

# AUSTRALIAN PLASTICS INDUSTRY

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Plastics manufacturers in Australia includes a supply chain which runs from polymers to finished products. Plastics products themselves also provide inputs to a range of industries such as a packaging, construction and furniture. This short report provides some key facts of the Australian plastics industry.

## 1.1 Industry definition

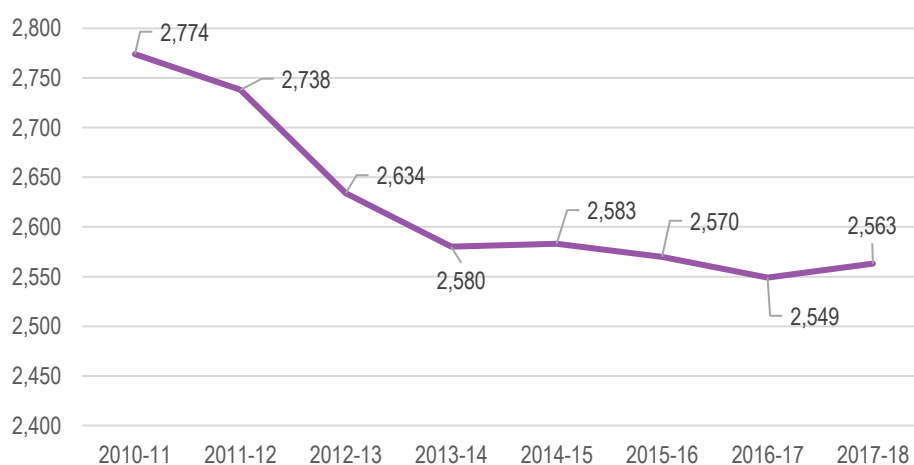
The plastics industry produces essential inputs to nearly every other sector in the Australian economy. The plastics industry for this study is based on definition provided by 'Plastics Stewardship Australia' (PSA). The industry definition uses the ABS's 2006 Australian and New Zealand Standard Industrial Classification (ANZSIC) system. The following list provides a summary of ANZSIC codes that represent the plastics industry.

ANZSIC class	Description
1829	Other Basic Polymer Manufacturing
1911	Polymer Film and Sheet Packaging Material Manufacturing
1912	Rigid and Semi-Rigid Polymer Product Manufacturing
1913	Polymer Foam Product Manufacturing
1915	Adhesive Manufacturing
1919	Other Polymer Product Manufacturing

## 1.2 Number of businesses

At June 2018, there were 2,563 businesses in the plastics industry in Australia. The total number of businesses in the industry declined to 2,549 at the end of June 2017 from 2,774 in June 2011 – a decline of over 225 businesses. However, the number of business in the industry increased recently, mainly in the sub-class of Other Polymer Product Manufacturing (**Figure 1.1**).

**FIGURE 1.1** NUMBER OF BUSINESSES OPERATING AT THE END OF FINANCIAL YEAR



SOURCE: ABS CAT NO: 8165 COUNTS OF AUSTRALIAN BUSINESSES, INCLUDING ENTRIES AND EXISTS

The number of businesses by state is provided in **Table 1.1**. Eighty per cent of businesses are in Victoria, New South Wales and Queensland. Victoria has the highest number of business (over 840), followed by New South Wales and Queensland.

**TABLE 1.1** NUMBER OF BUSINESSES BY STATE, 2011 TO 2018

State	2011	2012	2013	2014	2015	2016	2017	2018
New South Wales	756	755	734	704	694	697	687	691
Victoria	908	901	865	846	849	856	850	841
Queensland	557	539	514	522	526	520	522	520
South Australia	178	182	183	170	172	165	173	174
Western Australia	297	291	270	267	268	254	249	255
Tasmania	39	37	31	39	37	44	39	49
Northern Territory	17	17	19	16	14	13	10	12
Australian Capital Territory	12	6	12	6	15	10	8	9
Unknown	10	10	6	10	8	11	11	12
<b>TOTAL</b>	<b>2,774</b>	<b>2,738</b>	<b>2,634</b>	<b>2,580</b>	<b>2,583</b>	<b>2,570</b>	<b>2,549</b>	<b>2,563</b>

SOURCE: ABS CAT NO: 8165 COUNTS OF AUSTRALIAN BUSINESSES, INCLUDING ENTRIES AND EXISTS

### 1.3 Industry value added

The plastics industry directly contributed \$3.3 billion to the Australian economy in 2017-18. This is equivalent to 3.1 per cent of the manufacturing sector and 0.18 per cent of GDP in 2017-18. Its direct economic contribution measured as industry gross value-added as a share of the Australian economy (GDP) has been declining over the past seven years (**Table 1.2**). Approximately 27,000 persons (part-time and full-time) were directly employed in the plastics industry in 2017-18.

