

# Mineral Industry Survey

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## **COPPER IN APRIL 2017**

In April 2017, domestic mine production of recoverable copper was 109,000 metric tons (t). The average daily mine production was 3,650 t, slightly less than that in March and a decrease of 9% compared with April 2016. Year-to-date recoverable mine production through April 2017 was 434,000 t, a decline of 10% relative to the same period in 2016.

Total U.S. refinery production in April 2017 was 91,000 t; electrolytic and electrowon production data are available in table 4. Average daily total refinery production was 3,040 t, a decline of 11% compared with that in March and 9% less than that in April 2016. A scheduled maintenance shutdown at Freeport-McMoRan Inc.'s (Phoenix, AZ) Miami smelter in Arizona affected refined copper output during April 2017 (Freeport-McMoRan Inc., 2017, p. 23). Year-to-date refinery production through April 2017 was 391,000 t, a decrease of 6% relative to the same period in 2016 (fig. 1; tables 2, 4).

Smelter production in April 2017 was 40,700 t. The average daily smelter production was 1,360 t, 20% less than that in March and 14% lower than the daily average in April 2016. Year-to-date smelter production through April 2017 was 190,000 t, an increase of 5% compared with the same period during the prior year (table 3, 4).

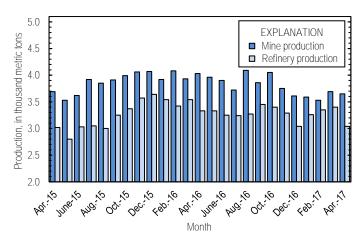


Figure 1. Average daily U.S. copper mine (recoverable) and refinery production from April 2015 through April 2017. Source: U.S. Geological Survey.

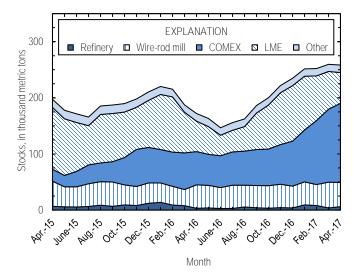


Figure 2. Monthly domestic refined copper stocks, by type, from April 2015 through April 2017. Sources: American Metal Market, London Metal Exchange Ltd., and U.S. Geological Survey.

#### Stocks

Refined copper stocks in the United States totaled 258,000 t at the end of April 2017, a slight decline from those in March and 50% greater than those in April 2016. Prior to April 2017, U.S. copper stocks increased for nine consecutive months. COMEX stocks rose by 8%, stocks at wire-rod mills fell by 5%, and London Metal Exchange Ltd. stocks decreased by 19% compared with those at the end of March (fig. 2, table 10).

#### **Prices**

The average April 2017 COMEX spot copper price was \$2.59 per pound, slightly less than \$2.64 per pound in March and 18% greater than \$2.18 per pound in April 2016 (fig. 3, table 11). Lower-than-expected domestic demand (particularly in the construction industry) and a high availability of copper scrap contributed to the price decline (Barker, 2017). The average price of New York dealers' number 2 scrap in April 2017 was

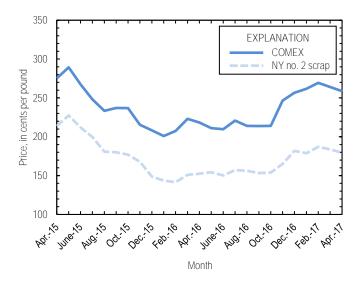


Figure 3. Monthly average COMEX copper price and New York no. 2 copper scrap price from April 2015 through April 2017. Sources: American Metal Market, Platts Metals Week.

\$1.80 per pound, down slightly from the average price in March and 18% higher than the average price in April 2016 (table 12).

# **Industry News**

PT Freeport Indonesia, a subsidiary of Freeport-McMoRan Inc., resumed exports of copper concentrate from the Grasberg Mine in late April. Freeport's license to ship concentrates from Indonesia had expired on January 11, leading the company to

halt mining operations at Grasberg from February 10 through March 20 (Hotter, 2017; Teo, 2017). A new temporary license will permit exports through October 10, and negotiations with the Government of Indonesia to reach a long-term agreement were ongoing. Owing primarily to the export dispute, Freeport reported that its total copper sales in the first quarter of 2017 were nearly 87,000 t less than those during the first quarter of 2016 (Mir, 2017; Yang, 2017).

