	2/	889	889	100.0
Phosphoric acid esters:						
Cresyl diphenyl phosphate--	10,525	2/	2/	9,509	2/	2/
Tricresyl phosphate-----	31,375	2/	2/	30,790	2/	2/
Triphenyl phosphate-----	8,427	2/	2/	2/	2/	2/
All other phosphoric acid esters-----	8,231	3/	3/	7,206	3/	3/
Sebacic acid esters, total--	9,969	8,974	90.0	6,593	6,038	91.5
Dibutyl sebacate-----	3,993	2/	2/	1,251	2/	2/
All other-----	5,976	5,553	92.9	5,342	5,075	95.0
Stearic acid esters, total---	14,792	10,428	70.5	12,949	10,286	79.4
n-Butyl stearate-----	4,118	3,617	87.8	3,444	3,353	97.4
All other-----	10,674	8,989	84.2	9,505	8,432	88.7
Triethylene glycol di(caprylate-caprate)-----	2,688	3/	3/	2,541	3/	3/

1/ Based on data reported to the U.S. Tariff Commission only.

2/ Withheld to avoid disclosing figures for individual companies.

3/ 3 companies reporting.

Table 3.--Plastics and resin materials: Production and sales by the 4 largest companies in relation to U.S. totals, 1958

Product	Production			Sales		
	Total	4 largest companies		Total	4 largest companies	
		Quantity	Percent of total		Quantity	Percent of total
	1,000 pounds	1,000 pounds		1,000 pounds	1,000 pounds	
Phenolic and other tar-acid resins, total	487,862	285,434	59	439,789	288,738	66
Molding materials	167,417	148,203	89	160,457	147,382	92
Bonding and adhesive resins for:						
Laminating	62 688	35,657	57	42,315	31,046	73
Coated and bonded abrasives	12,107	10,738	89	11,618	1/	1/
Friction materials	13,402	10,059	75	12,575	9,875	79
Thermal insulation	44,803	35,819	80	46,067	37,160	81
Plywood	51,513	41,205	80	43,187	41,695	97
All other bonding and adhesive uses	40,162	30,480	76	40,348	30,535	76
Protective coatings:						
Unmodified	24,247	18,716	77	22,130	18,848	85
Modified, except by rosin	4,185	2,842	68	2,347	2,102	90
Rosin esters modified by phenolic and other tar-acid resins (hard resins)	25,547	19,058	75	24,805	18,408	74
Resins for all other uses	41,791	21,162	51	33,940	19,171	56
Urea and melamine resins, total	349,214	194,916	56	326,114	191,202	59
Textile-treating and textile-coating resins	50,775	31,342	62	42,269	26,456	63
Paper-treating and paper-coating resins	24,702	19,774	80	23,366	19,146	82
Bonding and adhesive resins for:						
Laminating	32,002	1/	1/	27,273	1/	1/
Plywood	101,565	71,713	71	104,574	74,655	71
All other bonding and adhesive uses	11,585	1/	1/	11,682	1/	1/
Protective-coating resins, straight and modified	32,454	23,904	74	25,325	1/	1/
Resins for all other uses, including molding	96,131	1/	1/	91,625	1/	1/

See footnotes at end of table.

Table 3.--Plastics and resin materials: Production and sales by the 4 largest companies in relation to U.S. totals, 1958--Continued

Product	Production			Sales		
	Total	4 largest companies		Total	4 largest companies	
		Quantity	Percent of total		Quantity	Percent of total
	1,000 pounds	1,000 pounds		1,000 pounds	1,000 pounds	
Styrene resins, total-----	763,057	528,678	69	723,821	515,881	71
Molding materials-----	475,597	389,592	82	476,126	399,967	84
Protective-coating resins, straight and modified-----	110,602	90,699	82	103,663	89,647	86
Resins for all other uses	176,858	108,932	62	144,032	82,390	57
Vinyl and vinyl copolymer resins (resin content), total-----	869,419	440,371	51	829,301	432,591	52
Polyvinyl chloride and copolymer resins (containing 50% or more polyvinyl chloride) for--						
Film (under 0.010 gage):	2/	2/	2/	74,481	49,456	66
Sheeting (0.010 gage and over)-----	2/	2/	2/	73,856	47,440	64
Molding and extrusion--	2/	2/	2/	223,665	170,880	76
Textile and paper treating and coating--:	2/	2/	2/	64,195	1/	1/
Flooring-----	2/	2/	2/	109,765	85,150	78
Protective coatings-----	2/	2/	2/	26,647	1/	1/
All other uses-----	2/	2/	2/	74,883	61,501	82
All other vinyl resins for:						
Adhesives-----	2/	2/	2/	52,101	39,595	76
All other uses-----	2/	2/	2/	129,708	89,996	69
Alkyd resins, total-----	502,590	186,277	37	257,575	114,690	45
For protective coatings:						
Phthalic anhydride types:						
Unmodified-----	305,197	149,748	49	126,575	69,766	55
Modified-----	109,296	54,001	49	61,165	42,955	70
Polybasic acid types:						
Unmodified-----	13,104	8,942	68	11,542	9,003	78
Modified (except by rosin)-----	11,829	10,318	87	4,885	4,463	91
Rosin esters modified with maleic and fumaric acids only (hard resins)--	47,437	28,074	59	34,400	27,720	81
For all other uses-----	15,727	14,895	95	19,008	14,100	74

