

COMMONWEALTH BUREAU OF CENSUS AND STATISTICS

CANBERRA AUSTRALIA

MANUFACTURING INDUSTRIES

1952 53

NO 33 PLASTIC MOULDING AND PRODUCTS

Prepared Under Instructions from

THE RIGHT HONORABLE THE TREASURER

by

S.R. Cave:

Acting Commonwealth Statistician.

MANUFACTURING INDUSTRIES : 1952-53

PREFACE

1. GENERAL: The Bulletins in the series for 1952-53 are listed on the back of the cover of this Bulletin and incorporate the same range of industries as the 1951-52 series.

Where a number of industries are combined in one Bulletin the introductory paragraph on Page 2 specifies the industries so included.

2. CLASSIFICATION OF FACTORIES: For purposes of industry classification, factories in Australia are classified according to the nature of their product. Where two or more distinct types of industrial activity are carried on in one establishment, a separate return is obtained, wherever practicable, for each activity in order to allow classification on this basis. In cases where this is not practicable, factories are classified according to predominant activity and these cases are encountered most frequently in the Metal Trades, (e.g. General Engineering firms also producing Agricultural Implements or Stoves, etc.), and to a lesser degree in factories concerned with Skins, Leather, Clothing and Wood products.

Each of the summaries in the "Manufacturing Industries" series relates as far as possible to the operations of factories classified to the industry specified. Sometimes articles normally produced in the industry covered by a particular Bulletin are also produced, as subsidiary production, in other industries, and, wherever possible, quantity tables have been extended to show details of production separately for the industry under review and the total in all industries.

3. BASIS OF THE STATISTICS: The scope of the factory statistics is fully explained in the annual Secondary Industries Bulletin.

Briefly, a "factory" is taken to be a manufacturing establishment in which four or more persons are employed or in which power other than hand is used.

All persons employed in the manufacturing activities of the factory are counted as factory employees. The figures relating to employment, therefore, exclude all those engaged in selling and distribution, such as salesmen, travellers, collectors, carters engaged solely on outward delivery of manufactured goods, and retailing storemen. The figures do include, however, proprietors who work in their own factories as well as "out-workers".

The value of output is the selling value at the factory of goods made or processed during the year, including by-products. In addition it includes the value of other work done, such as repair work, assembling and making-up for customers.

The value of production is the value added to raw materials by the process of manufacture. It is calculated by deducting from the value of factory output the value (at the factory) of the materials used, containers and packing, power, fuel and light used, tools replaced and materials used in repairs to plant (but not depreciation charges). The value of production is the source from which such items as wages, interest, depreciation, profits taxation, advertising and other sundry charges are met. As full details of costs of production are not collected, the amount of profit resulting from factory operations cannot be ascertained from the figures contained herein.

S. R. CARVER

ACTING COMMONWEALTH STATISTICIAN

CANBERRA, A.C.T.

MANUFACTURING INDUSTRIES, AUSTRALIA, 1952-53.

PLASTIC MOULDING AND PRODUCTS.

1. **GENERAL:** This Bulletin in the Manufacturing Industries Series is the second issue concerned with statistics of the Plastic Mouldings and Products Industry. Provision was made for the separate collection of statistics relating to this industry in 1945-46 for the first time. Thus comparisons with earlier years are not possible. Nevertheless, even within this short span, considerable development has taken place (e.g. the number of factories classified to this industry has risen from 107 in 1945-46 to 236 in 1952-53).

2. **SUMMARY OF STATISTICS:** The following table furnishes a summary of the principal statistics of the factories engaged in the manufacture of Plastic Mouldings and Products for the years 1945-46 and 1949-50 to 1952-53.

