

# Mineral Industry Surveys

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#### **COPPER IN AUGUST 2023**

In August 2023, mine production of recoverable copper in the United States was 89,900 metric tons (t). The average daily mine output was 2,900 t, a decrease of 4% compared with that in July and 12% less than that in August 2022 (fig. 1). Year-to-date mine production through August 2023 was 728,000 t, a decrease of 12% from that in the same time period in 2022 (table 2). Production declined at a majority of U.S. copper mines in 2023 because of reduced copper ore grades, lower mining rates, and (or) unplanned maintenance.

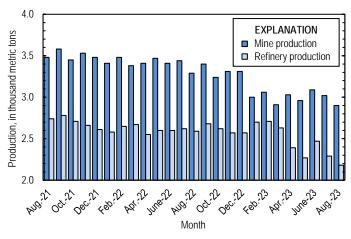


Figure 1. Average daily copper mine (recoverable) and refinery (primary and secondary) production in the United States from August 2021 through August 2023.

To avoid disclosing company proprietary data, smelter and electrolytic refinery production in August 2023 were estimated based on public information and do not reflect output reported to the U.S. Geological Survey. Estimated domestic smelter production was 25,000 t in August 2023. Year-to-date estimated smelter output was 260,000 t, an increase of 9% from that in the same time period in 2022. The smelter production estimates reported in table 3 represent primary production only in 2022 and primary and secondary output in 2023. A secondary copper smelter in Shelby, NC, with a production capacity of roughly 4,200 metric tons per month of anodes began operating in late 2022 (Toto, 2023).

Total U.S. refinery production in August 2023 was 67,600 t; data for electrolytic and electrowon output, as well as refined

production from scrap, are reported in table 4. The average daily refinery production was 2,180 t, 5% lower than that in July and a decrease of 16% compared with that in August 2022 (fig. 1). Year-to-date refinery output through August 2023 was 595,000 t, a decrease of 6% relative to the same time period in 2022. Domestic refined production of copper in 2023 was affected by a major rebuild of the Rio Tinto Group smelter and electrolytic refinery near Salt Lake City, UT, that began in May and was expected to be completed in September (Rio Tinto Group, 2023, p. 14).

#### **Prices**

In August 2023, the average Commodity Exchange Inc. (COMEX) copper price was \$3.76 per pound, slightly less than \$3.84 per pound in July and an increase of 4% compared with \$3.62 per pound in August 2022 (fig. 2, table 11). The average U.S. dealers buying price of number 2 copper scrap was \$2.94 per pound in August 2023, essentially unchanged from \$2.90 per pound in July and 20% greater than \$2.44 per pound in August 2022 (fig. 2, table 12).

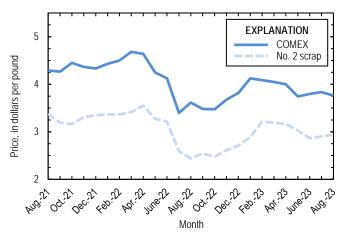


Figure 2. Monthly average Commodity Exchange Inc. (COMEX) copper price and no. 2 copper scrap U.S. dealers buying price from August 2021 through August 2023. Sources: Fastmarkets-AMM and S&P Global Platts Metals Week.

#### Stocks

Refined copper stocks in the United States totaled 105,000 t at the end of August 2023, an increase of 4% from those in July

and 10% lower than those in August 2022. Total domestic stocks at producers and fabricators (brass mills, refineries, wirerod mills, and other manufacturers) were unchanged and total stocks at exchanges (COMEX and London Metal Exchange Ltd.) increased by 4,550 t (7%) from those at the end of July (fig. 3, table 10).

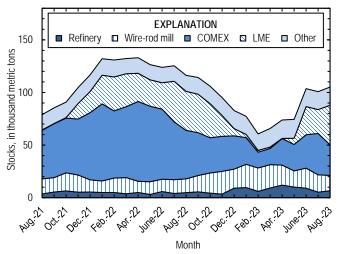


Figure 3. Domestic refined copper stocks at end of month, by type, from August 2021 through August 2023. Sources: London Metal Exchange Ltd., S&P Global Platts Metals Week, and U.S. Geological Survey.

#### **Industry News**

Chile.—On August 3, 2023, the President of Chile signed a law that increased taxes on annual copper mine production. As of January 1, 2024, companies that produce more than 80,000 t of copper in Chile will be subject to a maximum tax rate of 46.5% on operating income, and a maximum rate of 45.5% will apply to companies that produce between 50,000 and 80,000 t. No changes were enacted to tax rates on annual copper production of less than 50,000 t. The new law was expected to increase Government revenue by approximately \$1.4 billion per year (Deutsche Welle, 2023; Ernst & Young LLP, 2023). Chile has been the leading copper-producing country since 1982 and accounted for approximately one-quarter of global mine copper output in 2022.

