STRONTIUM

(Data in metric tons, strontium content, unless otherwise specified)

Domestic Production and Use: Domestic apparent consumption of strontium compounds and minerals increased significantly in 2025 compared with that in 2024. Apparent consumption of strontium compounds increased by 16%, and apparent consumption of the strontium mineral celestite increased to 8,100 tons in 2025 from 29 tons in 2024 but was 12% less than the recent high in 2022. Although deposits of strontium minerals occur widely throughout the United States, none have been mined since 1959. Large-scale domestic production of strontium carbonate, the principal strontium compound, ceased in 2006. Virtually all the strontium mineral celestite consumed in the United States since 2006 is estimated to have been used as an additive in drilling fluids for oil and natural-gas wells. A few domestic companies manufactured and (or) distributed small quantities of downstream strontium chemicals from imported strontium carbonate.

Based on import data, the estimated end-use distribution in the United States for strontium, including celestite and strontium compounds, was drilling fluids, 65%; ceramic ferrite magnets and pyrotechnics and signals, 14% each; and other uses, including electrolytic production of zinc, glass, master alloys, and pigments and fillers, 7%.

Salient Statistics—United States:	2021	2022	2023	2024	2025[e]
Production	—	—	—	—	—
Imports for consumption:					
Celestite[1]	106	9,160	2,060	29	8,100
Strontium compounds[2]	5,020	5,740	3,330	3,690	4,200
Exports, strontium compounds[3]	6	15	53	61	18
Consumption, apparent:[4]					
Celestite	106	9,160	2,060	29	8,100
Strontium compounds	5,010	5,720	3,270	3,620	4,200
Total	5,120	14,900	5,330	3,650	12,000
Price, average unit value of celestite imports at port of exportation, dollars per ton	210	143	82	807	160
Net import reliance[4] as a percentage of apparent consumption	100	100	100	100	100

Recycling: None.

Import Sources (2021–24): Celestite: Mexico, >99%; other, <1%. Strontium compounds: Germany, 51%; Mexico, 41%; China, 3%; and other, 5%. Total imports: Mexico, 64%; Germany, 31%; and other, 5%.

Tariff: Item	Number	Normal Trade Relations 12–31–25
Celestite	2530.90.8010	Free.
Strontium compounds:		
Strontium metal	2805.19.1000	3.7% ad valorem.
Strontium oxide, hydroxide, peroxide	2816.40.1000	4.2% ad valorem.
Strontium nitrate	2834.29.2000	4.2% ad valorem.
Strontium carbonate	2836.92.0000	4.2% ad valorem.

Depletion Allowance: 22% (domestic), 14% (foreign).

Government Stockpile: None.

Events, Trends, and Issues: Imports of celestite were 8,100 tons in 2025 compared with 29 tons in 2024. Such fluctuations in celestite imports likely resulted from increased use in natural-gas- and oil-well-drilling fluids. Some imported celestite may have been stockpiled for future use, but stock data were not available. The weekly average active rig count[5] decreased by 6% in the first 9 months in 2025 compared with that in the same period in 2024 and remained 42% lower than that in the same period in 2019 before the global coronavirus disease 2019 (COVID-19) pandemic in 2020. In recent years, nearly all celestite imports were from Mexico and were estimated to be used as additives in drilling fluids for oil and natural-gas exploration and production. For these applications, celestite is ground but undergoes no chemical processing. In addition, celestite is the raw material from which strontium carbonate and other strontium compounds are produced. In 2024, funding through the Defense Production Act Investments program was announced to establish domestic manufacturing for 22 critical chemicals that included strontium nitrate, strontium oxalate, and strontium peroxide, among other chemicals, which may result in increased imports of celestite or strontium carbonate in the next few years. A small quantity of high-value celestite imports were also reported; these were most likely mineral specimens.

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STRONTIUM

Imports of strontium compounds were estimated to have increased by 14% in 2025. Strontium carbonate is the most traded strontium compound and is used as the raw material from which other strontium compounds are derived. Strontium carbonate is sintered with iron oxide to produce permanent ceramic ferrite magnets. Strontium nitrate, the second most traded strontium compound, contributes a brilliant red color to fireworks and signal flares. Smaller quantities of these and other strontium compounds and strontium metal were consumed in several other applications, including electrolytic production of zinc, glass production, master alloys, and pigments and fillers. Various novel applications of strontium, such as its use in medical and technological applications, ultraprecise atomic optical clocks, and strontium-based power systems, as well as applications for photoluminescence, continue to be researched. Although strontium carbonate was not produced in the United States, in September an Australia-based company announced its acquisition of a 100% interest in a strontium deposit in California and planned to undertake an exploration and confirmatory drilling program for mineralization. Additionally, a United States-based mining company planned to recommence precious and base metals mining at a site in Montana, and the potential for the extraction of strontium from this project was being researched.

In 2025, a strontium optical lattice clock went on sale for $3.3 million in Japan; it was thought that customers would use the clock to advance scientific research. In August, a research team of scientists announced the discovery of the new mineral amaterasuite. Its chemical formula is $Sr_4Ti_6Si_4O_{23}(OH)Cl$, and it has been officially recognized by the International Mineralogical Association. Strontium was variously included or not included on critical minerals lists developed by several countries and regions.

World celestite production was estimated to be 450,000 tons in 2025 compared with 400,000 tons in 2024. In contrast, global strontium carbonate supply was disrupted in 2025 owing to reduced output from China, a major explosion at a port in Iran, and fire damage to a plant in Mexico.

World Mine Production and Reserves:[6] Production in 2024 for Spain was revised significantly based on a Government report. Reserves for Iran were revised based on company reports.

	Mine production[e]		Reserves[7]
	2024	2025	
United States	—	—	NA
Argentina	700	700	NA
China	80,000	80,000	12,000,000
Iran	200,000	250,000	2,000,000
Mexico	[8]19,000	20,000	NA
Spain	100,000	100,000	NA
World total (rounded)	400,000	450,000	Large

World Resources:[7] World resources of strontium may exceed 1 billion tons.

Substitutes: Barium can be substituted for strontium in ceramic ferrite magnets; however, the resulting barium composite will have a reduced maximum operating temperature when compared with that of strontium composites. Substituting for strontium in pyrotechnics is hindered by difficulty in obtaining the desired brilliance and visibility imparted by strontium and its compounds. In drilling mud, barite is the preferred material, but celestite may substitute for some barite, especially when barite prices are high.

[e]Estimated. NA Not available. — Zero.

[1]The strontium content of celestite ore is 43.88%, which was used to convert units of gross weight celestite ore to strontium content.

[2]Strontium compounds (with their respective strontium contents) include metal (100%); oxide, hydroxide, and peroxide (70%); carbonate (59.35%); and nitrate (41.40%). These factors were used to convert gross weight of strontium compounds to strontium content.

[3]Calculated from Schedule B number 2836.92.0000 for strontium carbonate. Exports of other strontium compounds are not included because these shipments likely consisted of materials misclassified as strontium compounds.

[4]Defined as imports − exports.

[5]Source: Baker Hughes Co., 2025, Rig count overview & summary count: Baker Hughes Co. (Accessed November 4, 2025, at https://rigcount.bakerhughes.com/na-rig-count.)

[6]Gross weight of celestite in tons.

[7]See Appendix C for resource and reserve definitions and information concerning data sources.

[8]Reported.