# Mineral Industry Surveys

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## COPPER IN DECEMBER 2021

In December 2021, domestic mine production of recoverable copper was 107,000 metric tons (t). The average daily mine production was 3,470 t, a slight decrease from that in November and an increase of 7% compared with that in December 2020 (fig. 1). Total recoverable mine output in 2021 was 1.23 million metric tons (Mt), slightly higher than that in 2020 (table 2).

The largest increases in mined copper production in 2021 were at Freeport-McMoRan Inc.'s Safford Mine in Arizona, where output rose by approximately 47,000 t (65%) compared with that in 2020; Rio Tinto Group's Bingham Canyon Mine in Utah, by 19,400 t (14%); and Freeport's Chino Mine in New Mexico, by about 14,500 t (35%). The Lone Star expansion of the Safford Mine was completed in the second half of 2020 and ramped up to production levels that exceeded the initial design capacity in 2021. Copper output increased at Bingham Canyon as a result of higher ore grades and recovery rates. Mining operations at Chino, which had been halted since April 2020 after workers tested positive for COVID-19, restarted in the first quarter of 2021. The production increases at these mines were partially offset by significant decreases in mined copper output at Freeport's Bagdad and Morenci Mines in Arizona. At Morenci, copper production declined by roughly 48,000 t (11%) in 2021 from that in the prior year; one of the two concentrators at the mine was on care and maintenance in the first half of 2021 and restarted in July. The Bagdad Mine produced 15% (14,500 t) less copper in 2021 than in 2020 (Freeport-McMoRan Inc., 2022, p. 9, 14, 30, 84; Rio Tinto Group, 2022, p. 13, 26).

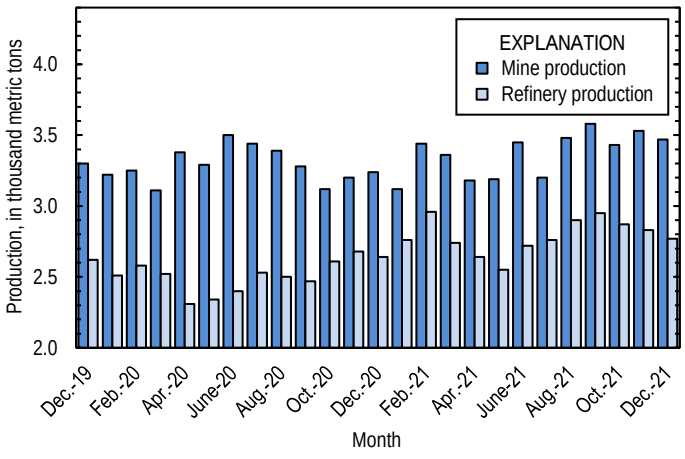


Figure 1. Average daily U.S. copper mine (recoverable) and refinery (primary and secondary) production from December 2019 through December 2021. Refinery production in November and December 2019 were withheld to avoid disclosing company proprietary data; the values shown reflect the daily average for cumulative production over this period rather than production in each month.

Owing to indefinite closures of ASARCO LLC's smelter in Hayden, AZ, and electrolytic refinery in Amarillo, TX, smelter and electrolytic refinery production reported to the U.S. Geological Survey in December 2021 were withheld to avoid disclosing company proprietary data. Smelter and electrolytic refinery output in tables 3 and 4 are estimates based on information in quarterly company reports. The facilities shut down in October 2019 because of a worker strike, which ended in July 2020. As of December 2021, ASARCO had not publicly announced when operations were expected to resume or a reason for the continued closures. According to the U.S. Environmental Protection Agency, ASARCO completed a Phase II Remedial Investigation Report in December 2021, which will be used to develop a cleanup plan for arsenic, lead, and other contaminants present at the Hayden smelter site. ASARCO's three copper mines and two electrowon refineries in Arizona continued to operate during the smelter and electrolytic refinery stoppages (Grupo México, S.A.B. de C.V., 2021, p. 83; U.S. Environmental Protection Agency, undated).

Estimated smelter production in the United States was 35,000 t in December 2021. Full-year estimated smelter production was 405,000 t, 29% more than that in 2020 (table 3).

Total U.S. refinery output was 85,900 t in December 2021; data for electrolytic and electrowon output, as well as refined production from scrap, are reported in table 4. The average daily refinery production was 2,770 t, a slight decrease compared with that in November and 5% greater than that in December 2020 (fig. 1). Total refinery output in 2021 was 1.02 Mt, an increase of 11% relative to that in 2020, when operations at Rio Tinto's smelter in Utah were affected by multiple disruptions (Rio Tinto Group, 2022, p. 13).

## Prices

In December 2021, the average Commodity Exchange Inc. (COMEX) spot copper price was $4.33 per pound, a slight decrease from $4.37 per pound in November and 23% greater than $3.53 per pound in December 2020 (fig. 2, table 11). The average COMEX price for all of 2021 was $4.24 per pound, 52% higher than $2.80 per pound in 2020 and an increase of 6% from the previous record high of $4.01 per pound in 2011. The average U.S. dealers buying price of number 2 copper scrap was $3.35 per pound in December 2021, slightly higher than $3.31 per pound in November and 30% more than $2.58 per pound in December 2020. The number 2 copper scrap price averaged $3.15 per pound for the full year, an increase of 56% from $2.02 per pound in 2020 (fig. 2, table 12). Strong global demand for copper, constrained growth in world copper production, low refined stockpiles, and supply constraints owing to shipping delays contributed to the increased copper prices (Freeport-McMoRan Inc., 2022, p. 73).

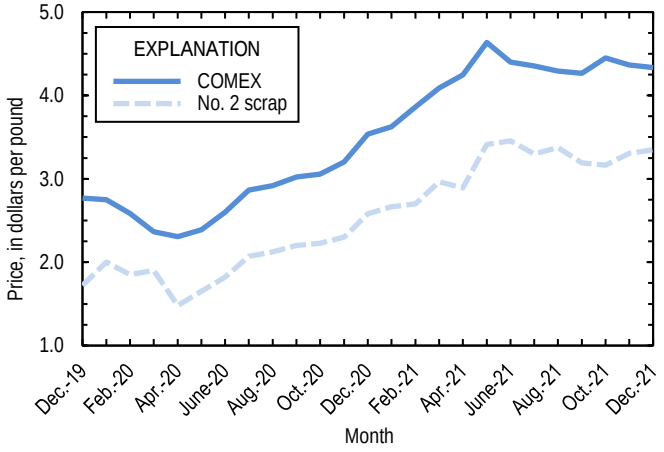


Figure 2. Monthly average COMEX copper price and no. 2 copper scrap dealers buying price from December 2019 through December 2021. As of January 2020, no. 2 prices were available only for the entire United States, whereas no. 2 prices were available only for individual domestic markets prior to January 2020. Prices shown prior to January 2020 are for New York dealers no. 2 scrap. Sources: Fastmarkets-AMM and S&P Global Platts Metals Week.

