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**April 1989
Production of Chemicals
and By-Products
Australia**

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**PRODUCTION OF CHEMICALS AND BY-PRODUCTS
AUSTRALIA
APRIL 1989**

IAN CASTLES
Australian Statistician

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TABLE 1. PLASTICS FILM, SHEETING AND COATED MATERIALS

Period	Unsupported plastics film, foil and sheeting— by polymer type(a)				Plastic coated textile materials(b)
	Vinyl chloride incl. co-polymers (423.08)	Polyethylene		Other (423.38)	Vinyl chloride (424.31) '000 m ²
		Low density(c) (423.15)	High density(c) (423.25)		
1985-86	15,526	(d)	(d)	27,542	8,744
1986-87	15,957	108,714	19,320	30,260	8,951
1987-88	15,601	115,821	23,597	33,064	8,824
1988—					
February	1,252	10,396	2,539	2,982	941
March	1,256	10,496	2,139	2,645	923
April	913	9,115	1,994	2,479	565
May	1,343	10,627	2,156	3,025	765
June	1,372	10,413	1,913	2,784	932
July	1,142	9,821	1,869	2,882	943
August	944	10,141	2,056	3,131	956
September	1,694	9,913	2,113	2,904	994
October	1,397	10,166	2,073	2,828	732
November	1,465	10,611	2,047	3,012	653
December	1,288	8,115	1,721	2,286	620
1989—					
January	624	6,467	1,230	1,679	302
February	1,149	8,736	2,196	2,697	733
March	1,014	9,560	2,038	2,579	843
April	1,297	9,430	1,981	2,405	783
1987-88 : July to Apr.	12,886	94,799	19,528	27,256	7,127
1988-89 : July to Apr.	12,013	92,960	19,323	26,403	7,560

(a) Rigid and flexible (includes lay flat tubing)-not profile. Includes film or sheet used in further production in the same establishment. (b) Area of completion of final coating by any method including laminating on continuous supporting materials. Includes production even if subsequently used in the same establishment for further processing. Excludes coating for adhesive purposes in the production of laminates. (c) Not collected separately prior to July 1986. High density classified as having a specific gravity of 0.94 and above. (d) Commodity codes 423.15,25 were collected in combination in 1985-86. Production was 119,750 tonnes.

TABLE 2. PLASTICS AND SYNTHETIC RESINS(a)
(tonnes)

Period	For protective coatings, paints, etc.							
	Acrylics (404.01)	Alkyls (404.02)	Phenolics (404.32)	Polyvinyl acetate (404.88)	Rosin esters (404.48)	Ureas and melamines (404.74)	Polyesters and styrenes (404.40,62)	Other (404.94)
1985-86	16,136	18,815	1,172	6,145	1,098	932	3,676	54,520
1986-87	16,126	14,707	751	7,425	917	1,006	3,796	52,355
1987-88	18,715	15,575	684	8,507	958	1,129	n.p.	59,352
1988—								
February	1,637	1,196	26	968	23	91	n.p.	4,930
March	1,928	1,635	81	885	122	119	n.p.	6,170
April	1,446	1,101	62	519	87	72	n.p.	4,220
May	1,630	1,486	75	774	99	91	n.p.	5,228
June	1,522	1,620	54	729	48	135	n.p.	5,549
July	1,432	1,264	43	692	92	68	444	718
August	1,994	1,263	25	713	41	102	442	5,301
September	1,651	1,365	49	791	83	59	318	5,047
October	1,533	1,352	69	761	103	114	406	5,035
November	2,014	1,588	55	754	54	105	378	5,674
December	1,702	1,452	55	953	77	70	344	5,312
1989—								
January	1,180	1,024	30	575	12	58	302	3,735
February	1,665	1,903	47	735	50	112	350	5,432
March	1,927	2,251	n.p.	1,032	n.p.	83	424	6,610
April	1,671	1,730	47	807	62	121	393	5,456
1987-88 : July to Apr.	15,563	12,469	555	7,004	811	903	n.p.	48,575
1988-89 : July to Apr.	16,769	15,192	n.p.	7,813	n.p.	892	3,801	52,355

(a) Liquid resin or emulsion form are shown in terms of dry weight of resin content.