**TABLE 1.2** SIZE OF THE AUSTRALIAN PLASTICS INDUSTRY, 2010-11 TO 2017-18

Year	Wages and salaries	Sales and service income	Industry value added	Employment	Per cent of GDP
	A\$m	A\$m	A\$m	Persons	%
2010-11	1,988	10,870	3,555	34,498	0.25
2011-12	2,018	11,117	3,809	33,131	0.25
2012-13	1,866	9,856	3,289	31,379	0.21
2013-14	1,836	10,046	3,118	30,105	0.20
2014-15	1,711	10,330	3,032	27,981	0.19
2015-16	1,828	10,521	3,258	27,842	0.20
2016-17	1,877	10,262	3,285	28,535	0.19
2017-18	1,779	10,708	3,272	26,747	0.18

SOURCE: ABS CAT NO: 8155 AUSTRALIAN INDUSTRY AND PREVIOUS YEARS

### 1.4 International trade

The Australian plastics industry is a trade exposed sector. Trade in plastics products takes place at several points along the supply chain, enabling producers to focus on aspects in which they can maintain a competitive advantage. As a consequence of the structure and size of the Australian market for plastics, and energy and freight costs from Australia, the plastics sector in Australia is typically import replacement focused. Australian plastics products trade in 2017-18 is provided in **Table 1.3**. The plastics industry trade deficit was nearly \$5 billion in 2017-18.

**TABLE 1.3** PLASTICS INDUSTRY TRADE BY PRODUCT TYPE, 2017-18

ANZSIC plastics product	Domestic sales	Value of exports	Value of imports	Trade balance
	A\$m	A\$m	A\$m	A\$m
Other Basic Polymer products	291	68	52	16
Polymer Film and Sheet Packaging Material	1,932	125	1,942	(1,818)
Rigid and Semi-Rigid Polymer Products	4,695	402	2,001	(1,599)
Adhesives	513	53	134	(81)
Other Polymer Products	1,780	311	1,906	(1,595)
<b>Total</b>	<b>9,211</b>	<b>959</b>	<b>6,035</b>	<b>(5,077)</b>

SOURCE: ABS, SPECIAL DATA REQUEST AND ACIL ALLEN

Trade by state is provided in **Table 1.4**. Victoria and New South Wales imported more than any other states in 2017-18 — together importing two-thirds of total plastics products.

**TABLE 1.4** PLASTICS PRODUCTS TRADE BY STATES, 2017-18

State	Value of exports	Value of imports
	A\$m	A\$m
New South Wales	221.8	2042.1
Victoria	459.8	2348.9
Queensland	99.6	1006.8
South Australia	74.1	198.0
Western Australia	101.7	408.0
Tasmania	1.2	21.2
Northern Territory	0.3	9.6
<b>Total</b>	<b>958.6</b>	<b>6034.5</b>

SOURCE: ABS, SPECIAL DATA REQUEST AND ACIL ALLEN

## 1.5 Plastics industry supply chain

Given the diverse range of products it produces, the plastics industry is intrinsically linked to the supply chains of many industries across the economy. The plastics industry supplies inputs to 100 of Australia's 114 industries (ABS input output industry groups).<sup>1</sup> Nearly 76 per cent of the industry's output forms inputs to other sectors of the economy. A quarter of direct sales by the plastics industry were to the exporters and consumers. Intermediate input usage of plastics industry outputs is summarised in **Table 1.5**.