## Stocks

Refined copper stocks in the United States totaled 117,000 t at the end of December 2021, an increase of 11% compared with those in November and essentially unchanged from those in December 2020. COMEX stocks rose by 20% (10,600 t), and London Metal Exchange Ltd. (LME) stocks in U.S. warehouses were 37% (5,430 t) higher than those at the end of November. Compared with stocks at the end of 2020, COMEX stocks decreased by 9% (6,430 t), and domestic LME stocks increased by 10% (1,880 t) in 2021 (fig. 3, table 10).

## Industry News

***Peru.***—The Las Bambas Mine, majority-owned by MMG Ltd., has been disrupted by road blockades on numerous occasions since copper production began in 2016. On December 18, 2021, MMG suspended operations at Las Bambas because protestors from a nearby community had blocked a key transport route since late November, preventing the company from delivering copper concentrates to port or obtaining necessary supplies. On December 30, MMG announced an agreement with the community to end the blockade and reported that production would restart within a week. In 2020, Las Bambas was the 14th-ranked global copper mine and produced 311,000 t of copper in concentrates, equivalent to 1.5% of worldwide mined copper output. In 2021, production at the mine through December 17 was approximately 290,000 t of copper (MMG Ltd., 2021a, p. 4; MMG Ltd., 2021b; Rochabrun, 2021).

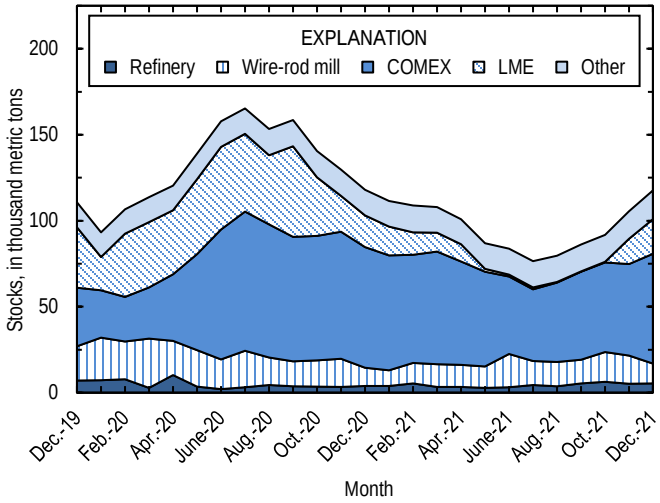


Figure 3. Domestic refined copper stocks at end of month, by type, from December 2019 through December 2021. Sources: Fastmarkets-AMM, London Metal Exchange Ltd., and U.S. Geological Survey.

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TABLE 1
SALIENT STATISTICS OF THE COPPER INDUSTRY IN THE UNITED STATES[1]

(Metric tons of copper content, unless otherwise specified)

| | Source table[2] | 2020[p] | 2021 | | | |
|---|---|---|---|---|---|---|
| | | | October | November | December | January–December |
| Production: | | | | | | |
| Primary: | | | | | | |
| Mine, recoverable | (2) | 1,200,000 | 106,000 [r] | 106,000 [r] | 107,000 | 1,230,000 |
| Smelter[e] | (3) | 315,000 | 35,000 | 35,000 | 35,000 | 405,000 |
| Refinery: | | | | | | |
| Electrolytic, domestic and foreign[e] | (4) | 315,000 | 35,000 | 35,000 | 35,000 | 405,000 |
| Electrowon | (4) | 559,000 | 50,400 | 45,800 [r] | 46,900 | 563,000 |
| Total | (4) | 874,000 | 85,400 | 80,800 [r] | 81,900 | 968,000 |
| Secondary recoverable copper:[3] | | | | | | |
| Refineries | (5) | 43,200 | 3,540 | 3,990 | 4,060 | 48,900 |
| Ingot makers[4] | (5) | 57,900 | 4,820 | 4,820 | 4,820 | 57,900 |
| Brass and wire-rod mills | (5) | 670,000 | 55,400 [r] | 54,000 [r] | 51,000 | 655,000 |
| Foundries, etc.[4] | (5) | 36,700 | 3,060 | 3,060 | 3,060 | 36,700 |
| Consumption: | | | | | | |
| Apparent, primary refined and copper from old scrap | (8) | 1,660,000 | 182,000 | 137,000 | 156,000 | 1,990,000 |
| Reported, refined copper | (7) | 1,710,000 | 149,000 | 150,000 | 122,000 | 1,770,000 |
| Purchased copper-base scrap (gross weight) | (9) | 938,000 | 77,600 [r] | 76,800 [r] | 73,800 | 930,000 |
| Stocks at end of period: | | | | | | |
| Total refined | (10) | 118,000 | 91,700 [r] | 106,000 [r] | 117,000 | 117,000 |
| Blister and anode | (10) | 9,380 | 15,700 [r] | 15,900 | 16,100 | 16,100 |
| Price, U.S. producers cathode (cents per pound)[5] | (11) | 286.745 | 453.612 | 445.074 | 441.82 | 432.264 |
| Imports:[6] | | | | | | |
| Ore and concentrates | (13) | 2,170 | 1,060 | 439 | -- | 11,000 |
| Refined | (13) | 676,000 | 92,300 | 60,000 | 77,300 | 919,000 |
| Exports:[6] | | | | | | |
| Ore and concentrates | (14) | 383,000 | 19,600 | 29,000 | 27,900 | 348,000 |
| Refined | (14) | 41,200 | 3,490 | 2,630 | 3,630 | 47,600 |

[e]Estimated. [p]Preliminary. [r]Revised. --Zero.

[1]Data are rounded to no more than three significant digits, except prices; may not add to totals shown.

[2]Numbers in parentheses refer to the tables where these data are located.