TABLE 2. PLASTICS AND SYNTHETIC RESINS(a)—continued
(tonnes)

Period	For moulding, extrusion, lamination, calendaring, etc.						For bonding and adhesives		Total plastics and synthetic resins
	Phenolic (403.52)	Polyesters (403.62)	Poly-ethylene (403.65)	Poly-propylene (403.74)	Other (b)(c)	Total	Polyvinyl acetate (404.90)	Other(d)	
1985-86	7,304	25,961	206,488	155,980	267,730	663,463	5,902	161,511	885,396
1986-87	7,135	24,261	215,757	128,380	275,058	650,591	5,685	195,477	904,108
1987-88	7,652	25,588	230,897	152,178	299,361	715,676	5,215	209,961	990,204
1988—									
February	633	2,396	17,944	12,582	25,431	58,986	458	18,970	83,344
March	800	2,435	20,829	12,708	26,760	63,532	481	21,499	91,682
April	582	1,819	20,067	13,869	24,691	61,028	445	17,108	82,801
May	600	2,220	17,986	12,972	25,969	59,747	449	16,911	82,335
June	663	2,614	20,526	13,712	26,065	63,580	454	17,861	87,444
July	595	2,595	21,689	12,743	27,187	64,809	443	18,015	88,020
August	664	2,082	22,195	13,398	24,326	62,665	388	20,381	88,735
September	692	2,473	20,296	14,404	24,704	62,569	448	19,523	87,587
October	631	2,448	22,077	14,440	26,534	66,130	503	17,936	89,604
November	737	2,243	20,072	13,305	25,952	62,309	589	14,408	82,980
December	604	2,195	20,647	12,590	20,333	56,369	397	10,512	72,590
1989—									
January	230	1,485	17,660	13,073	19,961	52,409	135	17,874	74,153
February	801	2,645	12,837	10,099	22,832	49,214	439	18,060	73,145
March	665	2,649	11,933	9,994	20,152	45,393	365	19,556	71,924
April	601	2,823	17,057	13,453	21,967	55,901	446	19,065	80,868
1987-88 : July to Apr.	6,389	20,754	192,385	125,494	247,327	592,350	4,312	175,189	820,425
1988-89 : July to Apr.	6,220	23,638	186,463	127,499	233,948	577,768	4,153	175,330	809,606

(a) Liquid resin or emulsion form are shown in terms of dry weight resin content. (b) Code nos. 403.22,73,82,90,92,94. (c) There has been no production of cellulistics and other vinyl resins (403.92) for any of the periods shown. (d) Code nos. 404.34,64,76,96,97.

TABLE 3. PAINTS AND OTHER SURFACE COATINGS
('000 litres)

Period	Architectural and decorative paints, enamels and clears							
	Solvent thinned				Water thinned			
	Primers and undercoats (410.01)	Finishing coats			Primers and undercoats (410.11)	Plastic latex		Other water based (410.17)
		Pigmented		Clears (410.07)		Finishing coats		
		Full gloss (410.03)	Other (410.05)			Flat (410.13)	Other (410.15)	
1985-86	6,909	12,336	4,660	3,722	5,251	30,840	22,138	2,919
1986-87	6,515	11,656	4,819	3,720	5,311	29,010	23,627	4,129
1987-88	6,169	12,221	4,773	3,685	6,264	31,883	26,332	4,877
1988—								
February	488	903	363	300	538	2,502	2,153	564
March	563	1,293	405	330	566	3,042	2,598	502
April	527	838	341	280	450	2,362	1,864	271
May	511	1,073	342	271	500	2,411	2,127	390
June	478	840	379	267	575	2,653	2,127	344
July	414	738	320	324	445	2,262	1,916	371
August	411	776	438	367	564	2,678	2,420	390
September	457	870	391	338	448	2,503	2,346	618
October	425	746	375	363	537	3,012	2,571	581
November	640	1,125	517	297	603	2,988	3,106	583
December	481	895	371	363	626	3,793	3,250	535
1989—								
January	456	760	321	237	619	3,182	2,967	398
February	471	1,020	356	306	531	3,482	2,709	516
March	623	1,245	466	294	573	3,253	2,883	498
April	433	795	365	247	483	2,791	2,619	345
1987-88 : July to Apr.	5,180	10,307	4,052	3,157	5,189	26,822	22,076	4,143
1988-89 : July to Apr.	4,810	8,970	3,920	3,136	5,430	29,944	26,787	4,834

TABLE 3. PAINTS AND OTHER SURFACE COATINGS—continued
(’000 litres)