#### **References Cited**

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### $\mbox{TABLE 1} \\ \mbox{SALIENT STATISTICS OF THE COPPER INDUSTRY IN THE UNITED STATES}^1 \\$

(Metric tons, copper content, unless otherwise specified)

				2023	3	
	Source					January-
	table <sup>2</sup>	2022 <sup>p</sup>	June	July	August	August
Production:						
Primary (from ore):						
Mine, recoverable <sup>3</sup>	(2)	1,230,000	92,800	93,600 <sup>r</sup>	89,900	728,000
Smelter <sup>e, 4</sup>	(3)	357,000	30,000	25,000	25,000	260,000
Refinery:						
Electrolytic	(4)	357,000	25,000 e	20,000 e	20,000 e	220,000 e
Electrowon	(4)	555,000	45,800	47,600	44,400	350,000
Total	(4)	912,000	70,800	67,600	64,400	570,000
Secondary (from copper-base scrap): <sup>5</sup>						
Refineries <sup>6</sup>	(5)	40,000	3,230	3,270	3,220	25,900
Ingot makers <sup>e, 7</sup>	(5)	39,500	3,290	3,290	3,290	26,300
Brass and wire-rod mills	(5)	650,000	52,900	55,800	56,700	448,000
Foundries, etc. <sup>e, 7</sup>	(5)	40,000	3,330	3,330	3,330	26,600
Consumption:						
Reported, refined copper	(7)	1,720,000	125,000	133,000	139,000	1,070,000
Apparent, primary refined copper and copper from old scrap <sup>8</sup>	(8)	1,800,000	144,000	138,000	123,000	1,230,000
Reported, purchased copper-base scrap (gross weight)	(9)	890,000	72,600	75,600	76,500	607,000
Stocks at end of period:						
Blister and anodes	(10)	13,300	34,500	20,400 <sup>r</sup>	24,000	24,000
Refined <sup>9</sup>	(10)	82,800	104,000	101,000	105,000	105,000
Price, U.S. producers cathode (cents per pound) <sup>10</sup>	(11)	410.775	389.598	393.570	386.330	402.585
Imports for consumption: <sup>11</sup>						
Ore and concentrates	(13)	11,700		2	(12)	3,290
Refined	(13)	732,000	92,800	60,300	54,300	606,000
Exports: 11	<u></u>					
Ore and concentrates	(14)	353,000	24,800	29,700	21,600	243,000
Refined	(14)	27,600	1,770	4,700	3,580	18,500

<sup>&</sup>lt;sup>e</sup>Estimated. <sup>p</sup>Preliminary. <sup>r</sup>Revised. -- Zero.

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

<sup>&</sup>lt;sup>2</sup>Numbers in parentheses refer to the tables where these data are located.

<sup>&</sup>lt;sup>3</sup>Includes the recoverable copper content of concentrates (of copper and other metals), copper produced by solvent extraction and electrowinning, and copper recovered as precipitates.

<sup>&</sup>lt;sup>4</sup>Consists of primary production in 2022 and primary and secondary production in 2023.

<sup>&</sup>lt;sup>5</sup>Copper recovered from copper-base scrap and converted to refined metal, alloys, and other forms. Does not include copper recovered from scrap other than copper-base.

<sup>&</sup>lt;sup>6</sup>Electrolytically refined and fire-refined copper.

<sup>&</sup>lt;sup>7</sup>Plants are surveyed by the U.S. Geological Survey on an annual basis; data after 2021 not yet available. Monthly data are estimated based on the monthly average of 2021 annual data.

<sup>&</sup>lt;sup>8</sup>Primary refined copper production plus copper recovered from old scrap (of copper-base and non-copper-base) plus refined imports for consumption minus refined exports, including adjustments for refined stock changes. Old scrap consists of copper items used by consumers.

<sup>&</sup>lt;sup>9</sup>Stocks of refined copper at brass mills, exchanges, refineries, wire-rod mills, and other manufacturers.

<sup>&</sup>lt;sup>10</sup>Source: S&P Global Platts Metals Week. Sum of the monthly average Commodity Exchange Inc. (COMEX) price and monthly average New York dealers cathode premium; reflects the delivered spot price of copper cathode to U.S. consumers by U.S. producers.

<sup>&</sup>lt;sup>11</sup>Source: U.S. Census Bureau. See tables 13 and 14 for the relevant Harmonized Tariff Schedule (imports) and Schedule B (exports) codes.

<sup>12</sup>Less than 1/2 unit.