[3]Copper recovered from copper-base scrap only.

[4]Estimated based on the monthly average of 2018 annual data.

[5]Source: S&P Global Platts Metals Week.

[6]Source: U.S. Census Bureau.

TABLE 2
MINE PRODUCTION OF RECOVERABLE COPPER IN THE UNITED STATES[1]

(Metric tons)

| Period | Recoverable copper | | | Contained copper | | |
|---|---|---|---|---|---|---|
| | Arizona | Others[2] | Total | Electrowon | Concentrates[3] | Total |
| 2020:[p] | | | | | | |
| December | 75,000 | 25,500 | 100,000 | 48,400 | 54,100 | 103,000 |
| January–December | 880,000 | 322,000 | 1,200,000 | 559,000 | 669,000 | 1,230,000 |
| 2021: | | | | | | |
| January | 71,600 | 25,100 | 96,700 | 47,100 | 51,700 | 98,800 |
| February | 70,600 | 25,700 | 96,400 | 43,900 | 54,700 | 98,500 |
| March | 76,200 | 27,900 | 104,000 | 46,500 | 59,900 | 106,000 |
| April | 66,900 | 28,600 | 95,500 | 44,000 | 53,600 | 97,600 |
| May | 68,400 | 30,600 | 99,000 | 44,400 | 56,800 | 101,000 |
| June | 74,200 | 29,200 | 103,000 | 46,600 | 59,000 | 106,000 |
| July | 68,200 | 31,000 | 99,200 | 47,200 | 54,100 | 101,000 |
| August | 76,000 | 31,800 | 108,000 | 51,300 | 58,800 | 110,000 |
| September | 75,400 | 32,100 | 107,000 | 49,000 | 60,800 | 110,000 |
| October | 73,100 [r] | 33,200 [r] | 106,000 [r] | 50,400 | 57,900 [r] | 108,000 [r] |
| November | 73,500 [r] | 32,300 [r] | 106,000 [r] | 45,800 [r] | 62,300 [r] | 108,000 [r] |
| December | 75,000 | 32,400 | 107,000 | 46,900 | 63,000 | 110,000 |
| January–December | 869,000 | 360,000 | 1,230,000 | 563,000 | 692,000 | 1,260,000 |

[p]Preliminary. [r]Revised.
[1]Data are rounded to no more than three significant digits; may not add to totals shown.
[2]Includes production from Michigan, Missouri, Montana, Nevada, New Mexico, and Utah.
[3]Includes copper content of precipitates and other metal concentrates.

TABLE 3
COPPER PRODUCED AT SMELTERS IN
THE UNITED STATES[1, 2]

(Metric tons, copper content)

| Period | Anode production[e, 3] |
|---|---|
| 2020:[p] | |
| December | 30,000 |
| January–December | 315,000 |
| 2021: | |
| January | 35,000 |
| February | 35,000 |
| March | 35,000 |
| April | 30,000 |
| May | 30,000 |
| June | 30,000 |
| July | 35,000 |
| August | 35,000 |
| September | 35,000 |
| October | 35,000 |
| November | 35,000 |
| December | 35,000 |
| January–December | 405,000 |

[e]Estimated. [p]Preliminary.
[1]Data are rounded to no more than three significant digits; may not add to totals shown.
[2]Includes blister and copper anode from primary or secondary sources.
[3]To avoid disclosing company proprietary data, monthly smelter production data are estimates based on information in quarterly public company reports and do not reflect actual production reported to the U.S. Geological Survey.

TABLE 4

U.S. PRODUCTION OF REFINED COPPER, BY SOURCE AND METHOD OF RECOVERY[1]

(Metric tons)

| Period | Primary materials | | | Scrap | Total refined |
|---|---|---|---|---|---|
| | Electrolytically refined[e, 2, 3] | Electrowon | Total | | |
| 2020:[p] | | | | | |
| December | 30,000 | 48,400 | 78,400 | 3,300 | 81,700 |
| January–December | 315,000 | 559,000 | 874,000 | 43,200 | 918,000 |
| 2021: | | | | | |
| January | 35,000 | 47,100 | 82,100 | 3,350 | 85,400 |
| February | 35,000 | 43,900 | 78,900 | 4,060 | 82,900 |
| March | 35,000 | 46,500 | 81,500 | 3,460 | 85,000 |
| April | 30,000 | 44,000 | 74,000 | 5,190 | 79,200 |
| May | 30,000 | 44,400 | 74,400 | 4,560 | 79,000 |
| June | 30,000 | 46,600 | 76,600 | 5,060 | 81,700 |
| July | 35,000 | 47,200 | 82,200 | 3,340 | 85,500 |
| August | 35,000 | 51,300 | 86,300 | 3,750 | 90,000 |
| September | 35,000 | 49,000 | 84,000 | 4,590 | 88,500 |
| October | 35,000 | 50,400 | 85,400 | 3,540 | 89,000 [r] |
| November | 35,000 | 45,800 [r] | 80,800 [r] | 3,990 | 84,800 [r] |
| December | 35,000 | 46,900 | 81,900 | 4,060 | 85,900 |
| January–December | 405,000 | 563,000 | 968,000 | 48,900 | 1,020,000 |

[e]Estimated. [p]Preliminary. [r]Revised.

[1]Data are rounded to no more than three significant digits; may not add to totals shown.

[2]From domestic and foreign source materials.

[3]To avoid disclosing company proprietary data, monthly electrolytically refined production data are estimates based on information in quarterly public company reports and do not reflect actual production reported to the U.S. Geological Survey.