TABLE 1. PLASTIC MOULDING AND PRODUCTS - AUSTRALIA

Year	Number of Factories (1)	Persons Employed (2)	Salaries and Wages Paid (b) (3)	Power, Fuel and Light, etc., used (4)	Value of Materials, etc., used (c) (5)	Value of Production (d) (6)	Value of Output (7)
	No.	No.	£'000	£'000	£'000	£'000	£'000
1945-46	107	3 559	504	55	1,185	1,453	2,694
1949-50	198	5,169	2,189	184	3,260	3,420	6,814
1950-51	211	5,936	2,915	184	4,907	4,992	10,161
1951-52	220	5,499	3,407	233	6,243	5,587	12,063
1952-53	236	5,227	3,522	274	7,125	6,325	13,724

(a) Average over whole year; includes Working Proprietors. (b) Excludes amounts drawn by Working Proprietors. (c) Includes also containers, packing, etc., replacement of tools and repairs to plant. (d) Value of production equals column (7) less total of columns (4) and (5).

In the following table, particulars of the industry are given for each State during the year 1952-53.

TABLE 2. PLASTIC MOULDING AND PRODUCTS - STATES, 1952-53

Particulars	New South Wales	Victoria	Queensland	South Australia	Western Australia	Tasmania	Australia
Number of Factories	101	112	7	11	5	-	236
Number employed (a) -							
Males	1,169	2 080	50	65	21	-	3,393
Females	108	1,046	19	49	12	-	1,834
Total	1,877	3,126	77	114	33	-	5,227
Value of -	£	£	£	£	£	£	£
Salaries and Wages Paid (b)	1,324,287	2,078,235	48,568	59,717	11,278	-	3,522,085
Power, Fuel and Light, etc., used	107,081	156,988	2,456	6,508	946	-	273,979
Materials, etc., used	2,116,208	4,812,635	98,971	84,523	12,575	-	7,124,912
Production (c)	2,519,967	3,576,875	97,580	106,505	23,849	-	6,324,736
Output	4,743,256	8,546,498	199,007	197,536	37,370	-	13,723,667
Land and Buildings	711,001	1,173,237	38,852	21,275	10,061	-	1,955,226
Plant and Machinery	889,740	1,613,080	29,678	59,978	8,848	-	2,601,324
H.P. of Engines ordinarily in use	H.P. 7,553	H.P. 10,068	H.P. 184	H.P. 469	H.P. 19	H.P. -	H.P. 18,253

(a) Average over whole year; includes Working Proprietors. (b) Excludes amounts drawn by Working Proprietors. (c) See note (d) to Table 1.

3. **AVERAGE SALARIES, OUTPUT AND PRODUCTION:** Particulars of the average salary and wage paid, together with the average value of output and production per person engaged and the ratio of salaries and wages to value of production, are shown in the following table for the years 1945-46 and 1949-50 to 1952-53.

TABLE 3. PLASTIC AND MOULDING FACTORIES - AVERAGE SALARIES AND WAGES PAID, OUTPUT, ETC. PER EMPLOYEE - AUSTRALIA

Year	Salaries and Wages per Employee (a)	Value of Output per person Engaged (b)	Value of Production per Person Engaged (c)	Ratio per cent of Salaries and Wages to Value of Production
	£	£	£	%
1945-46	259	757	408	62.23
1949-50	436	1,318	662	64.00
1950-51	503	1,712	841	58.39
1951-52	636	2,194	1,016	60.98
1952-53	696	2,686	1,210	55.69

(a) Excludes Working Proprietors and amounts drawn by them. (b) Includes Working Proprietors.

4. **MATERIALS USED AND ARTICLES PRODUCED:** The following table shows particulars of the quantity and value of the principal materials used and articles produced in Plastic Moulding Factories during the years 1951-52 and 1952-53. Particulars of materials used and articles produced in a number of cases include relevant data from industries not classified to the Plastic Moulding Industry.

TABLE 4: MATERIALS USED AND ARTICLES PRODUCED IN PLASTIC MOULDING FACTORIES
AUSTRALIA, 1951-52 AND 1952-53

Particulars	Unit of Quantity	1951-52		1952-53	
		Quantity	Value (£)	Quantity	Value (£)
PRINCIPAL MATERIALS USED					
Cellulose Acetate and Mixed Ester Plastics	cwt	8,896	2,202	9,694	291,135
Nitro Cellulose Plastics	"	150	8,669	141	9,340
Other Cellulose Plastics	"	1,506	51,065	1,621	59,424
Urea and Melamine Resins	"	29,706	480,248	38,409	684,966
Vinyl Resins	"	38,388	871,783	44,951	850,948
Phenolic Resins	"	61,501	807,808	40,779	556,000
Acrylics	"	4,365	179,723	2,847	103,314
Other Resins and Plastics	"	37,756	755,159	43,771	814,454
Sheets, Rods, Tubes, Forms, etc. ..	"	(a)	647,518	(a)	539,796