 $\label{eq:table 2} \textbf{TABLE 2}$  MINE PRODUCTION OF COPPER IN THE UNITED STATES  $^1$ 

	Red	coverable copp	per <sup>2</sup>		Contained copper	
Period	Arizona	Others <sup>3</sup>	Total	Electrowon	Concentrates <sup>4</sup>	Total
2022: <sup>p</sup>						
January-August	578,000	251,000	828,000	368,000	478,000	846,000
August	69,600	32,400	102,000	46,700	57,400	104,000
September	69,700	32,400	102,000	46,700	57,400	104,000
October	69,200	31,200	100,000	48,500	53,800	102,000
November	66,800	32,400	99,300	44,500	56,800	101,000
December	71,400	31,200	103,000	46,900	57,800	105,000
January-December	855,000	378,000	1,230,000	555,000	704,000	1,260,000
2023:						
January	67,900	25,000	92,900	45,400	48,500 <sup>r</sup>	94,000 <sup>r</sup>
February	62,400	23,200	85,600	37,700	49,200 <sup>r</sup>	86,800 <sup>r</sup>
March	66,100	24,100	90,200	43,300	50,200 <sup>r</sup>	93,600 <sup>r</sup>
April	68,000	23,000	91,000	43,300	49,600 <sup>r</sup>	92,900 r
May	66,800	24,800	91,600	42,100	50,700 <sup>r</sup>	92,700 <sup>r</sup>
June	69,300	23,600	92,800	45,800	49,900 <sup>r</sup>	95,700 <sup>r</sup>
July	70,000 <sup>r</sup>	23,600	93,600 <sup>r</sup>	47,600	48,000 <sup>r</sup>	95,600 <sup>r</sup>
August	68,200	21,700	89,900	44,400	47,400	91,800
January-August	539,000	189,000	728,000	350,000	394,000	743,000

<sup>&</sup>lt;sup>p</sup>Preliminary. <sup>r</sup>Revised.

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

<sup>&</sup>lt;sup>2</sup>Includes the recoverable copper content of concentrates (of copper and other metals), copper produced by solvent extraction and electrowinning, and copper recovered as precipitates.

<sup>&</sup>lt;sup>3</sup>Includes production from Michigan, Missouri, Montana, Nevada, New Mexico, and Utah.

<sup>&</sup>lt;sup>4</sup>Also includes copper recovered as precipitates.

## $\begin{tabular}{ll} TABLE 3 \\ COPPER PRODUCED AT SMELTERS IN \\ THE UNITED STATES $^{1,2}$ \\ \end{tabular}$

(Metric tons, copper content)

	Anode
Period	production <sup>e, 3</sup>
2022: <sup>p</sup>	
January-August	238,000
August	30,500
September	30,500
October	29,400
November	29,400
December	29,400
January-December	357,000
2023:	
January	40,000
February	40,000
March	40,000
April	30,000
May	30,000
June	30,000
July	25,000
August	25,000
January-August	260,000

<sup>&</sup>lt;sup>e</sup>Estimated. <sup>p</sup>Preliminary.

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

<sup>&</sup>lt;sup>2</sup>Data reflect primary production in 2022 and primary and secondary production in 2023.

<sup>&</sup>lt;sup>3</sup>To avoid disclosing company proprietary data, anode production data are estimated based on public information and do not reflect output reported to the U.S. Geological Survey.

 $\label{eq:table 4} \textbf{U.S. PRODUCTION OF REFINED COPPER}^1$ 

-	From p	rimary materials	3		
			Total	From	Total
Period	Electrolytic <sup>2</sup>	Electrowon	primary	scrap <sup>3</sup>	refined
2022: <sup>p</sup>					
January–August	238,000	368,000	607,000	27,100	634,000
August	30,500	46,700	77,200	3,260	80,400
September	30,500	46,700	77,200	3,220	80,400
October	29,400	48,500	77,900	3,220	81,100
November	29,400	44,500	73,900	3,280	77,200
December	29,400	46,900	76,300	3,240	79,600
January-December	357,000	555,000	912,000	40,000	952,000
2023:					
January	35,000 e	45,400	80,400	3,220	83,600
February	35,000 e	37,700	72,700	3,230	75,900
March	35,000 e	43,300	78,300	3,220	81,600
April	25,000 e	43,300	68,300	3,220	71,500
May	25,000 e	42,100	67,100	3,260	70,300
June	25,000 e	45,800	70,800	3,230	74,000
July	20,000 e	47,600	67,600	3,270	70,900
August	20,000 e	44,400	64,400	3,220	67,600
January-August	220,000 e	350,000	570,000	25,900	595,000

<sup>&</sup>lt;sup>e</sup>Estimated. <sup>p</sup>Preliminary.

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

<sup>&</sup>lt;sup>2</sup>Electrolytic production data in 2022 are sourced from quarterly company reports. To avoid disclosing company proprietary data, electrolytic production data in 2023 are estimated based on public information and do not reflect output reported to the U.S. Geological Survey.

<sup>&</sup>lt;sup>3</sup>Electrolytically refined and fire-refined copper.