TABLE 5
COPPER RECOVERABLE IN UNALLOYED AND ALLOYED FORM FROM PURCHASED COPPER-BASE SCRAP IN THE UNITED STATES[1]

(Metric tons, copper content)

| Period | Refineries[2] | | Ingot makers[3] | | Brass and wire-rod mills | | Foundries, etc.[3] | | Total[4] |
|---|---|---|---|---|---|---|---|---|---|
| | New scrap[e] | Old scrap | New scrap | Old scrap | New scrap | Old scrap | New scrap | Old scrap | |
| 2020:[p] | | | | | | | | | |
| December | 1,680 | 1,620 | 768 | 4,060 | 55,800 | 2,590 | 2,150 | 913 | 69,600 |
| January–December | 20,100 | 23,100 | 9,220 | 48,700 | 631,000 | 38,100 | 25,800 | 11,000 | 807,000 |
| 2021: | | | | | | | | | |
| January | 1,680 | 1,670 | 768 | 4,060 | 53,600 [r] | 4,080 [r] | 2,150 | 913 | 69,000 |
| February | 1,680 | 2,380 | 768 | 4,060 | 51,600 [r] | 3,470 [r] | 2,150 | 913 | 67,000 [r] |
| March | 1,680 | 1,780 | 768 | 4,060 | 53,000 [r] | 3,790 [r] | 2,150 | 913 | 68,100 [r] |
| April | 1,680 | 3,510 | 768 | 4,060 | 51,700 [r] | 3,740 [r] | 2,150 | 913 | 68,600 [r] |
| May | 1,680 | 2,890 | 768 | 4,060 | 50,600 [r] | 3,600 [r] | 2,150 | 913 | 66,700 [r] |
| June | 1,680 | 3,390 | 768 | 4,060 | 50,100 [r] | 3,430 [r] | 2,150 | 913 | 66,400 [r] |
| July | 1,680 | 1,660 | 768 | 4,060 | 50,400 [r] | 3,330 [r] | 2,150 | 913 | 64,900 [r] |
| August | 1,680 | 2,080 | 768 | 4,060 | 50,500 [r] | 3,540 [r] | 2,150 | 913 | 65,700 [r] |
| September | 1,680 | 2,910 | 768 | 4,060 | 51,300 [r] | 3,130 [r] | 2,150 | 913 | 66,900 [r] |
| October | 1,680 | 1,860 | 768 | 4,060 | 51,900 [r] | 3,490 [r] | 2,150 | 913 | 66,800 [r] |
| November | 1,680 | 2,320 | 768 | 4,060 | 50,900 [r] | 3,080 [r] | 2,150 | 913 | 65,900 [r] |
| December | 1,680 | 2,380 | 768 | 4,060 | 48,500 | 2,480 | 2,150 | 913 | 62,900 |
| January–December | 20,100 | 28,800 | 9,220 | 48,700 | 614,000 | 41,100 | 25,800 | 11,000 | 799,000 |

[e]Estimated. [p]Preliminary. [r]Revised.

[1]Data are rounded to no more than three significant digits; may not add to totals shown.

[2]Electrolytically refined and fire refined from scrap based on source of material at smelter or refinery level.

[3]Monthly data estimated based on the monthly average of 2019 annual data.

[4]Does not include an estimate, based on reported 2019 annual data, of 3,380 tons per month from new scrap and 2,710 tons per month from old scrap of copper recovered from scrap other than copper-base.

TABLE 6

U.S. PRODUCTION, SHIPMENTS, AND STOCKS OF BRASS AND WIRE-ROD SEMIFABRICATES[1]

(Metric tons, gross weight)

| Period | Production | | Shipments | | Stocks, end of period | |
|---|---|---|---|---|---|---|
| | Brass mills | Wire-rod mills | Brass mills | Wire-rod mills | Brass mills | Wire-rod mills |
| 2020:[p] | | | | | | |
| December | 73,700 | 101,000 | 74,000 | 97,800 | 28,700 | 19,000 |
| January–December | 884,000 | 1,240,000 | 885,000 | 1,240,000 | 28,700 | 19,000 |
| 2021: | | | | | | |
| January | 73,900 | 113,000 [r] | 74,300 [r] | 115,000 [r] | 28,300 | 16,800 |
| February | 74,100 | 102,000 [r] | 73,800 | 103,000 [r] | 28,600 | 15,800 |
| March | 74,700 | 125,000 | 74,500 | 123,000 [r] | 28,800 | 17,800 |
| April | 75,000 | 115,000 [r] | 75,300 | 117,000 [r] | 28,500 | 15,200 |
| May | 73,200 | 120,000 [r] | 73,300 | 117,000 [r] | 28,400 | 18,300 |
| June | 74,200 | 119,000 [r] | 74,000 | 119,000 [r] | 28,600 [r] | 19,100 |
| July | 74,600 | 112,000 | 74,800 | 114,000 [r] | 28,400 | 17,000 |
| August | 74,600 [r] | 117,000 [r] | 74,500 [r] | 113,000 [r] | 28,600 [r] | 21,200 |
| September | 74,000 | 118,000 | 74,300 | 120,000 | 28,300 | 18,800 |
| October | 74,600 | 115,000 | 74,400 | 110,000 | 28,600 [r] | 23,400 |
| November | 74,500 | 115,000 [r] | 74,300 | 110,000 | 28,800 [r] | 29,200 |
| December | 74,400 | 86,100 | 74,200 | 95,100 | 29,100 | 20,200 |
| January–December | 892,000 | 1,360,000 | 892,000 | 1,360,000 | 29,100 | 20,200 |

[p]Preliminary. [r]Revised.

[1]Data are rounded to no more than three significant digits; may not add to totals shown.

TABLE 7
U.S. CONSUMPTION OF REFINED COPPER[1]

(Metric tons)

| Period | Brass mills | Wire-rod mills | Other plants[2] | Total |
|---|---|---|---|---|
| 2020:[p] | | | | |
| December | 34,800 | 99,900 | 5,450 | 140,000 |
| January–December | 413,000 | 1,230,000 | 65,400 | 1,710,000 |
| 2021: | | | | |
| January | 34,700 | 103,000 [r] | 5,450 | 143,000 [r] |
| February | 34,900 | 96,100 | 5,450 | 137,000 |
| March | 35,300 | 119,000 | 5,450 | 159,000 |
| April | 34,300 | 108,000 | 5,450 | 148,000 |
| May | 34,100 | 119,000 | 5,450 | 159,000 |
| June | 34,200 [r] | 112,000 [r] | 5,450 | 152,000 [r] |
| July | 34,400 | 108,000 | 5,450 | 147,000 |
| August | 34,500 | 113,000 | 5,450 | 153,000 |
| September | 34,700 | 112,000 [r] | 5,450 | 152,000 [r] |
| October | 34,700 | 109,000 | 5,450 | 149,000 |
| November | 34,300 | 110,000 | 5,450 | 150,000 |
| December | 34,700 | 81,800 | 5,450 | 122,000 |
| January–December | 415,000 | 1,290,000 | 65,400 | 1,770,000 |

[p]Preliminary. [r]Revised.

