

# Mineral Industry Surveys

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## BISMUTH IN THE FOURTH QUARTER 2017

Bismuth imports in the fourth quarter of 2017 were 809 metric tons (t), representing increases of 7% compared with the previous quarter and 73% compared with the fourth quarter of 2016 (fig. 1, table 1). During the fourth quarter of 2017, China remained the dominant source of United States bismuth imports, accounting for 749 t, or 93%, of total bismuth imports for the quarter (table 3). Imports for consumption of bismuth for the full year 2017 were 2,820 t, a 29% increase from that in 2016. Bismuth exports in the fourth quarter of 2017 were 73 t, a 30% decrease compared with the previous quarter and a 28% decrease compared with the fourth quarter of 2016 (table 1). Exports of bismuth for the full year 2017 were 392 t, a 7% decrease from that in 2016.

The average bismuth price for the fourth quarter was \$5.22 per pound, a 5% increase from the price in the previous quarter and a 12% increase from the price in the fourth quarter of 2016 (table 1). The average bismuth price for 2017 was \$4.93 per pound, a 9% increase from that in 2016.

**Industry News**

Qinghai Xiyu Nonferrous Metals Co., Ltd. commissioned an upgrade for its recycling and gas treatment operation in Geermu, Qinghai Province, China. The upgrade would allow for the processing of 250,000 metric tons per year (t/yr) of lead, which would produce 700 t/yr of refined bismuth (Lead & Zinc Monthly, 2017).

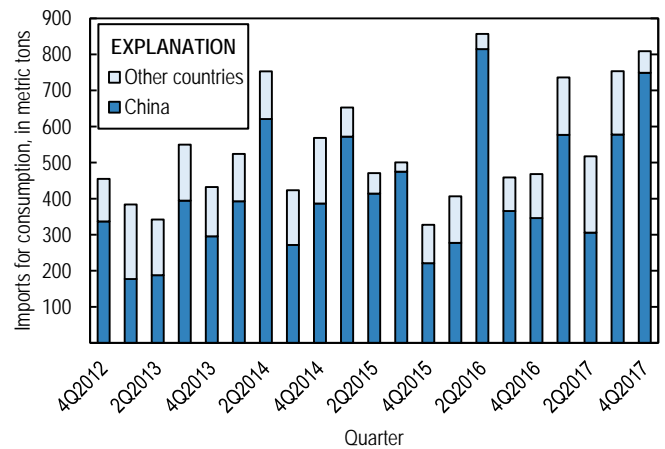


Figure 1. U.S. imports of bismuth metal (gross weight) from the fourth quarter of 2012 through the fourth quarter of 2017. Source: U.S. Census Bureau.

**Reference Cited**

Lead & Zinc Monthly, 2017, A lead recycling technology upgrade project commissioned in Qinghai: Lead & Zinc Monthly [published by Beijing Antaike Information Development Co., Ltd.], no. 249, October, p. 14.

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**NOTICE**

The U.S. Geological Survey plans to discontinue this quarterly Mineral Industry Surveys report after this issue. The last published report will be Bismuth in the Fourth Quarter 2017. Information on this mineral commodity will still be available in the bismuth chapters of the annual Mineral Commodity Summaries and the Minerals Yearbook, Volume I, Metals and Minerals. Prior to the proposed discontinuation date, please direct any comments or concerns to Elizabeth Sangine, Chief, Mineral Commodities Section, [escottsangine@usgs.gov](mailto:escottsangine@usgs.gov).

TABLE 1  
SALIENT BISMUTH STATISTICS<sup>1</sup>

(Metric tons, unless otherwise specified)

|   | 2016        |                             | 2017        |            |            |             |                             |
|---|-------------|-----------------------------|-------------|------------|------------|-------------|-----------------------------|
|   | 4th quarter | 1st quarter–<br>4th quarter | 1st quarter | 2d quarter | 3d quarter | 4th quarter | 1st quarter–<br>4th quarter |
| Exports <sup>2</sup>                                    | 102         | 421                         | 101         | 112        | 105        | 73          | 392                         |
| Imports for consumption <sup>2</sup>                    | 468         | 2,190                       | 736         | 518        | 754        | 809         | 2,820                       |
| Price per pound, dealer, average of period <sup>3</sup> | \$4.67      | \$4.53                      | \$4.69      | \$4.88     | \$4.95     | \$5.22      | \$4.93                      |

<sup>1</sup>Data are rounded to no more than three significant digits; except prices.

<sup>2</sup>Bismuth metal and articles thereof, including waste and scrap.

<sup>3</sup>Source: American Metal Market.

TABLE 2  
U.S. EXPORTS OF BISMUTH METAL, BY COUNTRY OR LOCALITY<sup>1,2</sup>

(Kilograms)