PRINCIPAL PLASTIC ARTICLES PRODUCED

Baths - Infants	number	(b)	(b)	(b)	(b)
Other	"	(b)	(b)	(b)	(b)
Blanks - Tooth Brush	"	(a)	(b)	(a)	(b)
Other Toilet Brush	"	(a)	10,421	(a)	8,462
Bottle Tops and Closures	"	(a)	343,211	(a)	217,956
Buckles	"	(a)	56,253	(a)	57,996
Builders Hardware, Furniture, etc.	"	(a)	519,516	(a)	412,701
Buttons	"	(a)	714,258	(a)	911,929
Cigarette Cases, Compacts, etc.	"	(a)	142,770	(a)	201,876
Clothes Pegs	gross	34,265	19,892	55,415	33,450
Costume Jewellery	"	(a)	2,971	(a)	3,062
Electrical Goods, Switchgear, etc.	"	(a)	(c)1,808,190	(c)1,383,626	(c)1,383,626
Gears, Bearings and other Machine Parts	"	(a)	144,209	(b)	127,837
Handbasins	number	-	-	(b)	(b)
Hose - Garden and Other	lin. ft.	16,286,617	477,420	16,928,563	561,392
Housings - Radio Cabinets	number	(c)276,714	(c)291,233	(c)185,479	(c)133,541
Other	"	(a)	(b)	(a)	15,838
Kitchenware and Tableware	"	(a)	(c)866,218	(a)	1,209,909
Packers Cans, Canisters and Containers	"	(a)	(d)152,273	(a)	(d)286,057
Pens, Pencils, etc. -	"	(a)	(b)	(a)	(b)
Barrels only	"	(b)	(b)	7,304	13,275
Penholders	gross	(c)1,843	(c)35,324	(c)17,317	(c)133,141
Ball Point Type	"	(c)246	(c)11,071	(b)	(b)
Propelling Pencils	"	(a)	1,235,266	(a)	793,311
Sheets, Plates, Blocks, Rods, Tubes, etc.	number	(b)	(b)	(b)	(b)
Sinks	"	(a)	(c)127,582	(a)	(c)110,593
Teeth Artificial for Dentures	"	(a)	1,096	4,065	3,771
Tiles, Wall	sq. yard	(a)	47,312	(a)	102,820
Tool and Other Handles	"	(a)	617,310	(a)	1,055,851
Toys (including Dolls)	"	-	-	(b)	(b)
Wall Panelling	sq. yard	-	-	(b)	(b)

(a) Value only collected. (b) Not available for publication. (c) Includes Production in other Works.
(d) Includes Collapsible Tubes.

5. **EMPLOYMENT:** The numbers of persons employed shown in Table 1, 2, 6 and 7 have been adjusted to represent the average employment over the whole year in those cases where short time was worked. In the following table the factories have been classified according to the average number employed during the actual period worked.

TABLE 5 : PLASTIC MOULDING FACTORIES CLASSIFIED ACCORDING TO PERSONS EMPLOYED : AUSTRALIA

Number of Persons Employed in each Factory	1945-46		1949-50		1950-51		1951-52		1952-53	
	Number of Factories	No. Em- ployed	Number of Factories	No. Em- ployed	Number of Factories	No. Em- ployed	Number of Factories	No. Em- ployed	Number of Factories	No. Em- ployed
Under 4	13	28	34	78	36	82	45	99		
4	9	36	14	56	17	68	24	96		
5 to 10	27	193	64	462	55	385	49	337		
11 to 20	15	255	31	465	42	620	47	709		
21 to 50	28	897	32	1,023	37	1,238	30	992	(a)	(a)
51 to 100	9	633	13	909	11	870	13	973		
101 to 200				570	5	671	8	1,276		
201 and over	6	1,606	6	1,726	8	2,087	4	1,037		
Total	107	3,648	198	5,289	211	5,071	220	5,519	236	(a)
Average Number employed per factory	34		27		29		25		(a)	

(a) Not yet available

Further details of employment in the industrial group, Plastic Moulding and Products, are furnished in the three following tables. In Table 6, the numbers of persons employed are shown according to sex and nature of employment for the year 1952-53.