See footnotes at end of table.

Table 3.--Plastics and resin materials: Production and sales by the 4 largest companies in relation to U.S. totals, 1958--Continued

Product	Production			Sales		
	Total	4 largest companies		Total	4 largest companies	
		Quantity	Percent of total		Quantity	Percent of total
	<u>1,000 pounds</u>	<u>1,000 pounds</u>		<u>1,000 pounds</u>	<u>1,000 pounds</u>	
Rosin esters:						
Unmodified (ester gums)						
for protective coatings-----	27,413	21,415	78	25,969	21,152	81
All other modifications for protective coatings and other uses-----	31,476	29,103	92	28,203	27,091	96
Coumarone-indene and petroleum polymer resins-----	267,940	238,066	89	269,125	239,052	89
Polyester resins, total----	117,246	58,993	50	107,310	57,168	53
For reinforced plastics--	91,913	54,244	59	86,015	53,976	63
For all other uses-----	25,333	13,364	53	21,295	12,262	58
Polyethylene resins, total--	864,728	626,743	72	845,370	624,594	74
For film-----	<u>2/</u>	<u>2/</u>	<u>2/</u>	314,989	274,273	87
For all other uses-----	<u>2/</u>	<u>2/</u>	<u>2/</u>	530,381	357,095	67
Epoxy resins, straight and modified-----	41,268	35,974	87	30,579	28,526	93
Miscellaneous plastics and resin materials-----	192,318	160,763	84	170,402	150,327	88

1/ Withheld to avoid disclosing figures for individual companies.

2/ Not available.

Table 4.--Plastics and resin materials: Production and sales by the 4 largest companies in relation to U.S. totals, 1959

Product	Production			Sales		
	Total	4 largest companies		Total	4 largest companies	
		Quantity	Percent of total		Quantity	Percent of total
		: 1,000 pounds	: 1,000 pounds		: 1,000 pounds	: 1,000 pounds
Phenolic and other tar-acid resins, total-----	624,793	384,302	61	554,589	373,172	67
Molding materials-----	229,022	216,111	94	213,462	202,622	95
Bonding and adhesives for:						
Laminating-----	75,597	44,880	59	51,137	41,083	80
Coated and bonded abrasives-----	16,208	14,101	87	14,416	1/	1/
Friction materials-----	16,872	12,902	76	14,824	11,574	78
Thermal insulation-----	51,716	1/	1/	51,572	1/	1/
Plywood-----	61,455	50,384	82	50,099	47,887	96
All other bonding and adhesive uses-----	63,415	46,302	73	62,043	45,830	74
Protective coatings:						
Unmodified-----	25,251	18,162	72	20,777	17,078	82
Modified-----	4,786	3,508	73	2,110	1,808	86
Rosin esters modified by phenolic and other tar-acid resins (hard resins)-----	29,112	16,802	58	26,056	16,813	65
Resins for all other uses-----	51,359	30,166	59	48,093	30,113	63
Cellulose plastics materials-----	158,088	1/	1/	151,993	1/	1/
Urea and melamine resins, total-----	423,602	259,235	61	386,897	250,463	65
Textile-treating and textile-coating resins-----	46,094	31,552	68	39,881	28,552	72
Paper-treating and paper-coating resins-----	30,381	25,137	83	27,702	23,653	85
Bonding and adhesive resins for--						
Laminating-----	36,382	1/	1/	29,651	1/	1/
Plywood-----	106,468	79,163	74	104,290	82,873	79
All other bonding and adhesive uses-----	27,663	19,854	72	23,365	15,178	65
Protective-coating resins, straight and modified-----	38,566	28,039	73	26,965	1/	1/
Resins for all other uses, including molding-----	138,048	1/	1/	135,043	1/	1/

See footnotes at end of table.