Period	Industrial paints, enamels and clear(a)							
	Automotive			Other industrial				
	Finishing coats			Finishing coats				
	Primers and undercoats (410.31)	Nitro- cellulose lacquers (410.33)	Other (410.37)	Primers and undercoats (410.41)	Nitro-cellulose lacquers Clears (410.43)	Colours (410.45)	Clears (410.47)	Colours (410.49)
1985-86	4,598	438	10,217	9,025	3,175	1,201	6,522	19,770
1986-87	4,422	459	9,212	7,715	3,009	1,162	7,041	20,130
1987-88	4,908	547	10,037	9,029	3,199	1,234	8,753	22,436
1988—								
February	367	52	792	764	267	109	844	1,844
March	429	64	934	919	272	105	854	2,106
April	353	41	791	826	260	99	642	1,642
May	452	50	934	832	298	112	738	2,081
June	330	54	1,029	789	312	115	745	1,788
July	414	33	846	769	245	98	654	2,040
August	440	55	951	847	273	135	684	1,998
September	394	58	888	853	277	99	635	1,953
October	351	49	806	682	321	99	859	2,141
November	448	59	869	931	397	85	828	2,100
December	429	24	921	878	248	96	778	2,188
1989—								
January	275	23	529	609	172	49	618	1,505
February	419	61	898	845	278	78	690	2,308
March	374	58	1,185	917	324	109	731	2,333
April	423	43	790	895	292	82	690	2,264
1987-88 : July to Apr.	4,127	441	8,074	7,408	2,589	1,007	7,271	18,611
1988-89 : July to Apr.	3,967	463	8,683	8,226	2,827	930	7,167	20,830

(a) Includes lacquers and water-thinned industrial products.

TABLE 3. PAINTS AND OTHER SURFACE COATINGS—continued
(’000 litres)

Period	Heavy duty coatings (410.55)(a)	Wood stains (oil, spirit, etc.) packed for sale or transfer out(b) (410.57)	Marine coatings(c) (410.59)	Thinners	
				For nitro- cellulose coatings (410.85)	For all other coatings (410.87)
1985-86	8,173	3,579	1,608	7,462	17,027
1986-87	8,005	2,816	1,820	8,097	17,186
1987-88	8,890	2,341	1,996	8,751	18,081
1988—					
February	774	266	154	725	1,581
March	993	259	181	908	1,765
April	696	147	135	579	1,322
May	576	154	156	886	1,783
June	754	157	144	723	1,623
July	736	153	164	637	1,245
August	971	179	122	848	1,522
September	772	218	165	720	1,531
October	840	231	183	784	1,610
November	875	223	206	769	1,692
December	1,001	218	209	598	1,471
1989—					
January	680	171	156	545	1,123
February	947	211	193	740	1,467
March	992	230	162	845	1,759
April	952	179	182	710	1,516
1987-88 : July to Apr.	7,562	2,028	1,696	7,141	14,676
1988-89 : July to Apr.	8,766	2,013	1,742	7,196	14,936

(a) Includes specialty coatings specifically designed for the protection of interior and exteriors of buildings, plant and equipment etc. Includes chemical resistant systems.

(b) Includes part-pigmented, Madison and Creosote types for all uses including industrial. (c) Excludes super structure paints which are included with architectural and decorative paints.

TABLE 4. PAINTS AND OTHER SURFACE COATINGS: STATES—APRIL 1989
(⁰⁰⁰ litres)

Code No.	Item	NSW	Vic.	Other States	Australia
	Architectural and decorative paints, enamels and clears—				
	Solvent thinned—				
410.01	Primers and undercoats	154	103	176	433
	Finishing coats, pigmented—				
410.03	Full gloss	218	189	388	795
410.05	Other than full gloss	108	110	147	365
410.07	Finishing coats, clears	137	93	17	247
	Water thinned—				
	Plastic latex—				
410.11	Primers and undercoats	232	102	150	483
	Finishing coats—				
410.13	Flat	1,810	411	570	2,791
410.15	Other than flat (satin, semi-gloss, gloss)	1,383	647	590	2,619
410.17	Other water based	207	60	78	345
	Industrial paints, enamels and clears(a)—				
	Automotive—				
410.31	Primers and undercoats	32	332	58	423
	Finishing coats—				
410.33	Nitro-cellulose lacquers	27	n.p.	n.p.	43
410.37	Other	231	535	24	790
	Other industrial—				
410.41	Primers and undercoats	472	233	190	895
	Finishing coats—				
	Nitro-cellulose lacquers—				
410.43	Clears	165	76	51	292
410.45	Colours	52	21	11	82
	Other—				
410.47	Clears	234	423	33	690
410.49	Colours	1,043	1,013	208	2,264
410.55	Heavy duty coatings(b)	164	261	527	952
410.57	Wood stains (oil, spirit, etc.) packed for sale or transfer out(c)	74	100	6	179
410.59	Marine coatings(d)	n.p.	n.p.	136	182
	Thinners—				
410.85	For nitro-cellulose coatings	333	232	145	710
410.87	For all other coatings	658	559	298	1,516