[1]Data are rounded to no more than three significant digits; may not add to totals shown.

[2]Monthly consumption data by ingot makers, chemical plants, foundries, and miscellaneous manufacturers are estimated based on the monthly average of 2018 annual data.

TABLE 8
U.S. APPARENT CONSUMPTION OF COPPER[1]

(Metric tons)

| Period | Primary refined copper production | Copper in old scrap[2] | Refined imports for consumption[3] | Refined exports[3] | Stock change during period | Apparent consumption |
|---|---|---|---|---|---|---|
| 2020:[p] | | | | | | |
| December | 78,400 | 11,900 | 57,400 | 5,150 | -11,700 | 154,000 |
| January–December | 874,000 | 153,000 | 676,000 | 41,200 | 7,370 | 1,660,000 |
| 2021: | | | | | | |
| January | 82,100 | 13,400 [r] | 42,400 | 4,350 | -6,490 | 140,000 |
| February | 78,900 | 13,500 [r] | 73,000 | 2,970 | -2,570 [r] | 165,000 |
| March | 81,500 | 13,200 [r] | 99,700 | 3,360 | -935 [r] | 192,000 [r] |
| April | 74,000 | 14,900 [r] | 85,200 | 5,280 | -7,000 [r] | 176,000 [r] |
| May | 74,400 | 14,200 [r] | 66,600 | 5,580 | -14,100 | 164,000 |
| June | 76,600 | 14,500 [r] | 69,600 | 6,880 | -3,100 [r] | 157,000 [r] |
| July | 82,200 | 12,700 [r] | 57,100 | 5,270 | -7,320 [r] | 154,000 |
| August | 86,300 | 13,300 [r] | 105,000 | 1,830 | 3,260 [r] | 200,000 |
| September | 84,000 | 13,700 [r] | 90,700 | 2,300 | 6,480 | 180,000 |
| October | 85,400 | 13,000 [r] | 92,300 | 3,490 | 5,550 [r] | 182,000 |
| November | 80,800 [r] | 13,100 | 60,000 | 2,630 | 13,900 | 137,000 |
| December | 81,900 | 12,500 | 77,300 | 3,630 | 11,900 | 156,000 |
| January–December | 968,000 | 162,000 | 919,000 | 47,600 | 6,850 | 1,990,000 |

[p]Preliminary. [r]Revised.
[1]Data are rounded to no more than three significant digits; may not add to totals shown.
[2]Copper recovered from old scrap and converted to refined metal and alloys. Includes reported monthly production of copper from old scrap of copper-base, an estimate for annual reporters, and a monthly average of copper from non-copper-base materials based on 2019 annual data.
[3]Source: U.S. Census Bureau.

TABLE 9

U.S. CONSUMPTION OF PURCHASED COPPER-BASE SCRAP[1]

(Metric tons, gross weight)

| Period | Smelters and refineries | | Ingot makers[2] | | Brass and wire-rod mills[3] | | Foundries, etc.[2] | | Total scrap used |
|---|---|---|---|---|---|---|---|---|---|
| | New scrap[e] | Old scrap | New scrap | Old scrap | New scrap | Old scrap | New scrap | Old scrap | |
| 2020:[p] | | | | | | | | | |
| December | 1,730 | 1,670 | 2,050 | 4,790 | 64,000 | 2,750 | 2,570 | 1,010 | 80,500 |
| January–December | 20,700 | 23,800 | 24,600 | 57,500 | 729,000 | 39,900 | 30,800 | 12,100 | 938,000 |
| 2021: | | | | | | | | | |
| January | 1,730 | 1,720 | 2,050 | 4,790 | 61,700 [r] | 4,190 | 2,570 | 1,010 | 79,700 [r] |
| February | 1,730 | 2,460 | 2,050 | 4,790 | 59,600 [r] | 3,580 | 2,570 | 1,010 | 77,800 [r] |
| March | 1,730 | 1,830 | 2,050 | 4,790 | 61,100 [r] | 3,970 | 2,570 | 1,010 | 79,100 [r] |
| April | 1,730 | 3,620 | 2,050 | 4,790 | 60,000 [r] | 4,010 | 2,570 | 1,010 | 79,800 [r] |
| May | 1,730 | 2,980 | 2,050 | 4,790 | 58,800 [r] | 3,820 | 2,570 | 1,010 | 77,700 [r] |
| June | 1,730 | 3,490 | 2,050 | 4,790 | 58,200 [r] | 3,680 | 2,570 | 1,010 | 77,600 [r] |
| July | 1,730 | 1,710 | 2,050 | 4,790 | 58,500 [r] | 3,520 | 2,570 | 1,010 | 75,900 [r] |
| August | 1,730 | 2,140 | 2,050 | 4,790 | 58,700 [r] | 3,750 | 2,570 | 1,010 | 76,700 [r] |
| September | 1,730 | 3,000 | 2,050 | 4,790 | 59,300 [r] | 3,260 | 2,570 | 1,010 | 77,800 [r] |
| October | 1,730 | 1,920 | 2,050 | 4,790 | 59,900 [r] | 3,630 | 2,570 | 1,010 | 77,600 [r] |
| November | 1,730 | 2,390 | 2,050 | 4,790 | 59,000 [r] | 3,240 | 2,570 | 1,010 | 76,800 [r] |
| December | 1,730 | 2,450 | 2,050 | 4,790 | 56,500 | 2,610 | 2,570 | 1,010 | 73,800 |
| January–December | 20,700 | 29,700 | 24,600 | 57,500 | 711,000 | 43,200 | 30,800 | 12,100 | 930,000 |

[e]Estimated. [p]Preliminary. [r]Revised.

[1]Data are rounded to no more than three significant digits; may not add to totals shown.

[2]Monthly data estimated based on the monthly average of 2019 annual data.

[3]Consumption at brass and wire-rod mills assumed equal to receipts.

