

## RUBIDIUM

(Data in kilograms of rubidium content, unless otherwise noted)

**Domestic Production and Use:** Although rubidium is not recovered from any domestically mined ores, at least one domestic company manufactured rubidium products from imported lepidolite ore. Small quantities of rubidium, usually in the form of chemical compounds, were used mainly in research and development. Rubidium also was used in electronic and medical applications.

**Salient Statistics—United States:** Salient statistics, such as production, consumption, imports, and exports, are not available. The domestic rubidium market is very small, with annual consumption probably amounting to only a few thousand kilograms. There is no active trading of the metal and, therefore, no market price. However, several companies publish prices for rubidium and rubidium compounds. These prices remain relatively stable for several years. The per-unit price for the metal or compounds purchased from these companies varies inversely with the quantity of material purchased. For example, in 1997, one company offered 1-gram ampoules of 99.8%-grade rubidium metal at \$45.40. The price for 100 grams of the same material from this company was \$612.00, or \$6.12 per gram. At another company, the price for a 1-gram ampoule of 99.6% pure rubidium was \$32.25.

**Recycling:** None.

**Import Sources (1993-96):** The United States is 100% import reliant. Although there is no information on the countries shipping rubidium-bearing material to the United States, Canada is thought to be the major source of this raw material.

<b><u>Tariff: Item</u></b>	<b><u>Number</u></b>	<b><u>Most favored nation (MFN)</u></b>	<b><u>Non-MFN<sup>1</sup></u></b>
		<b><u>12/31/97</u></b>	<b><u>12/31/97</u></b>
Alkali metals, other	2805.19.0000	6.2% ad val.	25% ad val.

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

**Government Stockpile:** None.

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**Events, Trends, and Issues:** Rubidium and its compounds were largely the subject of laboratory study and were of little commercial significance. No major breakthroughs or developments were anticipated that would change the production or consumption patterns. Domestic rubidium production is entirely dependent on imported lepidolite ores. Because of the small scale of production of rubidium products, no significant environmental problems have been encountered.

**World Mine Production, Reserves, and Reserve Base:**<sup>2</sup> Rubidium forms no known minerals in which it is the predominant metallic element. Rather, it substitutes for potassium in a number of minerals, especially those that crystallize late in the formation of pegmatites. Lepidolite, a potassium lithium mica that may contain up to 3.15% rubidium, is the principle ore of rubidium. Pollucite, the cesium aluminosilicate mineral, may contain up to 1.35% rubidium. The rubidium-bearing minerals are mined as by-products or coproducts with other pegmatite minerals.

**World Resources:** World resources of rubidium have not been estimated.

**Substitutes:** The properties of cesium and its compounds are so similar to those of rubidium and its compounds that compounds of rubidium and cesium are used interchangeably in many applications.

<sup>1</sup>See Appendix B.

<sup>2</sup>See Appendix D for definitions.