(a) Includes lacquers and water-thinned industrial products. (b) Includes specialty coatings specifically designed for the protection of interiors and exterior of buildings, plant and equipment etc. Includes chemical resistant systems. (c) Includes anti-pigmented, Madison and Crostone types for all uses including industrial. (d) Excludes superstructure paints which are included with architectural and decorative paints.

TABLE 5. PULP AND PAPERBOARDS
(tonnes)

Period	Wood pulp(a)			Paper boards, all types(b)
	Mechanical (341.39)	Other (341.32, 36.45)	Total	
1985-86	361,356	516,892	878,248	472,609
1986-87	371,089	534,629	905,718	497,425
1987-88	428,131	580,192	1,008,323	557,249
1988—				
February	34,189	48,914	83,103	42,707
March	35,579	47,458	83,037	49,613
April	52,957	55,962	108,919	64,226
May	38,659	49,700	88,359	44,296
June	39,223	38,949	78,172	51,565
July	38,116	48,037	86,153	43,117
August	39,491	48,540	88,031	45,306
September	38,415	56,660	95,075	51,100
October	38,331	45,695	84,026	42,151
November	36,165	48,142	84,307	48,798
December	37,037	51,659	88,696	49,635
1989—				
January	36,577	48,259	84,836	45,536
February	35,690	50,602	86,292	46,856
March	27,815	53,482	81,297	61,963
April	35,778	41,227	77,005	50,969
1987-88 : July to Apr.	350,249	491,543	841,792	461,388
1988-89 : July to Apr.	363,415	492,303	855,718	485,431

(a) Quantities shown represent tonnes air-dried. (b) Paper exceeding 205 grammes per square metre is classified as paperboard, includes strawboard.

TABLE 6. PAPER
(tonnes)

Period	Newsprint (351.11)	Printing (351.18)	Writing and duplicating(a) (351.25.29)	Wrapping (incl. Kraft) (351.61)	Tissue and sanitary (351.51)	Other (incl. blotting) (351.65)	Total
1985-86	362,954	172,539	82,495	338,220	125,592	40,886	1,122,686
1986-87	386,320	184,504	77,756	362,439	133,402	65,067	1,209,488
1987-88	401,066	194,191	72,588	n.p.	n.p.	n.p.	1,234,954
1988—							
February	31,565	15,249	5,448	27,872	10,334	6,800	97,268
March	33,100	19,275	5,723	31,179	10,618	5,586	105,481
April	32,222	15,107	6,382	n.p.	11,350	n.p.	106,939
May	32,473	18,318	4,592	n.p.	11,880	n.p.	106,617
June	33,684	17,044	9,741	n.p.	n.p.	n.p.	95,513
July	32,912	14,832	n.p.	n.p.	n.p.	6,077	109,810
August	36,526	15,600	n.p.	n.p.	n.p.	4,061	108,183
September	35,915	16,265	n.p.	n.p.	n.p.	4,399	112,963
October	35,855	17,518	n.p.	n.p.	n.p.	6,156	103,327
November	33,526	15,003	n.p.	n.p.	n.p.	4,864	104,627
December	34,711	17,437	n.p.	n.p.	n.p.	n.p.	114,266
1989—							
January	32,685	14,835	n.p.	n.p.	n.p.	6,457	107,272
February	31,244	14,260	n.p.	n.p.	n.p.	6,745	99,084
March	24,053	14,388	n.p.	n.p.	n.p.	n.p.	100,895
April	33,756	11,061	n.p.	n.p.	n.p.	n.p.	85,651
1987-88 : July to Apr.	334,909	158,829	58,255	n.p.	107,155	n.p.	1,032,824
1988-89 : July to Apr.	331,183	151,199	n.p.	n.p.	n.p.	n.p.	1,046,078

(a) Includes cartridge.

TABLE 7. DETERGENTS
(tonnes)

Period	Synthetic										For personal toilet use <
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(a) Containing 3 kg or less. Excludes dairy cleansers regardless of pack size. (b) Containing over 3 kg. Includes dairy cleansers regardless of pack size.