#### **References Cited**

Barker, Dalton, 2017, Copper players grow bleak as summer nears: American Metal Market, April 19. (Accessed April 21, 2017, via http://www. amm.com/.)

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Mir, Fawad, 2017, Freeport receives temporary permit to resume exports from Grasberg: S&P Global Market Intelligence, April 4. (Accessed April 7, 2017, via http://www.snl.com/.)

Teo, Vivian, 2017, Freeport seeks 'workable' Indonesia solution: American Metal Market, March 31. (Accessed April 3, 2017, via http://www.amm.com/.)

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 $\label{eq:table 1} \textbf{TABLE 1}$  SALIENT STATISTICS OF THE COPPER INDUSTRY IN THE UNITED STATES  $^1$ 

(Metric tons, unless otherwise specified)

				201	17	
	Source					January-
	table <sup>2</sup>	2016 <sup>p</sup>	February	March	April	April
Production:						
Primary:						
Mine, recoverable	(2)	1,430,000	98,700 <sup>r</sup>	114,000	109,000	434,000
Smelter, total	(3)	563,000	47,800	52,200	40,700	190,000
Refinery:						
Electrolytic, domestic and foreign	(4)	561,000	48,200	53,200	42,300	195,000
Electrowon	(4)	615,000	41,600	49,000	45,600	183,000
Total	(4)	1,180,000	89,800	102,000	87,800	378,000
Secondary recoverable copper:						
Refineries	(5)	46,300	4,090	3,240	3,230	13,800
Ingot makers <sup>3</sup>	(5)	73,100	6,090	6,090	6,090	24,400
Brass and wire-rod mills	(5)	621,000	53,000	55,100	54,700	216,000
Foundries, etc. <sup>3</sup>	(5)	47,200	3,940	3,940	3,940	15,700
Consumption:						
Apparent	(8)	1,880,000	147,000	172,000	141,000	614,000
Refined (reported)	(7)	1,780,000	150,000	149,000	147,000	593,000
Purchased copper-base scrap	(9)	917,000	80,500	82,700	82,200	326,000
Stocks at end of period:						
Total refined	(10)	235,000	252,000	260,000	258,000	258,000
Blister, etc.	(10)	14,200	13,200	13,500	26,100	26,100
Prices, U.S. producers cathode (cents per pound) <sup>4</sup>	(11)	224.873	274.051	269.122	263.626	268.291
Imports: <sup>5</sup>						
Ore and concentrate <sup>6</sup>	(13)	67 <sup>r</sup>	1,590	9,050	9	10,700
Refined	(13)	708,000	59,600	84,800	51,900	269,000
Exports: <sup>5</sup>						
Ore and concentrate <sup>6</sup>	(14)	331,000	14,000	17,200	26,400	66,400
Refined	(14)	134,000	9,100	9,760	12,200	43,400

<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, 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>Monthly data estimated based on 2015 monthly average.

<sup>&</sup>lt;sup>4</sup>Source: Platts Metals Week.

<sup>&</sup>lt;sup>5</sup>Source: U.S. Census Bureau.

<sup>&</sup>lt;sup>6</sup>Copper content.

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

#### (Metric tons)

	Re	coverable copp	er	Contained copper			
Period	Arizona	Others <sup>2</sup>	Total	Electrowon	Concentrates <sup>3</sup>	Total	
2016: <sup>p</sup>							
April	81,200	39,500	121,000	49,700	73,900	124,000	
May	83,500	39,400	123,000	51,700	74,000	126,000	
June	79,800	37,200	117,000	50,700	69,000	120,000	
July	80,200	35,100	115,000	54,000	63,700	118,000	
August	86,400	40,300	127,000	52,700	76,900	130,000	
September	79,400	36,400	116,000	51,400	67,000	118,000	
October	81,800	43,700	125,000	53,300	74,900	128,000	
November	74,200	38,200	112,000	48,700	66,100	115,000	
December	76,600	35,300	112,000	47,900	66,600	115,000	
January-December	969,000	461,000	1,430,000	615,000	848,000	1,460,000	
2017:							
January	71,000 <sup>r</sup>	40,200	111,000	46,800	66,900 <sup>r</sup>	114,000 <sup>r</sup>	
February	64,200 <sup>r</sup>	34,500	98,700 <sup>r</sup>	41,600	59,400 <sup>r</sup>	101,000	
March	77,500	36,800	114,000	49,000	67,900	117,000	
April	72,500	36,800	109,000	45,600	66,300	112,000	
January-April	285,000	148,000	434,000	183,000	261,000	443,000	