## TABLE 5 COPPER RECOVERED AS REFINED COPPER AND IN ALLOYS AND OTHER FORMS FROM PURCHASED COPPER-BASE SCRAP IN THE UNITED STATES $^{1,\,2}$

	Refine	ries <sup>3</sup>	Ingot ma	akers <sup>e, 4</sup>	Brass and wi	re-rod mills	Foundrie	s, etc. <sup>e, 4</sup>	
Period	New scrap <sup>e</sup>	Old scrap	New scrap	Old scrap	New scrap	Old scrap	New scrap	Old scrap	Total <sup>5</sup>
2022: <sup>p</sup>									
January-August	13,400	13,700	2,800	23,500	402,000	29,500	5,920	20,700	512,000
August	1,680	1,580	350	2,940	51,400	3,330	740	2,590	64,600
September	1,680	1,540	350	2,940	50,800	3,340	740	2,590	64,000
October	1,680	1,540	350	2,940	51,100	3,230	740	2,590	64,200
November	1,680	1,600	350	2,940	51,800	3,270	740	2,590	65,000
December	1,680	1,560	350	2,940	51,800	2,600	740	2,590	64,200
January-December	20,100	19,900	4,200	35,300	608,000	41,900	8,880	31,100	769,000
2023:									
January	1,680	1,540	350	2,940	54,300	4,360	740	2,590	68,500
February	1,680	1,550	350	2,940	53,000	3,360	740	2,590	66,200
March	1,680	1,540	350	2,940	53,400	3,620	740	2,590	66,900
April	1,680	1,540	350	2,940	52,500	3,300	740	2,590	65,700
May	1,680	1,580	350	2,940	51,900	2,960	740	2,590	64,700
June	1,680	1,550	350	2,940	49,900	2,950	740	2,590	62,700
July	1,680	1,590	350	2,940	52,600	3,260	740	2,590	65,700
August	1,680	1,540	350	2,940	53,500	3,280	740	2,590	66,600
January-August	13,400	12,400	2,800	23,500	421,000	27,100	5,920	20,700	527,000

<sup>&</sup>lt;sup>e</sup>Estimated. <sup>p</sup>Preliminary.

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

<sup>&</sup>lt;sup>2</sup>New scrap refers to material generated during the manufacturing process. Old scrap consists of copper items used by consumers.

<sup>&</sup>lt;sup>3</sup>Electrolytically refined and fire refined from scrap based on source of material at smelter or refinery level.

<sup>&</sup>lt;sup>4</sup>Plants are surveyed by the U.S. Geological Survey on an annual basis; data after 2021 not yet available. Monthly data are estimated based on the monthly average of 2021 annual data.

<sup>&</sup>lt;sup>5</sup>Does not include an estimate, based on 2021 annual data, of 2,970 tons per month from new scrap and 1,700 tons per month from old scrap of copper recovered from scrap other than copper-base.

 ${\it TABLE~6}$  U.S. PRODUCTION, SHIPMENTS, AND STOCKS OF BRASS AND WIRE-ROD SEMIFABRICATES  $^1$ 

	Pro	duction	Shij	pments	Stocks, end of period		
Period	Brass mills	Wire-rod mills	Brass mills	Wire-rod mills	Brass mills	Wire-rod mills	
2022: <sup>p</sup>							
January-August	602,000	908,000	602,000	910,000	29,200	17,900	
August	75,300	112,000	75,200	115,000	29,200	17,900	
September	79,900	116,000	79,400	119,000	29,800	15,600	
October	75,400	115,000	75,100	114,000	30,000	16,600	
November	74,900	94,800	74,800	94,700	30,200	16,600	
December	74,800	90,300	74,300	88,400	30,700	18,600	
January-December	908,000	1,330,000	906,000	1,330,000	30,700	18,600	
2023:	_						
January	76,400	95,600	75,400	95,600	31,700	18,500	
February	75,300	98,500	74,500	102,000	32,500	15,100	
March	77,000	108,000	75,000	105,000	34,500	17,600	
April	73,500	97,500	74,700	91,700	33,400	23,400	
May	72,900	100,000	74,000	101,000	32,300	22,700	
June	73,100	85,200	73,000	93,500	32,400	14,400	
July	73,700	101,000	73,200	97,000	32,800	18,700	
August	74,800	103,000	74,900	101,000	32,700	20,800	
January-August	597,000	789,000	595,000	787,000	32,700	20,800	

Preliminary.

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

### TABLE 7 $\mbox{U.s. Consumption of Refined Copper}^1$

	Brass	Wire-rod	Other	
Period	mills	mills	plants <sup>e, 2</sup>	Total
2022: <sup>p</sup>				
January-August	280,000	874,000	28,700	1,180,000
August	35,000	106,000	3,590	145,000
September	34,900	101,000	3,590	140,000
October	35,000	105,000	3,590	144,000
November	35,000	83,700	3,590	122,000
December	35,200	88,700	3,590	127,000
January-December	420,000	1,250,000	43,000	1,720,000
2023:	<u> </u>			
January	34,700	91,100	3,590	129,000
February	36,200	91,200	3,590	131,000
March	34,100	104,000	3,590	142,000
April	35,800	92,400	3,590	132,000
May	35,900	96,600	3,590	136,000
June	35,200	86,400	3,590	125,000
July	35,500	94,400	3,590	133,000
August	35,200	99,800	3,590	139,000
January–August	283,000	756,000	28,700	1,070,000

<sup>&</sup>lt;sup>e</sup>Estimated. <sup>p</sup>Preliminary.

