

## RARE EARTHS<sup>1</sup>

[Data in metric tons, rare-earth-oxide (REO) equivalent, unless otherwise specified]

**Domestic Production and Use:** Rare earths were mined and processed domestically in 2025. An estimated 51,000 tons of REO in mineral concentrates was produced and was valued at \$240 million. Bastnaesite was mined as a primary product in Mountain Pass, CA. Monazite was produced from heavy-mineral-sand concentrates in the southeastern United States. Rare-earth compounds were also produced in the Western United States. U.S. imports of rare-earth compounds and metals increased by 169% in 2025; however, the estimated value of these imports decreased to \$165 million from \$168 million in 2024, reflecting a shift toward lower-value imported products. The estimated leading domestic end use of rare earths was catalysts, whereas the estimated leading global use was magnets. Other end uses included batteries, ceramics and glass, metallurgical applications and alloys, and polishing. A significant amount of imported rare earths was embedded in finished goods.

| <b>Salient Statistics—United States:</b>                                  | <b>2021</b> | <b>2022</b> | <b>2023</b> | <b>2024</b> | <b>2025<sup>e</sup></b> |
|---------------------------------------------------------------------------|-------------|-------------|-------------|-------------|-------------------------|
| Production: <sup>e</sup>                                                  |             |             |             |             |                         |
| Mineral concentrates <sup>2</sup>                                         | 42,400      | 42,500      | 41,600      | 45,500      | 51,000                  |
| Compounds and metals <sup>e, 3</sup>                                      | 120         | 95          | 800         | 4,300       | 8,900                   |
| Imports: <sup>e, 4</sup>                                                  |             |             |             |             |                         |
| Compounds                                                                 | 7,730       | 10,800      | 8,970       | 8,120       | 21,000                  |
| Metals:                                                                   |             |             |             |             |                         |
| Ferrocium, alloys                                                         | 330         | 395         | 259         | 238         | 1,100                   |
| Rare-earth metals and alloys                                              | 579         | 487         | 476         | 96          | 350                     |
| Exports: <sup>e, 4</sup>                                                  |             |             |             |             |                         |
| Ores and compounds                                                        | 45,700      | 45,900      | 20,700      | 37,500      | 14,000                  |
| Metals:                                                                   |             |             |             |             |                         |
| Ferrocium, alloys                                                         | 825         | 1,520       | 817         | 902         | 890                     |
| Rare-earth metals and alloys                                              | 20          | 24          | 63          | 347         | 430                     |
| Consumption, apparent, compounds and metals <sup>5</sup>                  | 7,900       | 10,200      | 8,600       | 9,010       | 27,000                  |
| Price, average, dollars per kilogram: <sup>6</sup>                        |             |             |             |             |                         |
| Lanthanum oxide, 99.5% minimum                                            | 1.51        | 1.39        | 0.96        | 0.97        | 1.00                    |
| Cerium oxide, 99.5% minimum                                               | 1.54        | 1.45        | 1.03        | 1.21        | 1.71                    |
| Mischmetal, 65% cerium, 35% lanthanum                                     | 5.66        | 6.52        | 5.47        | 5.45        | 5.62                    |
| Praseodymium oxide, 99.99% minimum                                        | 93          | 128         | 76          | 56          | 74                      |
| Neodymium oxide, 99.5% minimum                                            | 98          | 134         | 78          | 56          | 73                      |
| Neodymium-praseodymium (NdPr) oxide, 99% minimum                          | 92          | 124         | 75          | 55          | 69                      |
| Samarium oxide, 99.5% minimum                                             | 2.03        | 3.34        | 2.17        | 2.01        | 2.82                    |
| Europium oxide, 99.99% minimum                                            | 31          | 30          | 27          | 27          | 27                      |
| Gadolinium oxide, 99.99% minimum                                          | 47          | 75          | 47          | 28          | 30                      |
| Employment, mine and mill, annual average, number                         | 293         | 350         | 450         | 570         | 670                     |
| Net import reliance <sup>7</sup> as a percentage of apparent consumption: |             |             |             |             |                         |
| Compounds and metals                                                      | >95         | >95         | >90         | 53          | 67                      |
| Mineral concentrates                                                      | E           | E           | E           | E           | E                       |

**Recycling:** Limited quantities of rare earths were recovered from batteries, permanent magnets, and fluorescent lamps.

**Import Sources (2021–24):** Rare-earth compounds and metals: China,<sup>8</sup> 71%; Malaysia, 13%; Japan, 5%; Estonia, 5%; and other, 6%. Compounds and metals imported from Estonia, Japan, and Malaysia were derived from mineral concentrates and chemical intermediates produced in Australia, China, and elsewhere.

| <b>Tariff:</b> | <b>Item</b>                           | <b>Number</b> | <b>Normal Trade Relations</b> |
|----------------|---------------------------------------|---------------|-------------------------------|
|                |                                       |               | <b>12–31–25</b>               |
|                | Rare-earth metals                     | 2805.30.0000  | 5% ad valorem.                |
|                | Cerium compounds                      | 2846.10.0000  | 5.5% ad valorem.              |
|                | Other rare-earth compounds:           |               |                               |
|                | Oxides or chlorides                   | 2846.90.2000  | Free.                         |
|                | Carbonates                            | 2846.90.8000  | 3.7% ad valorem.              |
|                | Ferrocium and other pyrophoric alloys | 3606.90.3000  | 5.9% ad valorem.              |

**Depletion Allowance:** Monazite, 22% on thorium content and 14% on rare-earth content (domestic), 14% (foreign); bastnaesite and xenotime, 14% (domestic and foreign).