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

 $\label{eq:table 3} \text{COPPER PRODUCED AT SMELTERS IN}$  THE UNITED STATES  $^{1,2}$ 

(Metric tons, copper content)

	Anode
Period	production
2016: <sup>p</sup>	
April	47,300
May	51,900
June	45,400
July	33,100
August	47,700
September	54,000
October	51,900
November	43,300
December	55,000
January-December	563,000
2017:	
January	48,900
February	47,800
March	52,200
April	40,700
January-April	190,000

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

<sup>&</sup>lt;sup>3</sup>Includes copper content of precipitates and other metal concentrates.

<sup>&</sup>lt;sup>1</sup>Includes blister and copper anode from primary or secondary sources.

<sup>&</sup>lt;sup>2</sup>Data are rounded to no more than three significant digits; may not add to total shown.

 ${\bf TABLE~4}$  PRODUCTION OF REFINED COPPER, BY SOURCE AND METHOD OF RECOVERY  $^1$ 

#### (Metric tons)

	Pri	nary materials			
	Electrolytically				Total
Period	refined <sup>2</sup>	Electrowon	Total	Scrap	refined
2016: <sup>p</sup>					
April	47,100	49,700	96,800	3,200	100,000
May	48,200	51,700	99,900	3,180	103,000
June	43,600	50,700	94,200	3,260	97,500
July	43,200	54,000	97,200	3,280	100,000
August	45,200	52,700	97,900	3,300	101,000
September	48,200	51,400	99,500	3,810	103,000
October	48,800	53,300	102,000	3,410	105,000
November	46,600	48,700	95,300	3,220	98,500
December	42,900	47,900	90,800	3,330	94,100
January-December	561,000	615,000	1,180,000	46,300	1,220,000
2017:					
January	51,100	46,800	97,900	3,240	101,000
February	48,200	41,600	89,800	4,090	93,900
March	53,200	49,000	102,000	3,240	105,000
April	42,300	45,600	87,800	3,230	91,000
January–April	195,000	183,000	378,000	13,800	391,000

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

 ${\it TABLE 5}$  COPPER RECOVERABLE IN UNALLOYED AND ALLOYED FORM FROM PURCHASED COPPER-BASE SCRAP  $^1$ 

#### (Metric tons, copper content)

	Refin	eries <sup>2</sup>	Ingot n	nakers <sup>3</sup>	Brass and w	Brass and wire-rod mills		Foundries, etc. <sup>3</sup>	
Period	New scrap	Old scrap	New scrap	Old scrap	New scrap	Old scrap	New scrap	Old scrap	Total <sup>4</sup>
2016: <sup>p</sup>									
April	1,630	1,570	1,290	4,800	50,500	2,790	3,040	898	66,500
May	1,610	1,570	1,290	4,800	50,400	2,610	3,040	898	66,200
June	1,680	1,580	1,290	4,800	49,600	3,000	3,040	898	65,800
July	1,680	1,600	1,290	4,800	48,200	2,600	3,040	898	64,100
August	1,680	1,620	1,290	4,800	48,900	2,790	3,040	898	65,000
September	1,680	2,130	1,290	4,800	49,700	2,730	3,040	898	66,300
October	1,680	1,740	1,290	4,800	51,800	3,020	3,040	898	68,300
November	1,680	1,540	1,290	4,800	49,900	3,060	3,040	898	66,200
December	1,680	1,650	1,290	4,800	49,100	2,860	3,040	898	65,300
January-December	19,900	26,400	15,400	57,600	586,000	35,200	36,500	10,800	788,000
2017:									
January	1,680	1,560	1,290	4,800	49,500	3,360	3,040	898	66,100
February	1,680	2,420	1,290	4,800	50,100	2,940	3,040	898	67,100
March	1,680	1,560	1,290	4,800	52,000	3,110	3,040	898	68,400
April	1,680	1,550	1,290	4,800	51,600	3,110	3,040	898	68,000
January-April	6,710	7,090	5,150	19,200	203,000	12,500	12,200	3,590	270,000

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>From domestic and foreign source materials.