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

<sup>&</sup>lt;sup>2</sup>Chemical plants, foundries, ingot makers, and miscellaneous manufacturers. These plants are surveyed by the U.S. Geological Survey on an annual basis; data after 2021 not yet available. Monthly data are estimated based on the monthly average of 2021 annual data.

TABLE 8  $\mbox{U.S. APPARENT CONSUMPTION OF COPPER}^1$ 

Dominal	Primary refined	Copper in	Refined imports	Refined	Refined stock change	Apparent
Period	copper production	old scrap <sup>2</sup>	for consumption <sup>3</sup>	exports <sup>3</sup>	during period	consumption <sup>4</sup>
2022: <sup>p</sup>						
January-August	607,000	101,000	555,000	20,400	-343	1,240,000
August	77,200	12,100	36,400	3,060	-9,190	132,000
September	77,200	12,100	50,700	2,470	-1,970	139,000
October	77,900	12,000	49,700	1,190	-8,330	147,000
November	73,900	12,100	37,900	1,430	-10,800	133,000
December	76,300	11,400	38,800	2,100	-12,300	137,000
January-December	912,000	149,000	732,000	27,600	-33,800	1,800,000
2023:						
January	80,400	13,100	39,000	1,190	-5,510	137,000
February	72,700	12,100	48,700	2,000	-16,800	148,000
March	78,300	12,400	126,000	1,290	5,250	210,000
April	68,300	12,100	97,900	2,020	8,080	168,000
May	67,100	11,800	86,700	1,910	587	163,000
June	70,800	11,700	92,800	1,770	29,200	144,000
July	67,600	12,100	60,300	4,700	-2,990	138,000
August	64,400	12,000	54,300	3,580	4,450	123,000
January-August	570,000	97,400	606,000	18,500	22,300	1,230,000

Preliminary.

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

<sup>&</sup>lt;sup>2</sup>Copper recovered from old scrap (of copper-base and non-copper-base) and converted to refined metal, alloys, and other forms. Includes reported monthly production and estimates for annual reporters based on the monthly average of 2021 annual data. Old scrap consists of copper items used by consumers.

<sup>&</sup>lt;sup>3</sup>Source: U.S. Census Bureau. Includes Harmonized Tariff Schedule (imports) and Schedule B (exports) codes 7403.11.0000, 7403.12.0000, 7403.13.0000, and 7403.19.0000.

<sup>&</sup>lt;sup>4</sup>Primary refined copper production plus copper in old scrap plus refined imports for consumption minus refined exports minus refined stock change during period.

 ${\bf TABLE~9} \\ {\bf U.S.~CONSUMPTION~OF~PURCHASED~COPPER-BASE~SCRAP}^{1,~2}$ 

	Smel	ters			Brass	and			
	and refi	neries	Ingot ma	akers <sup>e, 3</sup>	wire-roo	d mills <sup>4</sup>	Foundrie	s, etc. <sup>e, 3</sup>	
Period	New scrap <sup>e</sup>	Old scrap	New scrap	Old scrap	New scrap	Old scrap	New scrap	Old scrap	Total
2022: <sup>p</sup>									
January-August	13,800	14,100	7,460	27,600	467,000	31,000	6,970	24,300	593,000
August	1,730	1,630	933	3,450	59,500	3,490	871	3,040	74,700
September	1,730	1,590	933	3,450	58,900	3,510	871	3,040	74,000
October	1,730	1,590	933	3,450	59,100	3,340	871	3,040	74,100
November	1,730	1,650	933	3,450	59,800	3,420	871	3,040	74,900
December	1,730	1,610	933	3,450	59,900	2,710	871	3,040	74,200
January-December	20,700	20,500	11,200	41,400	705,000	43,900	10,500	36,500	890,000
2023:									
January	1,730	1,590	933	3,450	62,400	4,500	871	3,040	78,500
February	1,730	1,600	933	3,450	61,100	3,500	871	3,040	76,200
March	1,730	1,590	933	3,450	61,500	3,740	871	3,040	76,800
April	1,730	1,590	933	3,450	60,600	3,430	871	3,040	75,600
May	1,730	1,630	933	3,450	59,900	3,090	871	3,040	74,700
June	1,730	1,600	933	3,450	57,900	3,060	871	3,040	72,600
July	1,730	1,640	933	3,450	60,600	3,360	871	3,040	75,600
August	1,730	1,590	933	3,450	61,500	3,400	871	3,040	76,500
January-August	13,800	12,800	7,460	27,600	486,000	28,100	6,970	24,300	607,000

<sup>&</sup>lt;sup>e</sup>Estimated. <sup>p</sup>Preliminary.

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

<sup>&</sup>lt;sup>2</sup>New scrap refers to material generated during the manufacturing process. Old scrap consists of copper items used by consumers.