TABLE 6 : PLASTIC MOULDING FACTORIES : PERSONS EMPLOYED CLASSIFIED ACCORDING TO OCCUPATIONAL STATUS : AUSTRALIA, 1952-53

Occupational Status	Males	Females	Total
Working Proprietors	152	18	170
Managerial and Clerical Staff, including Salaried Managers and Working Directors	403	281	684
Chemists, Draftsmen and Other Laboratory Research Staff	69	3	72
Foremen and Overseers	305	37	342
Workers (skilled and unskilled)	2,452	1,494	3,946
Carters (excluding delivery only), Messengers and Persons Working Regularly at Home	12	1	13
Total	3,393	1,834	5,227

In Table 7, the numbers of males and females employed are shown for the years 1945-46, 1951-52 and 1952-53 according to the nature of their employment.

TABLE 7 : PLASTIC MOULDING FACTORIES : PERSONS EMPLOYED CLASSIFIED ACCORDING TO OCCUPATIONAL STATUS : AUSTRALIA

Occupational Status	1945-46		1951-52		1952-53	
	Males	Females	Males	Females	Males	Females
Working Proprietors	65	5	132	12	152	18
Managerial and Clerical Staff, including Salaried Managers and Working Directors	201	161	353	262	403	281
Chemists, Draftsmen and Other Laboratory Research Staff	45	2	56	1	69	3
Foremen and Overseers	165	26	313	32	305	37
Workers (skilled and unskilled)	1,658	1,099	2,723	1,600	2,452	1,494
Other (Carters, Messengers, etc.)	1	131	14	1	12	1
Total	2,135	1,424	3,591	1,908	3,393	1,834

The number of persons employed on or about 15th June for each of the years 1946 and 1950 to 1953 are shown according to age and sex distribution in Table 8.

TABLE 8 : PLASTIC MOULDING FACTORIES : DISTRIBUTION OF EMPLOYEES ACCORDING TO AGE AND SEX : AUSTRALIA

(Excluding Working Proprietors)

June	Under 16 Years	16 Years	17 Years	18 Years	19 Years	20 Years	Total 16 to 20 Years	21 Years and over	Total all Ages
MALES									
1946	98	112	87	84	76	76	435	1,995	2,328
1950	38	28	47	45	51	62	233	3,061	2,332
1951 (a)	26	22	45	55	43	55	220	3,432	3,678
1952 (a)	30	35	36	34	40	38	183	2,678	2,891
1953 (a)	48	50	55	67	59	60	291	3,447	3,786
FEMALES									
1946	11	28	55	58	60	59	258	1,052	1,321
1950	23	34	36	48	34	49	201	1,687	1,911
1951 (a)	23	28	43	48	62	58	239	1,901	2,163
1952 (a)	23	16	31	62	35	32	174	1,249	1,446
1953 (a)	41	63	47	51	58	44	263	1,937	2,261

(a) At last pay-day in June.

6. POWER EQUIPMENT: Statistics of the power equipment of the factories included in this group are given in the next table. The details given include the rated horse-power of engines ordinarily in use, together with those in reserve or idle.

