

**ALUMINUM<sup>1</sup>**

(Data in thousand metric tons of metal, unless otherwise noted)

**Domestic Production and Use:** In 1996, 13 companies operated 22 primary aluminum reduction plants. Montana, Oregon, and Washington accounted for 40% of the production; Kentucky, North Carolina, South Carolina, and Tennessee, 20%; other States, 40%. Based on published market prices, output of primary metal in 1996 was valued at \$5.6 billion. Aluminum consumption, by an estimated 25,000 firms, was centered in the East Central United States. Transportation accounted for an estimated 32% of domestic consumption in 1996; packaging, 28%; building, 15%; electrical, 8%; consumer durables, 8%; and other, 9%.

<b>Salient Statistics—United States:</b>	<b>1992</b>	<b>1993</b>	<b>1994</b>	<b>1995</b>	<b>1996<sup>e</sup></b>
Production: Primary	4,042	3,695	3,299	3,375	3,600
Secondary (from old scrap)	1,610	1,630	1,500	1,510	1,400
Imports for consumption	1,730	2,540	3,380	2,970	2,800
Exports	1,450	1,210	1,370	1,610	1,500
Shipments from Government stockpile excesses <sup>2</sup>	(55)	—	—	—	—
Consumption, apparent <sup>3</sup>	5,730	6,600	6,880	6,320	6,300
Price, ingot, average U.S. market (spot), cents per pound	57.5	53.3	71.2	85.9	70.0
Stocks: Aluminum industry, yearend	1,880	1,980	2,070	2,000	2,000
LME, U.S. warehouses, yearend	214	168	16	14	20
Employment: Primary reduction <sup>e</sup> , number	20,000	18,700	17,800	17,700	18,000
Secondary smelter <sup>e</sup> , number	3,600	3,600	3,600	3,600	3,600
Net import reliance <sup>4</sup> as a percent of apparent consumption	1	19	30	23	21

**Recycling:** Aluminum recovered in 1996 from purchased scrap was about 3.1 million tons, of which about 55% came from new (manufacturing) scrap and 45% from old scrap (discarded aluminum products). Aluminum recovered from old scrap was equivalent to about 20% of apparent consumption.

**Import Sources (1992-95):** Canada, 64%; Russia, 16%; Venezuela, 5%; Brazil, 3%; and other, 12%.

<b>Tariff:</b>	<b>Item</b>	<b>Number</b>	<b>Most favored nation (MFN) 12/31/96</b>	<b>Non-MFN<sup>5</sup> 12/31/96</b>
	Unwrought (in coils)	7601.10.3000	2.6% ad val.	18.5% ad val.
	Unwrought (other than aluminum alloys)	7601.10.6000	Free	11.0% ad val.
	Waste and scrap	7602.00.0000	Free	Free.

**Depletion Allowance:** None.<sup>1</sup>

**Government Stockpile:****Stockpile Status—9-30-96**

<b>Material</b>	<b>Uncommitted inventory</b>	<b>Committed inventory</b>	<b>Authorized for disposal</b>	<b>Disposals Jan.-Sept. 96</b>
Aluminum	57	—	57	—

## ALUMINUM

**Events, Trends, and Issues:** Domestic primary aluminum production increased slightly in 1996 as companies slowly began to restart some of the production capacity that had been temporarily idled. By the end of the year, domestic smelters were operating at about 85% of engineered or rated capacity.

U.S. imports for consumption continued to decline in 1996. Although Russia remained second only to Canada as a major shipper of aluminum products to the United States, the level of its shipments continued to decline from the record high level reached in 1994. Exports of aluminum declined for the first time since 1993.

The price of primary aluminum ingot continued to decrease, but at a much slower pace than in the previous year. In January, the average monthly U.S. spot price for primary ingot quoted by Platt's Metals Week was 75.1 cents per pound; by August, the price had decreased to 69.4 cents per pound. Prices on the London Metal Exchange (LME) followed the trend of the U.S. spot prices. The monthly average LME cash price for August was 66.4 cents per pound. Prices in the aluminum scrap markets paralleled the general trend of primary ingot prices. The buying price for aluminum used beverage can scrap, as quoted by American Metal Market, decreased from a 58- to 60-cent-per-pound range in January to a 50- to 52-cent-per-pound range at the end of August.

World production increased as producers slowly brought back on-stream primary production capacity that had been temporarily idled over the past few years. Demand for aluminum during the first part of the year was weak in response to the general slowing of the world economy. Inventories of metal held by producers, as reported by the International Primary Aluminum Institute, declined during the first half of 1996. Inventories of metal held by the LME, however, rose during the same period and were approaching 1 million tons by the end of September. This increase reversed the rapid decline in LME inventories that began in June 1994, which saw inventory levels drop from more than 2.6 million tons to slightly more than 0.5 million tons by September 1995.

### **World Smelter Production and Capacity:**

	Production		Yearend capacity	
	1995	1996 <sup>e</sup>	1995	1996 <sup>e</sup>
United States	3,375	3,600	4,180	4,180
Australia	1,297	1,370	1,420	1,420
Brazil	1,188	1,200	1,210	1,210
Canada	2,172	2,270	2,280	2,280
France	400	400	422	422
Norway	847	860	887	907
Russia	2,722	2,850	2,970	2,970
Venezuela	630	630	630	630
Other countries	6,770	7,350	8,200	8,480
World total (rounded)	19,400	20,500	22,200	22,500

**World Resources:** Domestic aluminum requirements cannot be met by domestic bauxite resources. Potential domestic nonbauxitic aluminum resources are abundant and could meet domestic aluminum demand. However, no processes for using these resources have been proven economically competitive with those now used for bauxite. The world reserve base for bauxite is sufficient to meet world demand for metal well into the 21st century.

**Substitutes:** Copper can replace aluminum in electrical applications; magnesium, titanium, and steel can substitute for aluminum in structural and ground transportation uses. Composites, wood, and steel can substitute for aluminum in construction. Glass, plastics, paper, and steel can substitute for aluminum in packaging.

<sup>e</sup>Estimated.

<sup>1</sup>See also Bauxite.

<sup>2</sup>Data in parentheses denote stockpile acquisitions.

<sup>3</sup>Domestic primary metal production + recovery from old aluminum scrap + net import reliance.

<sup>4</sup>Defined as imports - exports + adjustments for Government and industry stock changes.

<sup>5</sup>See Appendix B.