<sup>&</sup>lt;sup>3</sup>Plants are surveyed by the U.S. Geological Survey on an annual basis; data after 2021 not yet available. Monthly data are estimated based on the monthly average of 2021 annual data.

<sup>&</sup>lt;sup>4</sup>Consumption at brass and wire-rod mills assumed equal to receipts.

 $\label{table 10} {\rm COPPER~STOCKS~IN~THE~UNITED~STATES~AT~END~OF~PERIOD}^1$ 

(Metric tons, copper content)

					Refined copper			
	Blister and		Wire-rod					Total
Period	anodes	Refineries	mills	Brass mills	Other <sup>e, 2</sup>	COMEX <sup>3</sup>	$LME^4$	refined
2022: <sup>p</sup>								
August	14,200	4,790	13,100	9,010	6,200	46,000	37,100	116,000
September	14,900	5,570	15,500	9,840	6,200	40,800	36,400	114,000
October	18,500	4,300	19,200	10,400	6,200	33,400	32,400	106,000
November	14,600	3,470	21,500	10,800	6,200	33,400	19,700	95,100
December	13,300	9,100	18,000	11,000	6,200	31,700	6,850	82,800
2023:								
January	13,600	9,640	22,100	10,900	6,200	25,400	3,050	77,300
February	13,000	6,040	22,200	9,380	6,200	15,000	1,680	60,500
March	14,300	9,160	22,200	11,400	6,200	15,400	1,400	65,700
April	35,100	12,000	19,000	11,200	6,200	25,100	300	73,800
May	39,900	10,100	15,400	11,700	6,200	25,100	5,950	74,400
June	34,500	9,050	19,000	10,700	6,200	31,700	26,900	104,000
July	20,400 <sup>r</sup>	5,210	16,500	10,800	6,200	39,400	22,600	101,000
August	24,000	6,560	14,700	11,100	6,200	29,000	37,600	105,000

<sup>&</sup>lt;sup>e</sup>Estimated. <sup>p</sup>Preliminary. <sup>r</sup>Revised.

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

<sup>&</sup>lt;sup>2</sup>Chemical plants, foundries, ingot makers, and miscellaneous manufacturers. These plants are surveyed by the U.S. Geological Survey on an annual basis; data after 2021 not yet available. Monthly data are estimated based on yearend 2021 stocks.

<sup>&</sup>lt;sup>3</sup>Commodity Exchange Inc.

<sup>&</sup>lt;sup>4</sup>London Metal Exchange Ltd., U.S. warehouses.

## TABLE 11 AVERAGE PRICES FOR REFINED COPPER IN THE UNITED STATES AND ON THE LONDON METAL EXCHANGE

#### (Cents per pound)

	COMEX		
	first	U.S. producers	LME
Period	position <sup>1</sup>	cathode <sup>2</sup>	grade A cash <sup>3</sup>
2022:			
August	361.500	372.500	361.070
September	348.021	359.021	350.800
October	347.386	358.386	345.649
November	367.683	378.483	364.184
December	381.645	391.895	379.511
Year	400.719	410.775	399.791
2023:			
January	412.233	423.233	408.200
February	408.824	418.824	406.165
March	404.915	414.915	400.734
April	400.037	410.037	399.767
May	374.173	384.173	373.469
June	379.598	389.598	380.362
July	383.570	393.570	383.041
August	376.330	386.330	378.804
January-August	392.460	402.585	391.318

Listed as "COMEX high grade first position." COMEX refers to the Commodity Exchange Inc.

Source: S&P Global Platts Metals Week.

<sup>&</sup>lt;sup>2</sup>Sum of "COMEX high grade first position" and "NY dealer premium cathode." Reflects the delivered spot price of copper cathode to U.S. consumers by U.S. producers.

<sup>&</sup>lt;sup>3</sup>LME refers to the London Metal Exchange Ltd.

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

#### (Cents per pound)

-			De	ealers
				Red brass
	Brass mills	Refiners	No. 2	turnings and
Period	no. 1 scrap	no. 2 scrap	scrap	borings
2022:				
August	350.65	322.65	244.00	153.00
September	335.52	307.81	254.50	148.00
October	333.62	308.71	247.50	148.00
November	356.15	332.15	261.50	150.50
December	371.67	348.57	270.50	155.50
Year	390.04	358.05	296.29	183.13
2023:				
January	401.30	379.30	289.00	159.00
February	397.03	374.29	321.50	159.00
March	392.67	369.41	319.00	156.50
April	389.50	365.84	316.50	158.00
May	365.86	341.68	302.50	154.00
June	371.69	347.00	286.50	154.00
July	376.35	351.85	290.00	168.00
August	369.28	343.74	294.00	187.50
January-August	382.96	359.14	302.38	162.00

Source: Fastmarkets-AMM.