TABLE 10
COPPER STOCKS IN THE UNITED STATES AT END OF PERIOD[1]

(Metric tons)

| Period | Blister and anode[2] | Refined copper | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | Refineries | Wire-rod mills | Brass mills | Other[3] | Comex | LME[4] | Total refined |
| 2020:[p] | | | | | | | | |
| December | 9,380 | 3,850 | 10,700 | 7,850 | 7,070 | 70,200 | 18,300 | 118,000 |
| 2021: | | | | | | | | |
| January | 17,500 [r] | 3,810 | 9,190 | 7,970 | 7,070 | 66,800 | 16,700 | 111,000 |
| February | 23,800 | 5,340 [r] | 11,900 | 8,610 | 7,070 | 62,900 | 13,100 | 109,000 |
| March | 15,300 [r] | 3,410 [r] | 13,200 | 7,900 [r] | 7,070 | 65,500 | 10,900 | 108,000 [r] |
| April | 12,400 [r] | 3,330 [r] | 12,800 | 7,550 | 7,070 | 60,200 | 9,950 | 101,000 |
| May | 13,100 [r] | 2,860 [r] | 12,400 | 7,850 | 7,070 | 55,100 | 1,630 | 86,900 |
| June | 10,300 | 3,230 [r] | 19,300 | 7,950 [r] | 7,070 | 45,000 | 1,180 | 83,800 [r] |
| July | 12,300 | 4,410 [r] | 14,000 | 8,190 [r] | 7,070 | 41,600 | 1,180 | 76,400 [r] |
| August | 12,000 [r] | 3,620 | 14,200 | 8,330 [r] | 7,070 | 46,100 | 400 | 79,700 [r] |
| September | 10,200 [r] | 5,400 | 13,700 | 8,670 [r] | 7,070 | 51,200 | 125 | 86,200 [r] |
| October | 15,700 [r] | 6,400 | 17,200 | 8,640 [r] | 7,070 | 52,100 | 325 | 91,700 [r] |
| November | 15,900 | 5,250 | 16,300 | 9,080 [r] | 7,070 | 53,200 | 14,700 | 106,000 [r] |
| December | 16,100 | 5,440 | 11,500 | 9,500 | 7,070 | 63,800 | 20,200 | 117,000 |

[p]Preliminary. [r]Revised.

[1]Data are rounded to no more than three significant digits; may not add to totals shown.

[2]Copper content.

[3]Monthly estimates based on 2019 annual data, comprising stocks at ingot makers, chemical plants, foundries, and miscellaneous manufacturers.

[4]London Metal Exchange Ltd., U.S. warehouses.

TABLE 11
AVERAGE PRICE OF COPPER IN THE UNITED STATES
AND ON THE LONDON METAL EXCHANGE

(Cents per pound)

| Period | U.S. producers cathode[1] | Comex first position[2] | LME cash price Grade A |
|---|---|---|---|
| 2020: | | | |
| December | 360.470 | 353.470 | 351.772 |
| Year | 286.745 | 279.948 | 279.797 |
| 2021: | | | |
| January | 369.318 | 362.318 | 361.536 |
| February | 393.314 | 386.126 | 383.750 |
| March | 416.141 | 408.828 | 408.459 |
| April | 432.183 | 424.783 | 423.453 |
| May | 471.410 | 463.535 | 461.937 |
| June | 448.082 | 439.832 | 436.012 |
| July | 443.779 | 435.479 | 427.900 |
| August | 437.543 | 429.230 | 424.435 |
| September | 434.888 | 426.538 | 422.916 |
| October | 453.612 | 445.112 | 443.497 |
| November | 445.074 | 436.574 | 442.914 |
| December | 441.820 | 433.320 | 433.140 |
| January–December | 432.264 | 424.306 | 422.496 |

[1]Sum of "Comex high grade first position" and "NY dealer premium cathode."
[2]Listed as "Comex high grade first position."

Source: S&P Global Platts Metals Week.

TABLE 12
AVERAGE BUYING PRICES FOR COPPER SCRAP IN THE UNITED STATES

(Cents per pound)

| Period | Brass mills No. 1 scrap | Refiners No. 2 scrap | Dealers | |
|---|---|---|---|---|
| | | | No. 2 scrap | Red brass turnings and borings |
| 2020: | | | | |
| December | 339.98 | 314.75 | 258.18 | 165.45 |
| Year | 268.76 | 243.47 | 201.72 | 130.67 |
| 2021: | | | | |
| January | 349.74 | 320.61 | 266.50 | 167.00 |
| February | 370.89 | 338.87 | 270.00 | 175.00 |
| March | 392.04 | 351.52 | 296.50 | 185.50 |
| April | 406.52 | 365.52 | 289.00 | 186.50 |
| May | 444.95 | 405.23 | 341.50 | 239.00 |
| June | 421.77 | 381.68 | 345.50 | 230.50 |
| July | 417.36 | 374.12 | 330.00 | 227.00 |
| August | 410.36 | 368.41 | 337.50 | 238.00 |
| September | 409.62 | 368.38 | 319.00 | 229.00 |
| October | 430.88 | 390.64 | 316.50 | 222.00 |
| November | 423.05 | 383.05 | 330.50 | 222.00 |
| December | 420.45 | 380.45 | 335.00 | 230.00 |
| January–December | 408.14 | 369.04 | 314.79 | 212.63 |

Source: Fastmarkets-AMM.

TABLE 13

U.S. IMPORTS FOR CONSUMPTION OF COPPER (UNMANUFACTURED), BY CLASS[1]

(Metric tons, copper content)

| Country or locality | Ore and concentrates[2] | | | Matte, ash, and precipitates[3] | | | Blister and anodes[4] | | | Refined[5] | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 2021 | | | 2021 | | | 2021 | | | 2021 | |
| | 2020 | December | January–December | 2020 | December | January–December | 2020 | December | January–December | 2020 | December | January–December |
| Bahrain | -- | -- | -- | -- | -- | -- | -- | -- | -- | 76 | -- | -- |
| Belgium | -- | -- | -- | 354 | -- | 236 | -- | -- | -- | -- | -- | 29 |
| Bolivia | -- | -- | -- | -- | -- | -- | -- | -- | -- | 1,030 | -- | 763 |
| Canada | 2,170 | -- | 11,000 | 459 | 104 | 651 | (6) | -- | (6) | 149,000 | 5,740 | 141,000 |
| Chile | -- | -- | -- | -- | -- | -- | -- | -- | -- | 410,000 | 43,300 | 613,000 |
| China | -- | -- | -- | (6) | -- | -- | -- | -- | -- | 426 | 65 | 671 |
| Congo (Kinshasa) | -- | -- | -- | -- | -- | -- | -- | -- | -- | 148 | 2,530 | 22,200 |
| Finland | -- | -- | -- | -- | -- | -- | 275 | 16 | 371 | -- | -- | 35 |
| Germany | -- | -- | -- | -- | -- | 155 | (6) | (6) | (6) | 1,910 | 220 | 2,150 |
| Japan | -- | -- | 1 | 176 | -- | 483 | (6) | -- | 1 | 2,060 | 113 | 1,440 |
| Korea, Republic of | -- | -- | -- | -- | -- | -- | (6) | (6) | (6) | 72 | -- | 54 |
| Mexico | -- | -- | -- | (6) | (6) | 8 | (6) | -- | (6) | 95,200 | 17,700 | 87,400 |
| Peru | -- | -- | -- | -- | -- | -- | -- | -- | -- | 14,500 | 6,220 | 28,500 |
| Spain | -- | -- | -- | 49 | -- | -- | -- | -- | -- | 654 | -- | (6) |
| Other | -- | -- | 10 | 22 | (6) | 48 | 5 | (6) | 11 | 50 | 1,380 | 21,400 |
| Total | 2,170 | -- | 11,000 | 1,060 | 104 | 1,580 | 281 | 16 | 384 | 676,000 | 77,300 | 919,000 |

