

# TALC AND PYROPHYLLITE<sup>1</sup>

(Data in thousand metric tons unless otherwise noted)

**Domestic Production and Use:** Three companies operated five talc producing mines in three States during 2021, and domestic production of crude talc was estimated to be nearly unchanged at 490,000 tons valued at \$22 million. Talc was mined in Montana, Texas, and Vermont. Total sales (domestic and export) of talc by U.S. producers were estimated to be 490,000 tons valued at about \$130 million, a 9% increase from the value in 2020. Talc produced and sold in the United States was used in ceramics (including automotive catalytic converters) (23%), paper (18%), paint (17%), plastics (11%), rubber (6%), roofing (4%), and cosmetics (1%). The remaining 20% was for agriculture, export, insecticides, and other miscellaneous uses.

One company in North Carolina mined and processed pyrophyllite in 2020. Domestic production was withheld to avoid disclosing company proprietary data and was estimated to have increased from that in 2020. Pyrophyllite was sold for refractory, paint, and ceramic products.

| <b><u>Salient Statistics—United States:</u></b>                          | <b><u>2017</u></b> | <b><u>2018</u></b> | <b><u>2019</u></b> | <b><u>2020</u></b> | <b><u>2021<sup>e</sup></u></b> |
|--|--------------------|--------------------|--------------------|--------------------|--------------------------------|
| Production, mine   | 610                | 648                | 578                | <sup>e</sup> 490   | 490                            |
| Sold by producers  | 528                | 537                | 515                | <sup>e</sup> 460   | 490                            |
| Imports for consumption  | 336                | 313                | 281                | 189                | 280                            |
| Exports  | 220                | 273                | 234                | 188                | 240                            |
| Consumption, apparent <sup>2</sup>                                       | 644                | 577                | 562                | <sup>e</sup> 460   | 530                            |
| Price, average, milled, dollars per metric ton <sup>3</sup>              | 214                | 227                | 240                | 265                | 270                            |
| Employment, mine and mill, number: <sup>4</sup>                          |                    |                    |                    |                    |                                |
| Talc   | 206                | 208                | 202                | 187                | 190                            |
| Pyrophyllite   | 31                 | 30                 | 31                 | 31                 | 30                             |
| Net import reliance <sup>5</sup> as a percentage of apparent consumption | 18                 | 7                  | 8                  | <1                 | 8                              |

**Recycling:** Insignificant.

**Import Sources (2017–20):** Pakistan, 46%; Canada, 28%; China,<sup>6</sup> 11%; and other, 15%. Large quantities of crude talc were thought to have been mined in Afghanistan before being milled in and exported from Pakistan.

| <b><u>Tariff:</u></b> | <b><u>Item</u></b>                          | <b><u>Number</u></b> | <b><u>Normal Trade Relations</u></b><br><b><u>12–31–21</u></b> |
|-----------------------|---|----------------------|--|
|                       | Natural steatite and talc:                  |                      |  |
|                       | Not crushed, not powdered                   | 2526.10.0000         | Free.  |
|                       | Crushed or powdered                         | 2520.26.0000         | Free.  |
|                       | Talc, steatite, and soapstone; cut or sawed | 6815.99.2000         | Free.  |

**Depletion Allowance:** Block steatite talc: 22% (domestic), 14% (foreign). other talc and pyrophyllite: 14% (domestic and foreign).

**Government Stockpile:** None.

## TALC AND PYROPHYLLITE

**Events, Trends, and Issues:** Canada, China, and Pakistan were the principal sources for United States talc imports in recent years. Imports from Pakistan have increased in recent years and accounted for nearly one-half of total imports. Imports from Canada have supplied nearly one-third of the total, whereas imports from China have decreased recently to about 10% of total imports. Canada and Mexico continued to be the primary destinations for United States talc exports, collectively receiving about one-half of exports. Imports and exports of talc and related materials were estimated to have increased by at least 35% in 2021 compared with those of 2020. Primarily owing to the global COVID-19 pandemic, U.S. talc consumption, exports, imports, production, and sales were unusually low in 2020. Production and sales of domestically sourced talc remained at near 2020 levels in 2021, but apparent consumption increased as trade rebounded in 2021, returning to near 2019 levels.