 ${\bf TABLE~13} \\ {\bf U.S.~IMPORTS~FOR~CONSUMPTION~OF~UNMANUFACTURED~COPPER}^1$ 

(Metric tons, copper content)

	Ore and concentrates <sup>2</sup>			Matte, ash, and precipitates <sup>3</sup>			Bli	ster and anode	s <sup>4</sup>	Refined <sup>5</sup>		
	<del></del>	2023 January–		-	2023 January–			2023 January–			202	23
Country or												January-
locality	2022	August	August	2022	August	August	2022	August	August	2022	August	August
Austria										54		
Belgium				384		175				2		
Canada	11,700		3,270	581	70	352	(6)	(6)	5	118,000	13,800	85,900
Chile										472,000	32,000	433,000
China							(6)		9	897	38	362
Congo (Kinshasa)										8,910		11,800
Finland							281		78	39	35	35
France							15			53		47
Germany	(6)			94			(6)		(6)	3,410	117	1,740
Hungary	9		19									
India	11					(6)			(6)	57		
Japan	(6)	(6)	(6)				(6)		(6)	1,370	89	1,590
Korea, Republic of							1		1	10		35
Mexico			2	25	5	19	(6)			75,500	986	9,950
Peru										50,100	7,260	58,900
Qatar				43								
Slovakia				14								
Spain				51		151	(6)					
United Kingdom	(6)			(6)		(6)	5	(6)	1	138		
Zambia										1,230		2,040
Other	(6)			1			4	(6)	(6)	11	13	23
Total	11,700	(6)	3,290	1,190	75	697	306	(6)	94	732,000	54,300	606,000

<sup>--</sup> Zero.

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

<sup>&</sup>lt;sup>2</sup>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.

<sup>&</sup>lt;sup>3</sup>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.

<sup>&</sup>lt;sup>4</sup>HTS code 7402.00.0000.

<sup>&</sup>lt;sup>5</sup>HTS codes 7403.11.0000, 7403.12.0000, 7403.13.0000, and 7403.19.0000.

<sup>&</sup>lt;sup>6</sup>Less than ½ unit.

TABLE 14
U.S. EXPORTS OF UNMANUFACTURED COPPER<sup>1</sup>

(Metric tons, copper content)

	Ore	Ore and concentrates <sup>2</sup>			Matte, ash, and precipitates <sup>3</sup>			ster and anode	$s^4$	Refined <sup>5</sup>		
	2023			2023			2023				2023	
Country or			January-	nuary–	January–				January-			January-
locality	2022	August	August	2022	August	August	2022	August	August	2022	August	August
Belgium	70		76	5,950	387	3,880	211	449	591		60	66
Bulgaria	1,540											
Canada	39,800	2,910	29,400	13,500	184	2,630	6,740	3,260	22,300	14,200	103	2,410
China	56,900	1,860	35,300	378		416	60	10	73	2,150	44	221
Costa Rica			5	345		4		11	11	(6)		3
Germany	1,590			235	98	220	244		48	1	829	3,530
India			9	16		36	1,560		187	34	(6)	37
Israel							115		26	98		12
Italy						2	155	27	107	10		2
Japan	11,000		4,260	361	32	52	20	1	31	23		2
Korea, Republic of		11	11	189		9	1,570	138	984	133	(6)	47
Madagascar	1,220											
Malaysia	186	13	40	147		126	168	43	553	51	67	880
Mexico	232,000	16,800	164,000	30	24	1,080	260	1	115	7,680	1,650	8,130
Netherlands				40		29	4			1,070	632	2,010
Philippines	7,770			(6)		317	67		7	35		
Poland				270	77	772						
Singapore			5	414		181	40		2	22	31	80
Slovakia				1,210	34	299						
Spain	26			1,510	292	1,850	42			376		178
Taiwan			6,000	86		1	137	20	45	25		14
Thailand				158		13	94		20		1	1
Turkey				233		159	20		20	20		
United Kingdom				4		4	40		6	1,630		6
Other	718	23	3,630	194		158	378	47	257	57	165	812
Total	353,000	21,600	243,000	25,200	1,130	12,200	11,900	4,010	25,300	27,600	3,580	18,500
Zero				·						·		

<sup>--</sup> Zero.

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

<sup>&</sup>lt;sup>2</sup>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.

<sup>&</sup>lt;sup>3</sup>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.

<sup>&</sup>lt;sup>4</sup>Schedule B code 7402.00.0000.

<sup>&</sup>lt;sup>5</sup>Schedule B codes 7403.11.0000, 7403.12.0000, 7403.13.0000, and 7403.19.0000.

<sup>&</sup>lt;sup>6</sup>Less than ½ unit.