-- Zero.

[1]Data are rounded to no more than three significant digits; may not add to totals shown.

[2]Harmonized Tariff Schedule of the United States (HTS) code 2603.00.0010. Includes copper ore and concentrates only; excludes copper contained in ore and concentrates of other metals.

[3]HTS codes 2620.30.0010 and 7401.00.0000. Includes copper matte, ash, and precipitates only; excludes the copper content of mattes and ashes of other metals.

[4]HTS code 7402.00.0000.

[5]HTS codes 7403.11.0000, 7403.12.0000, 7403.13.0000, and 7403.19.0000.

[6]Less than ½ unit.

Source: U.S. Census Bureau.

TABLE 14

U.S. EXPORTS OF COPPER (UNMANUFACTURED), BY CLASS[1]

(Metric tons, copper content)

| Country or locality | Ore and concentrates[2] | | | Matte, ash, and precipitates[3] | | | Blister and anodes[4] | | | Refined[5] | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 2021 | | | 2021 | | | 2021 | | | 2021 | |
| | 2020 | December | January–December | 2020 | December | January–December | 2020 | December | January–December | 2020 | December | January–December |
| Belgium | 230 | 12 | 246 | 6,110 | 530 | 6,120 | 190 | 7 | 1,490 | 64 | -- | -- |
| Bulgaria | 4,350 | -- | -- | (6) | -- | -- | -- | -- | -- | -- | -- | -- |
| Canada | 36,100 | 3,740 | 39,500 | 13,100 | 795 | 16,200 | 1,690 | 1,080 | 19,400 | 12,600 | 272 | 24,700 |
| China | 49,300 | 8,880 | 65,600 | 62 | 57 | 548 | 148 | -- | 171 | 233 | 1,010 | 3,190 |
| Germany | -- | -- | 784 | 288 | 9 | 430 | 128 | 20 | 190 | 22 | -- | 20 |
| Hong Kong | 9 | -- | 2 | -- | -- | 44 | 86 | -- | 310 | 18 | -- | 9 |
| India | 20 | -- | -- | 37 | -- | 30 | 247 | 19 | 433 | -- | -- | -- |
| Italy | -- | -- | -- | -- | -- | -- | 197 | -- | 113 | 86 | -- | 22 |
| Japan | 14,600 | -- | 6,350 | 251 | 56 | 760 | 24 | -- | 17 | 4 | (6) | 11 |
| Korea, Republic of | 8,140 | -- | 2,370 | 1 | 33 | 171 | 1,390 | 76 | 1,320 | 1,160 | (6) | 30 |
| Malaysia | -- | -- | 5 | 3 | -- | 47 | 218 | 20 | 188 | -- | 4 | 13 |
| Mexico | 250,000 | 15,200 | 229,000 | 2,720 | -- | 33 | 848 | (6) | 258 | 26,800 | 2,310 | 19,100 |
| Philippines | 6,250 | -- | 2,350 | -- | -- | 1 | 10 | -- | 39 | -- | -- | -- |
| Singapore | -- | -- | -- | 256 | -- | 300 | 36 | -- | 92 | 13 | 2 | 22 |
| Slovakia | -- | -- | -- | 1,050 | 75 | 1,450 | -- | -- | -- | -- | -- | -- |
| Spain | 8,990 | -- | -- | 1,820 | 53 | 1,130 | 35 | -- | 20 | -- | -- | (6) |
| Sweden | -- | -- | -- | -- | -- | -- | 135 | -- | 72 | -- | -- | 1 |
| Thailand | -- | -- | -- | 2 | -- | -- | 256 | -- | 26 | (6) | -- | -- |
| Other | 4,630 | 15 | 2,560 | 172 | 12 | 227 | 565 | 39 | 850 | 164 | 30 | 419 |
| Total | 383,000 | 27,900 | 348,000 | 25,900 | 1,620 | 27,500 | 6,210 | 1,260 | 25,000 | 41,200 | 3,630 | 47,600 |

-- Zero.

[1]Data are rounded to no more than three significant digits; may not add to totals shown.

[2]Schedule B of the United States code 2603.00.0010. Includes copper ore and concentrates only; excludes copper contained in ore and concentrates of other metals.

[3]Schedule B codes 2620.30.0000, 7401.00.0010, and 7401.00.0050. Includes copper matte, ash, and precipitates only; excludes the copper content of mattes and ashes of other metals.

[4]Schedule B code 7402.00.0000.

[5]Schedule B codes 7403.11.0000, 7403.12.0000, 7403.13.0000, and 7403.19.0000.

[6]Less than ½ unit.

Source: U.S. Census Bureau.