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**Government Stockpile:**<sup>9</sup> In addition to the materials listed below, the fiscal year (FY) 2025 potential acquisitions included 300 tons of neodymium-praseodymium oxide, 450 tons of neodymium-iron-boron magnet block, and 60 tons of samarium-cobalt alloy. Information for FY 2026 potential acquisitions was not available.

|                 | FY 2025                       |                            | FY 2026                       |                            |
|-----------------|-------------------------------|----------------------------|-------------------------------|----------------------------|
| <u>Material</u> | <u>Potential acquisitions</u> | <u>Potential disposals</u> | <u>Potential acquisitions</u> | <u>Potential disposals</u> |
| Lanthanum       | 1,100                         | —                          | NA                            | NA                         |

**Events, Trends, and Issues:** In April 2025, China tightened its export controls on rare-earth elements, adding specific controls on alloys, compounds, metals, and oxides of samarium, gadolinium, terbium, dysprosium, lutetium, scandium, and yttrium. In October, China expanded its rare-earths export controls to include europium, holmium, erbium, thulium, and ytterbium. In November, China suspended the October export controls for 1 year. The April export controls remained in effect, although China began to issue general export licenses to selected exporters.

**World Mine Production and Reserves:** Significant revisions were made to the 2024 production for Australia, Brazil, Burma, Madagascar, Nigeria, and Vietnam based on Government and industry reports. Reserves for Australia, Brazil, and Malaysia were revised based on Government reports.

|                       | <u>Mine production<sup>e</sup></u> |                      | <u>Reserves<sup>10</sup></u> |
|-----------------------|------------------------------------|----------------------|------------------------------|
|                       | <u>2024</u>                        | <u>2025</u>          |                              |
| United States         | <sup>11</sup> 45,500               | 51,000               | 1,900,000                    |
| Australia             | 29,000                             | 29,000               | <sup>13</sup> 6,300,000      |
| Brazil                | 560                                | 2,000                | 11,000,000                   |
| Burma                 | <sup>12</sup> 27,000               | <sup>12</sup> 22,000 | NA                           |
| Canada                | —                                  | —                    | 830,000                      |
| China                 | 270,000                            | 270,000              | 44,000,000                   |
| Greenland             | —                                  | —                    | 1,500,000                    |
| India                 | 2,900                              | 2,900                | <sup>14</sup> NA             |
| Madagascar            | <sup>12</sup> 1,400                | <sup>12</sup> 2,700  | NA                           |
| Malaysia              | <sup>12</sup> 140                  | <sup>12</sup> 110    | 710,000                      |
| Nigeria               | 1,500                              | 1,500                | NA                           |
| Russia                | 2,600                              | 2,600                | 3,800,000                    |
| South Africa          | —                                  | —                    | 860,000                      |
| Tanzania              | —                                  | —                    | 890,000                      |
| Thailand              | <sup>12</sup> 2,100                | <sup>12</sup> 4,800  | NA                           |
| Vietnam               | <sup>12</sup> 300                  | <sup>12</sup> 150    | 3,500,000                    |
| Other                 | 1,000                              | 550                  | NA                           |
| World total (rounded) | 380,000                            | 390,000              | >75,000,000                  |

**World Resources:**<sup>10</sup> Rare earths are relatively abundant in the Earth's crust, but minable concentrations are less common than for most other mineral commodities. In North America, measured and indicated resources of rare earths were estimated to include 3.6 million tons in the United States and more than 14 million tons in Canada.

**Substitutes:** Substitutes are available for many applications but generally are less effective.

<sup>e</sup>Estimated. E Net exporter. NA Not available. — Zero.

<sup>1</sup>Data include lanthanides and yttrium but exclude most scandium. See also the Rare Earths (Heavy), Scandium, and Yttrium chapters.

<sup>2</sup>Excludes monazite concentrates.

<sup>3</sup>Production includes compounds from California and Utah. Data are rounded to two significant digits.

<sup>4</sup>REO equivalent or content of various materials were estimated. Source: U.S. Census Bureau.

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

<sup>6</sup>Free on board. Source: Argus Media group, Argus Non-Ferrous Markets.

<sup>7</sup>Defined as imports – exports.

<sup>8</sup>Includes Hong Kong.

<sup>9</sup>Gross weight. See Appendix B for definitions. For fiscal year 2026, the Annual Materials Plan was not released.

<sup>10</sup>See Appendix C for resource and reserve definitions and information concerning data sources.

<sup>11</sup>Reported.

<sup>12</sup>Estimated based on reported import data for China. Source: Trade Data Monitor Inc.

<sup>13</sup>For Australia, Joint Ore Reserves Committee-compliant or equivalent reserves were 3.3 million tons.

<sup>14</sup>A 2015 report from OSCOM indicated that monazite reserves from their operations were 256,000 tons; rare-earth reserves were not reported.