

FELDSPAR AND NEPHELINE SYENITE

(Data in thousand metric tons unless otherwise specified)

Domestic Production and Use: U.S. feldspar production in 2024 had an estimated value of \$51 million. Feldspar was produced by six companies in California, Idaho, North Carolina, and Virginia. In addition to feldspar, processors reported recovery of mica and silica sand. Two companies produced nepheline syenite in Arkansas, but production data were not available.

Feldspar is ground to about 20 mesh for glassmaking and to 200 mesh or finer for most ceramic and filler applications. Domestically produced feldspar was estimated to have been transported by ship, rail, or truck to at least 30 States and to foreign destinations, including Canada and Mexico. In pottery and glass, feldspar and nepheline syenite function as a flux. Glass manufacturing accounted for an estimated 50% of the 2024 end-use distribution of domestic feldspar and nepheline syenite; ceramic tile, pottery, and other uses accounted for the remaining 50%.

Salient Statistics—United States:	2020	2021	2022	2023	2024^e
Production, feldspar, marketable ¹	480	420	430	450	450
Imports for consumption:					
Feldspar	43	169	276	68	220
Nepheline syenite	503	529	484	440	470
Exports:					
Feldspar	3	4	3	7	7
Nepheline syenite	13	15	18	13	8
Consumption, apparent: ²					
Feldspar ¹	520	590	703	510	670
Nepheline syenite	489	514	466	427	460
Price, average unit value, dollars per metric ton:					
Feldspar only, marketable production ^e	104	103	104	104	110
Nepheline syenite, imports	163	164	183	195	200
Employment, mine, preparation plant, and office, number ^e	220	180	150	160	170
Net import reliance ³ as a percentage of apparent consumption:					
Feldspar	9	30	39	12	33
Nepheline syenite	>95	>95	>95	>95	>95

Recycling: Feldspar and nepheline syenite are not recycled by producers; however, glass container producers use cullet (recycled container glass), thereby reducing feldspar and nepheline syenite consumption.

Import Sources (2020–23): Feldspar: Turkey, 92%; Mexico, 6%; and other, 2%. Nepheline syenite: Canada, 99%; and other, 1%.

Tariff:	Item	Number	Normal Trade Relations 12-31-24
Feldspar	2529.10.0000		Free.
Nepheline syenite	2529.30.0010		Free.

Depletion Allowance: 14% (domestic and foreign).

Government Stockpile: None.

Events, Trends, and Issues: In 2024, estimated domestic production and sales of feldspar were unchanged, and the average unit value increased by 6% compared with that in 2023. Estimated imports of feldspar more than tripled, and imports of nepheline syenite increased by 7% compared with those in 2023.

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In the United States, new residential construction housing starts, for which feldspar is a raw material commonly used in the manufacture of plate glass, ceramic tiles and sanitaryware, and insulation, decreased slightly compared with those in 2023 based on data through September 2024. In 2024, the value of the global glass packaging industry was estimated to increase by almost 40% compared with that in 2023. The increase was largely attributed to increased use of glass beverage containers, which accounted for more than one-half of the feldspar consumed by the glass industry. Glass—including beverage containers, plate glass, and fiberglass insulation for housing and building construction—accounted for 50% of end uses of feldspar in the United States.

On September 26, the two feldspar producers in North Carolina temporarily shut down operations owing to Hurricane Helene. After the hurricane, there was minor damage to both companies' operations, and both companies were able to ramp up to full capacity and resume shipments from their operations in October.

World Mine Production and Reserves:⁴ Reserves for Iran and the Republic of Korea were revised based on Government reports.

	Mine production ^e		Reserves ⁵
	2023	2024	
United States ¹	450	450	NA
Brazil (beneficiated, marketable)	⁶ 622	420	150,000
China	2,500	2,500	730,000
India	6,000	6,000	320,000
Iran	3,100	3,100	130,000
Italy	2,200	2,200	NA
Korea, Republic of	⁶ 991	990	200,000
Morocco	590	590	NA
Russia	650	650	NA
Saudi Arabia	650	650	NA
Spain (includes pegmatites)	990	990	NA
Thailand	2,000	2,000	45,000
Turkey	⁶ 9,480	9,500	720,000
Other countries	<u>3,220</u>	<u>3,200</u>	NA
World total (rounded)	33,400	33,000	Large

World Resources:⁵ Identified and undiscovered resources of feldspar are more than adequate to meet anticipated world demand. Quantitative data on resources of feldspar existing in feldspathic sands, granites, and pegmatites generally have not been compiled. Ample geologic evidence indicates that resources are large, although not always conveniently accessible to the principal centers of consumption.

Substitutes: Imported nepheline syenite was the major alternative material for feldspar. Feldspar can be replaced in some of its end uses by clays, electric furnace slag, feldspar-silica mixtures, pyrophyllite, spodumene, or talc.

^eEstimated. NA Not available.

¹Rounded to two significant digits to avoid disclosing company proprietary data.

²Defined as production + imports – exports.

³Defined as imports – exports.

⁴Feldspar only.

⁵See Appendix C for resource and reserve definitions and information concerning data sources.

⁶Reported.