

CESIUM

(Data in kilograms of cesium content, unless noted)

Domestic Production and Use: Although cesium was not recovered from any domestically mined ores, it is believed that at least one domestic company manufactured cesium products from imported pollucite ore. Cesium, usually in the form of chemical compounds, was used in research and development and was used commercially in electronic, photoelectric, and medical applications.

Salient Statistics—United States: Salient statistics, such as production, consumption, imports, and exports, are not available.

The cesium market is very small. As a result, there is no active trading in the metal and therefore no official market price. However, several companies publish prices for cesium and cesium compounds. These prices are relatively stable over time periods up to several years in length. The per-unit price for the metal or compound purchased from these companies varies inversely with the quantity of material purchased. For example, in 1995, one company offered 1-gram ampoules of 99.98%-grade cesium metal at \$40.80. The price for 100 grams of the same material from this company was \$535.00 or \$5.35 per gram. At another company, the price for a 1-gram ampoule of 99.95% pure cesium was \$45.30.

Recycling: None.

Import Sources (1991-94): The United States is 100% import reliant. Although there is no information on the countries shipping cesium-bearing material to the United States, it is believed that Canada is the major source of this raw material. Other possible sources of cesium-bearing material include Germany and the United Kingdom.

Tariff:	Item	Number	Most favored nation (MFN) 12/31/95	Non-MFN¹ 12/31/95
	Alkali metals, other	2805.19.0000	6.4% ad val.	25% ad val.
	Chlorides, other	2827.39.5000	3.7% ad val.	25% ad val.

Depletion Allowance: 14% (Domestic), 14% (Foreign).

Government Stockpile: None.

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Events, Trends, and Issues: It was estimated that U.S. demand for cesium remained essentially unchanged. The United States is likely to continue to be dependent upon foreign sources unless domestic deposits are discovered or technology is developed to use low-grade raw materials. The high cost and extreme reactivity of cesium limit its application at present. Because of the small scale of production of cesium products, no significant environmental problems have been encountered.

World Mine Production, Reserves, and Reserve Base: Data on mine production of cesium are not available. Cesium forms independent minerals in pegmatites and is commonly obtained as a coproduct in the processing of titanium, beryllium, and lithium minerals. Reserves and the reserve base are associated mainly with the cesium silicate mineral pollucite, concentrates of which contain more than 20% cesium.

	Reserves²	Reserve base²
Canada	70,000,000	73,000,000
Namibia	7,000,000	9,000,000
Zimbabwe	23,000,000	23,000,000
Other countries	<u>NA</u>	<u>NA</u>
World total (may be rounded)	100,000,000	110,000,000

World Resources: World resources of cesium are not known.

Substitutes: The properties of rubidium and its compounds are quite similar to those of cesium and its compounds; thus, rubidium and cesium are used interchangeably in many applications.

NA Not available.

¹See Appendix B.

²See Appendix C for definitions.