 $<sup>^{1}\</sup>mathrm{Data}$  are rounded to no more than three significant digits; may not add to totals shown.

<sup>&</sup>lt;sup>2</sup>Electrolytically refined and fire-refined from scrap based on source of material at smelter or refinery level.

<sup>&</sup>lt;sup>3</sup>Monthly data and 2016 cumulative data estimated based on 2015 annual data.

<sup>&</sup>lt;sup>4</sup>Does not include an estimate, based on reported 2015 data, of 3,050 tons per month from new scrap and 2,510 tons per month from old scrap of copper recovered from scrap other than copper-base.

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

## (Metric tons, gross weight)

	Production		Shi	pments	Stocks, e	end of period
Period	Brass mills	Wire-rod mills	Brass mills	Wire-rod mills	Brass mills	Wire-rod mills
2016: <sup>p</sup>						_
April	73,500	109,000	73,300	108,000	29,200	29,400
May	72,300	110,000	73,700	111,000	27,800	28,300
June	72,300	112,000	71,200	110,000	28,900	30,200
July	72,800	103,000	72,700	103,000	29,100	29,600
August	74,400	113,000	73,800	113,000	29,600	29,600
September	72,500	106,000	73,500	110,000	28,700	25,200
October	74,800	111,000	75,100	109,000	28,500	27,100
November	72,700	108,000	72,800	107,000	28,300	28,100
December	72,300	96,100	72,100	97,900	28,500	26,300
January-December	880,000	1,310,000	880,000	1,300,000	28,500	26,300
2017:						
January	73,500	111,000	72,900	113,000	29,100	23,600
February	72,800	102,000	73,100	97,100	28,900	28,600
March	74,200 <sup>r</sup>	110,000	74,400 <sup>r</sup>	113,000	28,600 r	26,000
April	73,400	107,000	73,500	103,000	28,500	30,300
January-April	294,000	430,000	294,000	426,000	28,500	30,300

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

 $\label{eq:table 7} \textbf{TABLE 7}$  CONSUMPTION OF REFINED COPPER  $^1$ 

#### (Metric tons)

	Brass	Wire-rod	Other	
Period	mills	mills	plants <sup>2</sup>	Total
2016: <sup>p</sup>				
April	34,900	107,000	5,820	148,000
May	34,400	108,000	5,820	149,000
June	35,500	110,000	5,820	151,000
July	35,500	100,000	5,820	142,000
August	35,600	111,000	5,820	153,000
September	35,400	103,000	5,820	145,000
October	35,400	110,000	5,820	151,000
November	34,400	110,000	5,820	150,000
December	33,800	93,000	5,820	133,000
January-December	421,000	1,290,000	69,800	1,780,000
2017:				
January	34,600	108,000	5,820	148,000
February	34,800	109,000	5,820	150,000
March	35,300	108,000	5,820	149,000
April	34,900	106,000	5,820	147,000
January–April	140,000	431,000	23,300	593,000

Preliminary.

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

 $<sup>^{1}\</sup>mathrm{Data}$  are rounded to no more than three significant digits; may not add to totals shown.

<sup>&</sup>lt;sup>2</sup>Monthly and 2016 cumulative consumption data by ingot makers, chemical plants, foundries, and miscellaneous manufacturers is estimated based on 2015 annual data.