TABLE 15
U.S. IMPORTS FOR CONSUMPTION OF COPPER SCRAP[1]

(Metric tons, gross weight)

| Country or locality | Unalloyed[2] | | | Alloyed[3] | | |
|---|---|---|---|---|---|---|
| | | 2021 | | | 2021 | |
| | 2020 | December | January–December | 2020 | December | January–December |
| Antigua and Barbuda | -- | -- | -- | 151 | 15 | 126 |
| Bahamas | -- | -- | -- | 681 | 47 | 608 |
| Brazil | -- | -- | 15 | 164 | 7 | 114 |
| Canada | 14,500 | 1,330 | 19,900 | 41,300 | 3,140 | 48,200 |
| Cayman Islands | 4 | -- | -- | 262 | 13 | 219 |
| Colombia | 60 | -- | 174 | 808 | 45 | 643 |
| Costa Rica | 619 | 34 | 729 | 934 | 113 | 1,480 |
| Dominican Republic | 876 | 193 | 1,550 | 1,150 | 303 | 2,720 |
| Ecuador | -- | 8 | 88 | 154 | 22 | 277 |
| El Salvador | -- | -- | -- | 294 | 77 | 583 |
| Germany | 179 | 18 | 210 | 108 | 43 | 191 |
| Guatemala | -- | -- | -- | 289 | 35 | 484 |
| Honduras | 54 | 4 | 75 | 844 | 133 | 907 |
| Jamaica | -- | -- | 7 | 258 | 34 | 159 |
| Mexico | 9,450 | 1,050 | 12,600 | 37,100 | 3,070 | 43,900 |
| Nicaragua | 114 | -- | 17 | -- | 17 | 115 |
| Panama | 714 | 96 | 1,050 | 335 | 39 | 497 |
| Peru | 495 | -- | 19 | 251 | 98 | 439 |
| Vietnam | 121 | 7 | 114 | 22 | 5 | 64 |
| Other | 362 | 84 | 1,120 | 1,400 | 344 | 2,940 |
| Total | 27,600 | 2,830 | 37,700 | 86,500 | 7,600 | 105,000 |

-- Zero.

[1]Data are rounded to no more than three significant digits; may not add to totals shown.

[2]Harmonized Tariff Schedule of the United States (HTS) codes 7404.00.3020 and 7404.00.6020.

[3]HTS codes 7404.00.3045, 7404.00.3055, 7404.00.3065, 7404.00.3090, 7404.00.6045, 7404.00.6055, 7404.00.6065, and 7404.00.6090.

Source: U.S. Census Bureau.

TABLE 16

U.S. EXPORTS OF COPPER SCRAP[1]

(Metric tons, gross weight)

| Country or locality | Unalloyed[2] | | | | | | | Alloyed[3] | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 2021 | | | | | | | 2021 | | | |
| | | No. 1 | | No. 2 | | Other | | | Segregated | | Unsegregated | |
| | 2020 | December | January–December | December | January–December | December | January–December | 2020 | December | January–December | December | January–December |
| Austria | 3,970 | -- | 59 | -- | 1,050 | -- | 143 | 1,010 | -- | 135 | -- | 58 |
| Belgium | 20,900 | 1,120 | 8,380 | 778 | 7,460 | 397 | 4,830 | 11,100 | 41 | 958 | 646 | 7,700 |
| Canada | 51,800 | -- | -- | -- | -- | 3,900 | 61,100 | 32,200 | -- | -- | 4,750 | 53,900 |
| China | 81,200 | 5,840 | 50,200 | 5,140 | 47,900 | 10,300 | 97,800 | 35,400 | 1,240 | 18,400 | 883 | 25,600 |
| Germany | 22,400 | 1,110 | 12,800 | 61 | 2,300 | 140 | 3,910 | 16,000 | 318 | 2,330 | 1,170 | 12,900 |
| Greece | 13,000 | 467 | 6,640 | -- | 2,950 | 594 | 5,240 | 1,450 | 19 | 133 | 220 | 2,010 |
| Hong Kong | 7,810 | 38 | 2,990 | 404 | 9,080 | 1,080 | 11,100 | 7,750 | 71 | 1,950 | 934 | 5,570 |
| India | 9,570 | 506 | 4,630 | 148 | 1,780 | 833 | 6,190 | 34,800 | 1,070 | 15,500 | 1,420 | 24,100 |
| Japan | 16,400 | 129 | 3,200 | 1,550 | 14,300 | 204 | 2,620 | 13,800 | -- | 1,120 | 538 | 6,380 |
| Korea, Republic of | 45,700 | 1,770 | 18,900 | 1,170 | 13,800 | 687 | 14,500 | 18,500 | 251 | 5,090 | 1,400 | 12,000 |
| Malaysia | 54,400 | 595 | 7,390 | 143 | 10,500 | 2,290 | 45,700 | 122,000 | 1,330 | 20,500 | 4,490 | 68,100 |
| Pakistan | 697 | -- | 189 | 3 | 230 | -- | 58 | 14,500 | 40 | 285 | 1,990 | 24,100 |
| Poland | 5,000 | 36 | 1,040 | 119 | 1,690 | 1,040 | 8,640 | 6,570 | -- | 118 | 39 | 2,160 |
| Russia | 7,310 | 40 | 163 | -- | 100 | 227 | 1,130 | 830 | -- | -- | -- | 629 |
| Spain | 4,070 | -- | 444 | 17 | 306 | 38 | 2,210 | 7,610 | 146 | 2,240 | 234 | 4,840 |
| Taiwan | 17,000 | 324 | 5,580 | 104 | 2,390 | 700 | 5,880 | 16,400 | 133 | 2,630 | 51 | 3,870 |
| Thailand | 4,800 | 230 | 1,870 | 59 | 383 | 1,160 | 7,520 | 20,900 | 250 | 2,150 | 3,880 | 33,700 |
| Vietnam | 7,480 | -- | 757 | -- | 124 | -- | 229 | 2,340 | 19 | 103 | -- | 62 |
| Other | 22,900 | 527 | 9,090 | 135 | 2,230 | 579 | 7,690 | 16,600 | 475 | 4,300 | 1,020 | 13,600 |
| Total | 396,000 | 12,700 | 134,000 | 9,830 | 119,000 | 24,200 | 286,000 | 380,000 | 5,400 | 77,900 | 23,700 | 301,000 |

-- Zero.

[1]Data are rounded to no more than three significant digits; may not add to totals shown.

[2]Schedule B of the United States codes 7404.00.0010 and 7404.00.0015 (no. 1), 7404.00.0025 (no. 2), and 7404.00.0030 (other).

[3]Schedule B codes for segregated alloyed copper scrap are 7404.00.0041, 7404.00.0046, 7404.00.0051, 7404.00.0056, 7404.00.0061, 7404.00.0066, and 7404.00.0075. Schedule B codes for unsegregated alloyed copper scrap are 7404.00.0085 and 7404.00.0095.

Source: U.S. Census Bureau.