Table 4.--Plastics and resin materials: Production and sales by the 4 largest companies in relation to U.S. totals, 1959--Continued

Product	Production			Sales		
	Total	4 largest companies		Total	4 largest companies	
		Quantity	Percent of total		Quantity	Percent of total
Styrene resins, total-----	976,937	656,990	67	905,521	634,370	70
Molding materials:						
Straight polystyrene---	319,200	235,325	74	285,677	206,146	72
All other-----	348,589	264,812	76	310,246	242,246	78
Protective-coating resins, straight and modified-----	81,642	60,997	75	71,050	56,050	79
Textile and paper treating and coating resins--	63,155	1/	1/	48,011	1/	1/
Resins for all other uses:	164,351	109,939	67	190,537	140,666	74
Vinyl and vinyl copolymer resins (resin content), total-----	1,116,465	570,872	49	1,101,598	559,620	51
Polyvinyl chloride and copolymer resins (containing 50% or more polyvinyl chloride) for--						
Film (under 0.010 gage):	2/	2/	2/	88,904	45,779	51
Sheeting (0.010 gage and over)-----	2/	2/	2/	130,178	89,070	68
Molding and extrusion--	2/	2/	2/	305,947	223,616	73
Textile and paper treating and coating--	2/	2/	2/	68,449	1/	1/
Flooring-----	2/	2/	2/	153,007	110,161	72
Protective coatings----	2/	2/	2/	31,367	30,903	98
All other uses-----	2/	2/	2/	96,506	82,669	86
All other vinyl resins for--						
Adhesives-----	2/	2/	2/	59,495	45,327	76
Protective coatings----	2/	2/	2/	25,275	21,231	84
All other uses-----	2/	2/	2/	142,470	102,575	72
Alkyd resins, total-----	559,961	194,005	35	278,341	141,879	51
For protective coatings:						
Phthalic anhydride types:						
Unmodified-----	348,121	149,318	43	144,833	79,076	55
Modified-----	120,630	56,942	47	63,742	43,939	69

See footnotes at end of table.

Table 4.--Plastics and resin materials: Production and sales by the 4 largest companies in relation to U.S. totals, 1959--Continued

Product	Production			Sales		
	Total	4 largest companies		Total	4 largest companies	
		Quantity	Percent of total		Quantity	Percent of total
	1,000 pounds	1,000 pounds		1,000 pounds	1,000 pounds	
Alkyd resins--Continued						
For protective coatings--Continued						
Polybasic acid types:						
U-modified-----	15,224	8,556	56	10,101	7,732	77
Modified (except by rosin)-----	10,933	7,767	71	5,862	5,421	92
Rosin esters modified with maleic and fumaric acids only (hard resins)-----	40,099	21,742	54	29,973	19,540	65
For all other uses-----	24,954	23,400	94	23,830	22,376	94
Rosin esters:						
Unmodified (ester gums) for protective coatings:	25,653	21,063	82	23,847	20,137	84
All other modifications for protective coatings and other uses-----	47,870	1/	1/	45,230	1/	1/
Coumarone-indene and petroleum polymer resins--	318,330	280,793	88	299,062	263,171	88
Polyester resins, total----	180,672	81,974	45	169,544	79,095	47
For reinforced plastics--	129,472	76,387	59	123,297	73,130	59
For all other uses-----	51,200	25,778	50	46,247	23,179	50
Polyethylene resins, total--	1,194,987	835,414	70	1,116,248	791,979	71
For film and sheeting----	2/	2/	2/	344,353	272,686	79
Molding materials-----	2/	2/	2/	216,479	154,321	71
Extrusion materials-----	2/	2/	2/	155,049	134,288	87
For all other uses-----	2/	2/	2/	400,367	254,985	64
Epoxy resins, total-----	56,821	43,978	77	45,233	39,177	87
For protective coatings--	2/	2/	2/	20,672	18,843	91
For all other uses-----	2/	2/	2/	24,561	21,033	86
Miscellaneous plastics and resin materials-----	287,159	228,761	81	242,660	203,412	84

1/ Withheld to avoid disclosing figures for individual companies.

2/ Not available.