 $\label{eq:table 8} \textbf{U.S.} \ \textbf{APPARENT CONSUMPTION OF COPPER}^1$ 

#### (Metric tons)

	Refined copper	Copper in	Refined general	Refined	Stock change	Apparent
Period	production	old scrap <sup>2</sup>	imports <sup>3</sup>	exports <sup>3</sup>	during period	consumption
2016: <sup>p</sup>						
April	96,800	12,600	51,800 <sup>r</sup>	9,650	(15,500)	167,000 <sup>r</sup>
May	99,900	12,400	52,400	22,000	(8,810)	152,000
June	94,200	12,800	63,400	5,600	(16,400)	181,000
July	97,200	12,400	68,200	6,510	9,060	162,000
August	97,900	12,600	62,200 <sup>r</sup>	6,420	6,690	160,000 r
September	99,500	13,100	66,800 <sup>r</sup>	6,630	23,800	149,000
October	102,000	13,000	67,600 <sup>r</sup>	7,750	13,900	161,000 <sup>r</sup>
November	95,300	12,800	65,900 <sup>r</sup>	13,100	21,700	139,000
December	90,800	12,700	59,400 <sup>r</sup>	8,040	12,800	142,000 r
January-December	1,180,000	160,000	701,000 <sup>r</sup>	134,000 <sup>r</sup>	26,100	1,880,000
2017:						
January	97,900	13,100	72,400	12,300	17,000	154,000
February	89,800	13,600	53,500	9,100	506	147,000
March	102,000	12,900	73,800	9,760	7,510	172,000
April	87,800	12,900	51,400	12,200	(1,470)	141,000
January–April	378,000	52,400	251,000	43,400	23,500	614,000

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

 ${\bf TABLE~9}$  CONSUMPTION OF PURCHASED COPPER-BASE SCRAP  $^1$ 

# (Metric tons, gross weight)

	Smelters				Brass and					
	and ref	ineries	Ingot n	nakers <sup>2</sup>	wire-ro	d mills <sup>3</sup>	Foundri	es, etc. <sup>2</sup>	Total scrap	
Period	New scrap	Old scrap	New scrap		New scrap	Old scrap	New scrap	Old scrap	used	
2016: <sup>p</sup>										
April	1,680	1,570	2,890	5,460	58,400	2,880	3,660	992	77,600	
May	1,660	1,570	2,890	5,460	58,400	2,690	3,660	992	77,300	
June	1,730	1,590	2,890	5,460	57,500	3,090	3,660	992	76,900	
July	1,730	1,590	2,890	5,460	56,200	2,670	3,660	992	75,100	
August	1,730	1,590	2,890	5,460	56,900	2,870	3,660	992	76,000	
September	1,730	1,590	2,890	5,460	57,600	2,800	3,660	992	76,700	
October	1,730	1,590	2,890	5,460	59,800	3,120	3,660	992	79,200	
November	1,730	1,590	2,890	5,460	58,000	3,250	3,660	992	77,500	
December	1,730	1,590	2,890	5,460	57,100	2,990	3,660	992	76,400	
January-December	20,500	22,400	34,700	65,500	681,000	36,400	43,900	11,900	917,000	
2017:										
January	1,820	4,630	2,890	5,460	57,500	3,490	3,660	992	80,400	
February	1,820	4,630	2,890	5,460	58,000	3,040	3,660	992	80,500	
March	1,820	4,630	2,890	5,460	60,100	3,240	3,660	992	82,700	
April	1,820	4,630	2,890	5,460	59,600	3,190	3,660	992	82,200	
January–April	7,300	18,500	11,600	21,800	235,000	13,000	14,600	3,970	326,000	

<sup>&</sup>lt;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>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 2015 data.

<sup>&</sup>lt;sup>3</sup>Source: U.S. Census Bureau.

<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>Monthly data estimated from 2015 annual data.

<sup>&</sup>lt;sup>3</sup>Consumption at brass and wire-rod mills assumed equal to receipts.

# ${\bf TABLE~10}$ ${\bf COPPER~STOCKS~AT~END~OF~PERIOD}^1$

#### (Metric tons)

				F	Refined coppe	er		
	Crude		Wire-rod					Total
Period	copper <sup>2</sup>	Refineries <sup>3</sup>	$mills^3$	Brass mills <sup>3</sup>	Other <sup>4</sup>	Comex	LME <sup>5</sup>	refined
2016: <sup>p</sup>	-							
April	12,400	3,200	41,600	7,950	5,730	59,400	54,100	172,000
May	15,500	3,950	40,100	8,670	5,730	55,400	49,300	163,000
June	18,700	2,820	37,300	7,680	5,730	56,600	36,600	147,000
July	13,500	3,040	41,200	7,940	5,730	59,300	38,600	156,000
August	12,500	5,660	38,500	7,930	5,730	61,000	43,600	162,000
September	12,600	4,230	39,500	7,650	5,730	64,000	65,200	186,000
October	14,700	3,230	40,200	7,270	5,730	65,300	78,400	200,000
November	13,800	4,290	41,800	7,070	5,730	70,600	92,400	222,000
December	14,200	3,750	38,900	7,380	5,730	80,100	98,900	235,000
2017:								
January	11,700	9,250	40,900	7,430	5,730	92,600	95,700	252,000
February	13,200	8,010	37,400	7,330	5,730	114,000	79,600	252,000
March	13,500	3,860	45,800	7,050	5,730	130,000	67,200	260,000
April	26,100	5,980	43,300	7,590	5,730	141,000	54,700	258,000