TABLE 9 : PLASTIC MOULDING FACTORIES : TYPES AND RATED HORSE-POWER OF ENGINES : AUSTRALIA

Class of Engine	Rated Horse-Power of Engines					
	Ordinarily in Use			In Reserve or Idle		
	1945-46	1951-52	1952-53	1945-46	1951-52	1952-53
Steam - Reciprocating	—	6	21	6	—	6
Turbine	—	—	—	—	—	—
Internal Combustion -						
Gas	—	100	100	—	—	—
Petrol or Other light Oils	—	511	188	22	596	824
Heavy Oils	—	801	557	—	176	450
Water	—	—	—	—	—	—
Total, Prime Movers:	—	1,418	866	28	772	1,280
Motors driven by electricity -						
Purchased	5,264	13,818	17,517	95	1,011	1,305
Own Generation	—	—	—	—	—	148
Total, Electricity:	5,264	13,818	17,517	95	1,011	1,453
TOTAL POWER USED:	5,264	15,236	18,383	123	1,783	2,733

7. **POWER, FUEL AND LIGHT, ETC., USED:** Details of the quantities and values of the various items of power, fuel and light used in Plastic Moulding factories are shown in the following table for the years 1945-46, 1951-52 and 1952-53.

TABLE 10 : PLASTIC MOULDING FACTORIES : POWER, FUEL AND LIGHT, ETC., USED : AUSTRALIA

Particulars	Unit of Quantity	Quantity			Value (£)		
		1945-46	1951-52	1952-53	1945-46	1951-52	1952-53
Power, Fuel and Light —							
Coal — Black ..	ton*	1,780	26	27	4,026	123	143
Brown ..	"	"	97	1,099	"	256	2,561
Brown Coal Briquettes ..	"	146	"	"	244	"	"
Coke ..	"	188	46	36	395	272	254
Wood ..	"	157	39	101	290	162	428
Fuel Oil ..	gallon	7,484	560,918	438,654	352	42,866	35,970
Tar (Fuel) ..	"	"	"	400	"	"	15
Electricity ..	"	(a)	(a)	(a)	34,651	150,839	192,262
Gas ..	"	(a)	(a)	(a)	3,329	6,413	10,508
Other (Charcoal, etc.) ..	"	(a)	(a)	(a)	3,930	12,312	9,124
Water and Lubricating Oil Used ..	"	(a)	(a)	(a)	7,827	17,684	22,714
TOTAL:		(a)	(a)	(a)	55,044	232,927	273,979

(a) Value only available.

8. **VALUE OF LAND, BUILDINGS, PLANT AND MACHINERY:** Particulars of the book values of premises occupied and plant used for factory purposes at 30th June for each of the years 1945-46, and 1949-50 to 1952-53 are shown in the next table. Details of the values of additions and replacements made and depreciation allowed during the same period are also shown. It should be noted that the amounts shown are those recorded by factories which were operating during each year and that changes in their numbers, as well as other factors, affect comparison from year to year.

TABLE 11 : PLASTIC MOULDING FACTORIES : VALUE OF LAND AND BUILDINGS, PLANT AND MACHINERY, ETC. : AUSTRALIA

(£)

Year	Book Values as at 30th June (a)		Additions and Replacements made during year		Depreciation allowed during year	
	Land and Buildings	Plant and Machinery	Land and Buildings	Plant and Machinery	Land and Buildings	Plant and Machinery
1945-46	464,973	530,581	21,498	140,599	799	58,084
1949-50	1,090,185	1,444,540	128,886	506,602	2,672	198,158
1950-51	1,130,515	1,984,423	152,790	692,908	5,464	275,161
1951-52	1,664,431	2,298,234	274,501	746,380	3,422	271,886
1952-53	1,935,226	2,601,524	235,288	769,824	5,946	306,075

(a) Includes estimated value of rented premises and machinery.

9. **OVERSEA TRADE:** In the next two tables, exports and imports of Plastic Materials are given for the years 1947-48 and 1949-50 to 1952-53.

TABLE 12 : EXPORTS OF PLASTIC MATERIALS : AUSTRALIA

Year	Laminated Plastic			Plastic Materials and Synthetic Enamels in Liquid Solid or Powder Form		Plastic Moulding Materials in Sheet, Rod or Tube Form	
	Asbestos Base	Paper Base	N.E.L.				
	EA	EA	EA	lb.	EA	lb.	EA
1947-48	(a)	(a)	(a)	572,103	46,034	113,941	19,635
1949-50	"	"	"	1,154,173	122,680	79,172	25,333
1950-51	"	150	1,268	1,643,552	196,433	90,821	31,500
1951-52	"	"	353	2,526,804	374,497	174,030	24,287
1952-53	"	"	317	1,578,566	242,519	212,778	37,250

(a) Not recorded separately.