| Country or Locality | 2016        |                             | 2017        |            |            |         |          |          |                             |
|---------------------|-------------|-----------------------------|-------------|------------|------------|---------|----------|----------|-----------------------------|
|                     | 4th quarter | 1st quarter–<br>4th quarter | 1st quarter | 2d quarter | 3d quarter | October | November | December | 1st quarter–<br>4th quarter |
| Argentina           | 60          | 141                         | --          | 20         | 2,210      | --      | --       | 24       | 2,260                       |
| Belgium             | --          | 6,500                       | --          | 2,430      | 15,200     | --      | --       | --       | 17,600                      |
| Brazil              | 118         | 8,500                       | 218         | 18,900     | 241        | 315     | --       | --       | 19,700                      |
| Canada              | 5,400       | 18,000                      | 4,700       | 12,200     | 13,900     | 408     | 2,430    | 276      | 34,000                      |
| Chile               | --          | 866                         | 587         | 383        | --         | 589     | --       | --       | 1,560                       |
| China               | 26,200      | 37,400                      | 2,830       | 3,780      | 3,040      | 1,570   | 1,760    | 865      | 13,800                      |
| Costa Rica          | 393         | 1,790                       | 434         | 30         | 30         | --      | --       | 30       | 524                         |
| French Guiana       | --          | 1,690                       | --          | 1,720      | --         | --      | --       | --       | 1,720                       |
| Germany             | --          | 323                         | 824         | 480        | 2,020      | 116     | 306      | 450      | 4,200                       |
| Hong Kong           | 3,900       | 22,000                      | 8,720       | 23,700     | 19,000     | 2,180   | 2,210    | 4,660    | 60,400                      |
| India               | 330         | 1,720                       | 3,830       | 2,330      | 4,980      | 181     | 363      | 100      | 11,800                      |
| Japan               | 1,370       | 4,020                       | --          | 802        | --         | --      | 1,300    | --       | 2,100                       |
| Korea, Republic of  | 490         | 581                         | --          | 1,440      | 293        | 399     | --       | --       | 2,130                       |
| Laos                | --          | 11,300                      | --          | 10,600     | 7,820      | --      | --       | --       | 18,400                      |
| Mexico              | 5,180       | 17,600                      | 1,040       | 1,240      | 4,380      | 396     | 4,060    | 1,860    | 13,000                      |
| Netherlands         | --          | 42,000                      | 429         | --         | --         | 356     | --       | --       | 785                         |
| Pakistan            | --          | --                          | --          | --         | 387        | --      | 573      | --       | 960                         |
| Singapore           | 1,170       | 6,030                       | 2,150       | 2,890      | 125        | 225     | 386      | --       | 5,770                       |
| Taiwan              | 933         | 952                         | --          | 32         | 524        | --      | --       | 127      | 683                         |
| Thailand            | 1,380       | 32,200                      | 4,040       | 4,140      | 2,090      | 180     | 116      | 950      | 11,500                      |
| United Kingdom      | --          | 1,240                       | 2,940       | 4,880      | 627        | --      | --       | --       | 8,440                       |
| Vietnam             | 54,500      | 184,000                     | 67,600      | 19,300     | 28,300     | 12,300  | 12,400   | 18,100   | 158,000                     |
| Other <sup>3</sup>  | 556         | 21,800                      | 406         | 616        | 250        | 72      | --       | 816      | 2,160                       |
| Total               | 102,000     | 421,000                     | 101,000     | 112,000    | 105,000    | 19,300  | 25,900   | 28,200   | 392,000                     |

-- Zero.

<sup>1</sup>Data are rounded to no more than three significant digits; may not add to totals shown.

<sup>2</sup>Bismuth metal and articles thereof, including waste and scrap. HTS Code 8106.00.0000.

<sup>3</sup>Includes countries with exports less than 500 through 2017.

Source: U.S. Census Bureau.

TABLE 3  
U.S. IMPORTS FOR CONSUMPTION OF BISMUTH METAL, BY COUNTRY OR LOCALITY<sup>1,2</sup>

(Kilograms)

| Country or Locality | 2016        |                             | 2017        |            |            |         |          |          |                             |
|---------------------|-------------|-----------------------------|-------------|------------|------------|---------|----------|----------|-----------------------------|
|                     | 4th quarter | 1st quarter-<br>4th quarter | 1st quarter | 2d quarter | 3d quarter | October | November | December | 1st quarter-<br>4th quarter |
| Belgium             | 51,000      | 130,000                     | 4,000       | 53,700     | 68,000     | --      | 15,000   | --       | 141,000                     |
| Bolivia             | --          | --                          | 20,000      | --         | 40,100     | --      | --       | --       | 60,100                      |
| Canada              | 2,130       | 6,210                       | 3,720       | 2,880      | 2,830      | --      | --       | 640      | 10,100                      |
| China               | 346,000     | 1,800,000                   | 577,000     | 306,000    | 578,000    | 322,000 | 168,000  | 260,000  | 2,210,000                   |
| Germany             | 17          | 863                         | 3,620       | 2,120      | 1,070      | 2,170   | 839      | 995      | 10,800                      |
| Hong Kong           | --          | --                          | 10,000      | 25,100     | 12,400     | --      | --       | --       | 47,600                      |
| Korea, Republic of  | --          | 18,000                      | 35,600      | 71,300     | 17,800     | --      | --       | 60       | 125,000                     |
| Mexico              | 29,600      | 161,000                     | 58,900      | 48,900     | 28,200     | 10,000  | 19,600   | 9,900    | 176,000                     |
| United Kingdom      | 18,800      | 49,500                      | 23,700      | 7,700      | 4,390      | --      | --       | 10       | 35,800                      |
| Other <sup>3</sup>  | 20,100      | 20,700                      | --          | 91         | 707        | --      | 239      | 90       | 1,130                       |
| Total               | 468,000     | 2,190,000                   | 736,000     | 518,000    | 754,000    | 334,000 | 203,000  | 271,000  | 2,820,000                   |

-- Zero.

<sup>1</sup>Data are rounded to no more than three significant digits; may not add to totals shown.

<sup>2</sup>Bismuth metal and articles thereof, including waste and scrap.

<sup>3</sup>Includes countries with imports less 500 through 3d quarter 2017. HTS Code 8106.00.0000.

Source: U.S. Census Bureau.