**TABLE 1.5** SALES OF PLASTICS INDUSTRY OUTPUTS, 2016-17

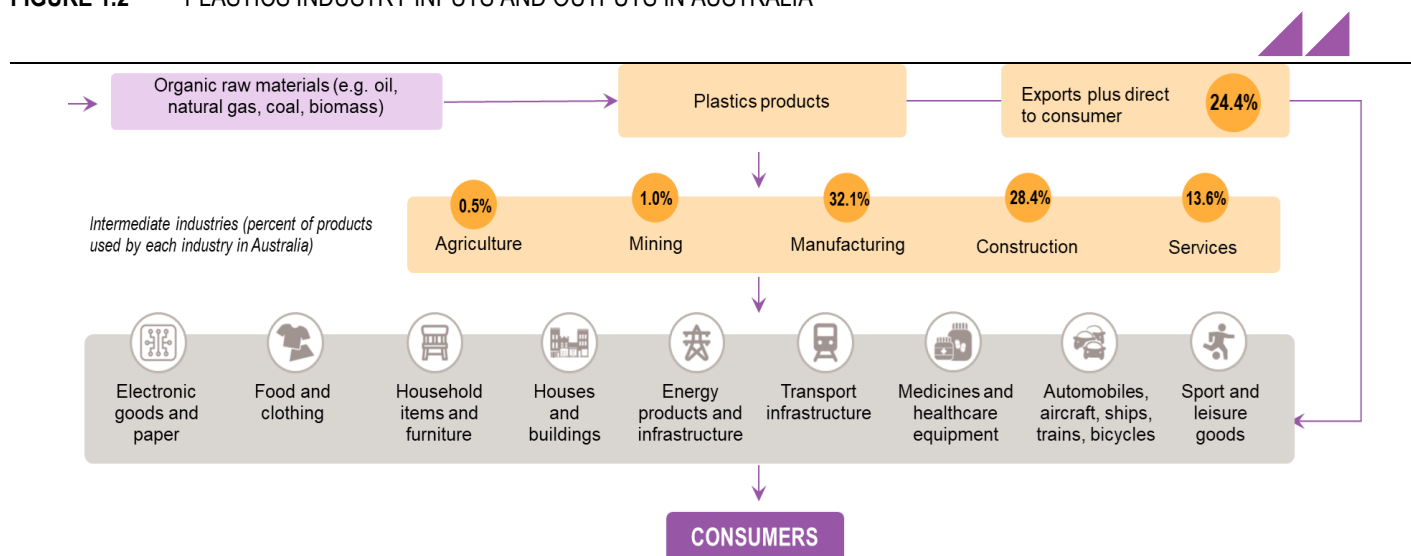
Broad industry	Usage (%)
Agriculture	0.5
Mining	1.0
Manufacturing	32.1
Construction	28.4
Services	13.6
<b>Plastics industry sales to other industries at basic prices</b>	<b>75.6</b>

SOURCE: ABS 2019, AUSTRALIAN NATIONAL ACCOUNTS: INPUT-OUTPUT TABLES (PRODUCT DETAILS) - 2016-17.

<sup>1</sup> The estimates are based on 2016-17 5215.0.55.001 Australian National Accounts: Input-Output Tables (Product Details) - 2016-17, released in November 2019.

A stylised plastics industry supply chain within the Australian economy is shown in **Figure 1.2**.

**FIGURE 1.2** PLASTICS INDUSTRY INPUTS AND OUTPUTS IN AUSTRALIA



SOURCE: BASED ON ABS 2019, AUSTRALIAN NATIONAL ACCOUNTS: INPUT-OUTPUT TABLES (PRODUCT DETAILS) 2016-17.

## 1.6 Plastics consumption and recovery

Australian plastics consumption by type is summarised in **Table 1.6**. In 2017-18, around 57 per cent of consumption was through imported finished and semifinished products and around 43 per cent consumption was through the domestic manufacturing of plastics products. The last decade has seen the local manufacturers of PET, PVC and EPS resins cease production. Total consumption of plastics in 2017-18 was 3.4 million tonnes with recovery of 320,000 tonnes, an average recovery rate of 9.5 per cent.<sup>2</sup>

**TABLE 1.6** PLASTICS CONSUMPTION AND RECOVERY IN AUSTRALIA, 2017-18

Polymer type	Use of locally manufactured + imported resins	Imports of plastics	Processed recycle into local use	Australian consumption	Recovery	Recovery rate
	Tonnes	Tonnes	Tonnes	Tonnes	Tonnes	%
Polyethylene terephthalate (PET)	114,100	223,000	18,200	355,300	74,900	21.1
High density polyethylene (PE-HD)	377,600	235,600	43,300	656,500	98,100	14.9
Poly-vinyl chloride (PVC)	233,900	172,000	4,300	410,200	5,900	1.4
Low / linear low-density polyethylene (PE-LD/LLD)	198,800	172,400	28,800	400,000	57,100	14.3
Polypropylene (PP)	176,300	274,000	18,500	468,800	37,500	8.0
Polystyrene (PS)	12,900	48,700	1,900	63,500	7,300	11.5
Expanded polystyrene (PS-E)	50,500	34,900	1,700	87,100	6,600	7.6
Acrylonitrile butadiene styrene / styrene acrylonitrile / acrylonitrile styrene acrylate (ABS/SAN/ASA)	9,500	56,900	800	10,300	5,900	57.3
Polyurethanes (PU)	35,600	44,500	6,500	86,600	6,500	7.5
Nylons (polyamides)	10,800	114,500	200	125,500	7,700	6.1
Bioplastics	100	100	0	200	0	0.0
Other aggregated polymer types	75,300	141,900	800	218,000	2,600	1.2
Unknown polymer	5,800	462,500	0	468,300	9,800	2.1
<b>TOTAL</b>	<b>1,301,200</b>	<b>1,924,100</b>	<b>125,000</b>	<b>3,350,300</b>	<b>319,900</b>	<b>9.5</b>

SOURCE: AUSTRALIAN GOVERNMENT (2019) 2017-18 AUSTRALIAN PLASTICS RECYCLING SURVEY, NATIONAL REPORT

<sup>2</sup> <https://www.environment.gov.au/protection/waste-resource-recovery/publications/australian-plastics-recycling-survey-report-2017-18>

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