TABLE 9. INDUSTRIAL CHEMICALS

Period	Acids (in terms of 100% acid)					Super-phosphate(b) (415.07, 405.25)
	Hydrochloric (401.29)	Nitric (401.37)	Sulphuric		Ammonium sulphate (405.36)	
			Original (401.57)	Seas. adj.(a)		
	—tonnes—		—'000 tonnes—		tonnes	'000 tonnes
1985-86	54,248	192,514	1,788	..	204,909	2,610
1986-87	62,318	203,484	1,678	..	165,397	2,769
1987-88	69,137	203,547	1,816	..	179,211	3,194
1988—						
February	6,156	11,896	166	161	12,564	295
March	6,656	15,036	184	161	10,365	433
April	6,139	10,808	179	167	12,821	349
May	5,381	21,351	171	159	13,460	355
June	5,465	21,447	174	178	13,357	274
July	5,296	n.p.	138	165	21,474	228
August	3,853	n.p.	150	185	16,537	220
September	5,468	n.p.	146	163	17,456	231
October	6,373	n.p.	140	156	10,924	259
November	5,601	n.p.	132	132	10,836	277
December	5,546	n.p.	191	171	19,887	307
1989—						
January	5,390	n.p.	177	153	9,207	328
February	3,955	n.p.	158	156	11,500	311
March	5,253	n.p.	178	158	11,707	417
April	5,232	n.p.	171	156	n.p.	450
1987-88 : July to Apr.	58,291	160,749	1,473	..	152,394	2,566
1988-89 : July to Apr.	51,967	n.p.	1,581	..	n.p.	3,028

(a) See paragraph 6, Explanatory Notes. (b) Includes double and triple superphosphates and ammonium phosphate expressed in terms of single phosphate i.e. 22% P₂O₅ equivalent.

EXPLANATORY NOTES

Introduction

1. This publication is one of a series of eight containing monthly and quarterly production statistics. The titles of the other publications of this series are shown in paragraph 7 below.

2. Data contained in these publications are mostly based on monthly or quarterly collections conducted by the Australian Bureau of Statistics (ABS). Where another authority is the source this is indicated in a footnote.

Classification

3. Most items are identified by the commodity codes used in Australian Manufacturing statistics. However, in cases where data are derived from sources other than ABS collections no commodity code is shown. In general, where items are combined they have been arranged so as to align production data with import and export commodity items in accordance with the Australian Standard Commodity Classification (ASCC). For further information regarding the ASCC, see the ABS publication *Australian Standard Commodity Classification, Part 1: Introduction Summary Classification and Commodity Keys* (1207.0).

Scope and coverage

4. Manufacturing commodity statistics collected by the ABS exclude details relating to single establishment manufacturing enterprises with fewer than four persons employed and production of establishments predominantly engaged in non-manufacturing activities but which may carry on, in a minor way, some manufacturing. However, except for a few commodities the effect on production levels and movements is marginal.

5. Annual figures shown in this publication are derived by aggregating monthly/quarterly production and relate to production during the year ended 30 June. They may differ from annual manufacturing census data which relate to the census year and, in the case of businesses unable to report on a June year basis include details in respect of substitute accounting periods.

Seasonal adjustment

6. This publication contains seasonally adjusted statistics of sulphuric acid. In the seasonal adjustment, account has been taken not only of normal seasonal factors but also of 'working day' effects (arising from the varying numbers of Sundays, Mondays, Tuesdays etc. in the month) and the influence of Easter and Australia Day which may, in successive years, affect figures for different months. However, care should be exercised in interpreting the figures for those months in which Christmas/New Year and Easter holidays fall as some manufacturers vary holiday shutdowns in the light of prevailing demand for their products. Details of the methods used in seasonally adjusting this and other series are available on request.

Related publications

7. Other ABS publications which may be of interest are:

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Manufacturing Commodities : Principal Articles Produced, Australia, 1983-84 and 1984-85 (8303.0)

8. Current publications produced by the ABS are listed in the *Catalogue of Publications, Australia* (1101.0). The ABS also issues, on Tuesdays and Fridays, a *Publications Advice* (1105.0) which lists publications to be released in the next few days. The Catalogue and Publications Advice are available from any ABS office.

Symbols and other usages

- n.p. not available for separate publication
(but included in totals where applicable)
- .. not applicable
- r revised since last issue

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