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

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

#### (Cents per pound)

		Comex	LME
	U.S. producers	first	cash price
Period	cathode1	position <sup>2</sup>	Grade A
2016:			
April	223.726	218.288	220.017
May	216.831	211.143	213.544
June	215.520	209.770	210.025
July	226.296	220.733	220.235
August	219.284	214.096	215.811
September	218.752	213.752	213.496
October	218.885	214.010	214.629
November	251.388	246.638	246.878
December	261.183	256.683	256.997
January-December	224.873	219.727	220.571
2017:			
January	266.363	261.863	260.225
February	274.051	269.426	269.484
March	269.122	264.122	264.040
April	263.626	258.626	258.428
January–April	268.291	263.509	263.044

<sup>&</sup>lt;sup>1</sup>Sum of "Comex high grade first position" and "NY dealer premium cathode."

Source: Platts Metals Week.

<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 content of blister and anode.

<sup>&</sup>lt;sup>3</sup>Stocks of refined copper as reported; no estimates are made for nonrespondents.

<sup>&</sup>lt;sup>4</sup>Monthly estimates based on reported and 2015 annual data, comprising stocks at ingot makers, chemical plants, foundries, and miscellaneous manufacturers.

<sup>&</sup>lt;sup>5</sup>London Metal Exchange Ltd., U.S. warehouses.

<sup>&</sup>lt;sup>2</sup>Listed as "Comex high grade first position."

 $\label{eq:table 12} \textbf{AVERAGE BUYING PRICES FOR COPPER SCRAP}$ 

(Cents per pound)

			Dealers (New York)	
				Red brass
	Brass mills	Refiners	No. 2	turnings and
Month	No. 1 scrap	No. 2 scrap	scrap	borings
2016:				
April	217.98	199.00	152.50	130.00
May	210.83	192.43	154.26	132.38
June	210.30	191.68	150.27	130.14
July	221.00	201.70	157.15	134.10
August	213.54	192.26	156.20	133.35
September	213.43	191.88	153.21	131.57
October	212.71	190.05	153.88	131.95
November	241.32	218.05	165.00	137.50
December	248.38	224.48	181.98	146.00
January-December	218.01	197.52	155.05	132.17
2017:	-			
January	254.78	228.38	178.80	144.65
February	261.50	234.00	186.97	148.00
March	256.70	228.57	183.67	146.30
April	251.10	225.95	179.50	145.00
January-April	256.02	229.23	182.24	145.99

Source: American Metal Market.

 ${\it TABLE~13}$  U.S. IMPORTS FOR CONSUMPTION OF COPPER (UNMANUFACTURED), BY CLASS  $^1$ 

# (Metric tons, copper content)

	Ore and concentrate			Matte, ash, and precipitates			Blis	ter and anod	es	Refined		
	2017				2017			2017			2017	
Country or	_	January-			January-		·	January-		-		January-
territory	2016	April	April	2016	April	April	2016	April	April	2016	April	April
Belgium				27		25					(2)	(2)
Canada	33 <sup>r</sup>			355	3	52	2			193,000	13,100	62,300
Chile										354,000	33,600	172,000
China							(2)			76	(2)	8
Congo (Kinshasa)										21,100	508	3,500
Finland							175	31	99	110	1	2
Germany							(2)			1,830	230	648
India	3									1,210		224
Japan				109		(2)	3		(2)	4,090	360	1,500
Mexico	3		10,600	41		10				102,000	3,600	25,000
Netherlands				69	26	58	(2)		2	(2)	3	3
Peru										24,800		2,450
Other	27	9	9	205	95	251	93 <sup>r</sup>	(2)	29	4,100 <sup>r</sup>	379	1,270
Total	67 <sup>r</sup>	9	10,700	806	124	397	274	31	130	708,000	51,900	269,000

<sup>&</sup>lt;sup>r</sup>Revised. -- 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>Less than ½ unit.