TABLE 15 U.S. IMPORTS FOR CONSUMPTION OF COPPER  $\mathsf{SCRAP}^1$ 

		Unalloyed <sup>2</sup>	Alloyed <sup>3</sup>				
	·	202	2023				
Country or			January-			January-	
locality	2022	August	August	2022	August	August	
Antigua and Barbuda				188	14	87	
Bahamas, The				612	35	401	
Barbados				326	2	79	
Bermuda	12		24	90	12	59	
Bolivia	46			106	19	59	
Brazil	14		113	69	8	228	
Canada	17,600	1,160	10,200	41,800	2,430	22,800	
Cayman Islands				243	32	147	
Colombia	196	20	98	106	19	102	
Costa Rica	712	119	528	1,350	80	643	
Dominican Republic	1,350	47	818	2,090	87	940	
Ecuador	24			57	23	111	
El Salvador				1,090	43	588	
Germany	260	11	321	50	29	68	
Grenada	<del></del>			72	7	95	
Guatemala				309		174	
Haiti				104	52	169	
Honduras	24	23	42	787	118	765	
Jamaica	7			461	64	278	
Mexico	12,200	1,180	8,810	42,900	4,450	30,700	
Nicaragua	<del></del>			194		35	
Panama	1,190	61	521	405	57	336	
Peru				225		57	
Saudi Arabia	<del></del>			134			
Sint Maarten	1			54	32	118	
Saint Lucia	25			269	20	144	
Saint Vincent and the Grenadines	<del></del>			91	15	103	
Suriname	360	23	176	69	14	65	
Uruguay	73		27	20		12	
Vietnam	62			50			
Other	75	32	95	401	91	416	
Total	34,200	2,670	21,700	94,700	7,750	59,700	

<sup>--</sup> Zero.

<sup>&</sup>lt;sup>1</sup>Data are rounded to no more than three significant digits; may not add to totals shown.
<sup>2</sup>Harmonized Tariff Schedule of the United States (HTS) codes 7404.00.3020 and 7404.00.6020.

 $<sup>^3</sup> HTS\ codes\ 7404.00.3045,\ 7404.00.3055,\ 7404.00.3065,\ 7404.00.3090,\ 7404.00.6045,\ 7404.00.6055,\ 7404.00.6065,\ and\ 3404.00.3065,\ 7404.00.3065,\ 7404.00.3090,\ 7404.00.6045,\ 7404.00.6065,\$ 7404.00.6090.

TABLE 16
U.S. EXPORTS OF COPPER SCRAP<sup>1</sup>

				Unalloyed <sup>2</sup>		Alloyed <sup>3</sup>						
		2023							2023			
		No. 1		No. 2		Other			Segregated		Unsegregated	
Country or	·-		January-	January–		January–			January-		January-	
locality	2022	August	August	August	August	August	August	2022	August	August	August	August
Austria	1,300	17	127	59	325			1,210	197	801	37	402
Belgium	33,200	1,050	7,640	885	7,230	270	3,470	8,860	79	616	656	4,300
Canada	60,900					5,760	47,900	46,200			2,510	19,300
China	260,000	8,680	52,900	3,700	31,900	14,600	90,400	31,900	1,360	13,200	1,950	11,500
Germany	15,400	1,040	8,270	112	579	790	4,130	15,300		391	1,180	7,420
Greece	8,830	608	2,880			350	1,070	2,170		59	156	1,270
Hong Kong	16,800	137	551	549	5,960	452	3,910	3,760	96	383	223	1,680
India	19,900	693	5,770	122	982	787	5,790	65,700	1,390	11,000	2,640	24,200
Japan	25,400	396	2,930	645	8,040	467	2,450	6,980	43	672	445	4,060
Korea, Republic of	42,200	1,060	7,430	609	3,320	874	6,380	11,400	227	2,400	537	5,540
Malaysia	24,700	1,470	9,110	239	2,620	1,060	7,760	41,700	527	4,490	2,770	22,100
Mexico	3,120	192	1,630	1	3		161	8,380		228	3	1,310
Netherlands	7,600	98	927		98	71	716	1,540				196
Pakistan	1,020		177		5		41	26,300		80	251	11,400
Philippines	1,660		526			55	449	757	9	70		560
Poland	15,700	397	2,270		20	801	8,240	1,030		20	59	308
Singapore	1,210	100	1,710		20			264			41	212
Slovakia	1,550	39	617					2,500		642		330
Spain	3,860	76	335	17	56	51	747	7,380	100	842	524	2,660
Sweden	581		30					1,940			6	254
Taiwan	13,100	311	1,190	79	1,320	364	2,480	4,440	22	156	426	3,000
Thailand	23,900	983	5,150	20	278	2,100	14,200	39,600	354	2,370	3,530	20,400
Turkey	1,020	4	456					2,320	4	24	171	557
United Arab Emirates	766		295					5,790			744	6,240
Vietnam	139	154	1,020		226	323	1,110	929	35	35	21	241
Other	2,180	207	539	99	234	27	443	2,400	110	307	210	1,280
Total	586,000	17,700	115,000	7,140	63,300	29,300	202,000	341,000	4,550	38,800	19,100	151,000

<sup>--</sup> Zero.

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

<sup>&</sup>lt;sup>2</sup>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).

 $<sup>^{3}</sup>$ 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.