NOTE: — Values are expressed in EA, i.e. b. port of shipment.

TABLE 13 : IMPORTS OF PLASTIC MATERIALS : AUSTRALIA

Article	Unit	1947-48	1949-50	1950-51	1951-52	1952-53
<u>Plastic Materials in Liquid, Solid and Powder Form -</u>						
<u>Condensation Plastics -</u>						
Phenolic Resins ..	lb.	1,964,349	446,976	503,670	523,346	89,489
	£A	187,345	47,445	57,144	73,942	12,215
Alkyd Resins ..	lb.	782,134	59,341	191,679	269,344	140,705
	£A	81,110	9,329	21,538	40,794	23,265
Organic Nitrogen Resins ..	lb.	1,171,018	1,296,587	799,560	228,695	665,508
	£A	117,248	112,067	73,730	40,764	90,995
Other Condensation Plastics ..	lb.	610,250	63,522	343,280	691,630	61,739
	£A	37,556	6,212	28,565	71,855	8,279
<u>Polymerisation Plastics -</u>						
Acrylic Resins ..	lb.	214,743	153,199	42,615	38,858	135,183
	£A	70,195	40,218	15,001	13,324	32,232
Vinyl Resins ..	lb.	2,185,540	1,707,834	3,489,296	4,923,953	2,478,963
	£A	286,679	216,544	420,457	725,784	322,862
Polyolefin and Polyaromatic Resins	lb.	(a) 1,878,068	480,029	193,171	205,735	770,116
	£A	(a) 140,274	61,891	51,638	38,818	183,212
Polystyrene Resins ..	lb.	(b)	2,373,490	1,343,743	4,955,962	2,353,070
	£A	(b)	280,995	222,410	1,089,122	410,523
Miscellaneous Polymerisation Plastics	lb.	120,547	168,660	58,337	271,085	14,301
	£A	9,806	29,237	3,938	45,386	3,222
Protein Plastics ..	lb.	11,214	7,609	35	2,563	2,957
	£A	650	618	12	455	484
Cellulose Plastics ..	lb.	1,151,094	1,243,814	1,588,124	2,070,344	862,446
	£A	170,277	143,149	314,781	547,408	169,231
Synthetic Elastomers ..	lb.	1,567,939	159,629	151,747	170,863	325,902
	£A	150,817	17,757	22,095	31,868	60,890
Plastic Materials n.e.i. ..	lb.	408,273	1,175,799	2,328,713	2,310,494	461,490
	£A	44,637	122,150	295,844	372,665	87,177
<u>Plastic Moulding Materials in Sheet, Rod or Tube Form -</u>						
Casein ..	lb.	37,091	18,466	53,089	162,286	35,525
	£A	17,665	6,329	13,705	55,816	13,601
Celluloid ..	lb.	553,107	470,502	741,005	729,182	162,303
	£A	204,637	253,910	424,428	416,390	70,349
Cellulose Acetate ..	lb.	108,836	155,065	193,068	285,931	404,902
	£A	45,777	34,662	57,045	135,300	246,981
Other Plastic Moulding Materials ..	lb.	316,010	1,457,500	3,209,834	2,716,737	902,878
	£A	92,256	427,390	951,327	746,360	358,905
<u>Antifriction and Plastic Metals</u> ..						
	cwt.	113	97	202	600	-
	£A	3,475	3,484	10,127	1,327	14
<u>Laminated Plastic Blocks, Sheets or Boards -</u>						
	£A	(b)	26,885	52,809	61,245	16,328
<u>Articles of Laminated Plastic, n.e.i.</u>						
	£A	(b)	15,119	47,482	83,714	20,189

(a) Includes Polystyrene Resins. (b) Not recorded separately.
NOTE: - Values are expressed in £A, f.o.b. Port of Shipment.

S.R. CARVER
ACTING COMMONWEALTH STATISTICIAN

COMMONWEALTH BUREAU OF CENSUS AND STATISTICS

CANBERRA. A.C.T.

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