The amount of talc used in rubber production increased in 2020 and 2021 in response to greater demand for rubber stoppers as the medical industry shipped large quantities of COVID-19 vaccines. Ceramic tile and sanitaryware formulations and the technology for firing ceramic tile changed over recent decades, reducing the amount of talc required for the manufacture of some ceramic products. For paint, the industry shifted its focus to production of water-based paint (a product for which talc is not well suited because it is hydrophobic) from oil-based paint in order to reduce volatile emissions. The amount of talc used for paper manufacturing began to decrease beginning in the 1990s, and some talc used for pitch control was replaced by chemical agents. For cosmetics, manufacturers of body dusting powders shifted some of their production from talc-based to corn-starch-based products.

### World Mine Production and Reserves:

|   | <b>Mine production</b> |                         | <b>Reserves<sup>7</sup></b> |
|---|------------------------|-------------------------|-----------------------------|
|   | <u>2020</u>            | <u>2021<sup>e</sup></u> |                             |
| United States (crude)                         | <sup>e,8</sup> 490     | <sup>8</sup> 490        | 140,000                     |
| Brazil (crude and beneficiated) <sup>9</sup>  | 650                    | 650                     | 45,000                      |
| Canada (unspecified minerals)                 | 230                    | 240                     | NA                          |
| China (unspecified minerals)                  | 1,300                  | 1,400                   | 82,000                      |
| Finland                                       | 278                    | 300                     | Large                       |
| France (crude)                                | 450                    | 450                     | Large                       |
| India <sup>9</sup>                            | 1,670                  | 1,700                   | 110,000                     |
| Italy (includes steatite)                     | 165                    | 170                     | NA                          |
| Japan <sup>9</sup>                            | 160                    | 160                     | 100,000                     |
| Korea, Republic of <sup>9</sup>               | 476                    | 450                     | 81,000                      |
| Pakistan                                      | 126                    | 120                     | NA                          |
| South Africa <sup>9</sup>                     | 126                    | 130                     | NA                          |
| Other countries (includes crude) <sup>9</sup> | <u>600</u>             | <u>700</u>              | <u>Large</u>                |
| World total (rounded)                         | <sup>8</sup> 6,720     | <sup>8</sup> 7,000      | Large                       |

**World Resources:**<sup>7</sup> The United States is self-sufficient in most grades of talc and related minerals, but lower priced imports have replaced domestic minerals for some uses. Talc occurs in the United States from New England to Alabama in the Appalachian Mountains and the Piedmont region, as well as in California, Montana, Nevada, Texas, and Washington. Domestic and world identified resources are estimated to be approximately five times the quantity of reserves.

**Substitutes:** Substitutes for talc include bentonite, chlorite, feldspar, kaolin, and pyrophyllite in ceramics; chlorite, kaolin, and mica in paint; calcium carbonate and kaolin in paper; bentonite, kaolin, mica, and wollastonite in plastics; and kaolin and mica in rubber.

<sup>e</sup>Estimated. NA Not available.

<sup>1</sup>All statistics exclude pyrophyllite unless otherwise noted.

<sup>2</sup>Defined as sold by producers + imports – exports.

<sup>3</sup>Average ex-works unit value of milled talc sold by U.S. producers, based on data reported by companies.

<sup>4</sup>Includes only companies that mine talc or pyrophyllite. Excludes office workers and mills that process imported or domestically purchased material.

<sup>5</sup>Defined as imports – exports.

<sup>6</sup>Includes Hong Kong.

<sup>7</sup>See Appendix C for resource and reserve definitions and information concerning data sources.

<sup>8</sup>Excludes U.S. production of pyrophyllite.

<sup>9</sup>Includes pyrophyllite.