 ${\it TABLE~14}$  U.S. EXPORTS OF COPPER (UNMANUFACTURED), BY  ${\it CLASS}^1$ 

(Metric tons, copper content)

	Ore and concentrate			Matte, ash, and precipitates			Blis	ter and anode	es	Refined		
		2017			2017			2017			2017	
Country or	_		January-	_	January-		-		January-	•		January-
territory	2016	April	April	2016	April	April	2016	April	April	2016	April	April
Belgium	(2)			5,700	440	2,500	679	30	151			(2)
Canada	25,800	2,230	9,710	12,300	1,530	3,860	2,050	523	1,400	32,400 <sup>r</sup>	1,410	7,990
China	57,100 °	7,090	16,400	52			485	21	44	32,600	4,460	9,450
Germany				204	55	303	517	20	40	21	1	1
Hong Kong				36			1,070	59	402			
Italy							377 <sup>r</sup>	38	108	240	(2)	2
Japan	20,400	10	19	180		50	453	13	26	157	4	5
Korea, Republic of	138		32	352	18	55	1,420	116	750	85	959	1,050
Mexico	226,000	17,000	40,200				99	9	71	67,700	4,870	24,400
Singapore							42	10	10	13		4
Spain				40			266	20	61	4		1
Switzerland							24	6	14	5		
Taiwan				359		54	60	20	60	62		5
Other	853	9	45	883 <sup>r</sup>	19	19	1,970	182	553	518	513	561
Total	331,000	26,400	66,400	20,100	2,070	6,840	9,510 <sup>r</sup>	1,070	3,690	134,000	12,200	43,400

<sup>&</sup>lt;sup>r</sup>Revised. -- 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>Less than ½ unit.

 $\label{eq:table 15} \text{U.S. COPPER SCRAP IMPORTS}^1$ 

(Metric tons, gross weight)

		Unalloyed	Alloyed					
		201	7		2017			
Country or	_		January–	_		January– April		
territory	2016	April	April	2016	April			
Canada	13,300 <sup>r</sup>	1,770	7,010	52,200 <sup>r</sup>	7,510	26,000		
Chile	41	18	18	211	40	155		
Colombia	259	102	245	1,180	129	424		
Costa Rica	344	56	177	1,030	67	351		
Guatemala			29	326	45	106		
Honduras	102	6	19	357	20	108		
Mexico	12,900	850	3,080	34,400	2,570	11,800		
Nicaragua				264	17	48		
Other	2,170	160	937	6,180	438	2,880		
Total	29,100	2,960	11,500	96,100	10,800	41,800		

<sup>&</sup>lt;sup>r</sup>Revised. -- Zero.

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

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

(Metric tons, gross weight)

	Unalloyed								Alloyed					
				201	17		2017							
	_	No	. 1	No.	. 2	Other		_	Segregated		Unsegre	gated		
Country or	_	January-		January-		January-		_		January-		January-		
territory	2016	April	April	April	April	April	April	2016	April	April	April	April		
Belgium	9,030	193	814	192	647	73	765	8,390 <sup>r</sup>	195	561	180	1,230		
Canada	23,400					3,920	15,400	51,200			4,170	21,000		
China	284,000 <sup>r</sup>	9,820	38,700	6,110	28,700	9,350	42,700	376,000 <sup>r</sup>	8,120	38,000	21,800	83,400		
Germany	24,900	1,000	5,030	247	922	122	412	8,130 <sup>r</sup>	58	124	488	2,330		
Hong Kong	6,550 <sup>r</sup>	194	660	204	548	978	1,780	17,100	840	1,260	2,260	6,190		
India	1,670 <sup>r</sup>	117	294	121	179	257	641	23,000	1,780	5,030	235	685		
Japan	6,460	129	372	345	1,700	257	1,370	8,730	105	302	971	3,520		
Korea, Republic of	17,000 <sup>r</sup>	682	3,000	122	311	446	1,440	10,300	792	1,770	386	1,380		
Mexico	1,660	250	869			20	68	950 <sup>r</sup>		18	15	66		
Netherlands	12,100	290	1,250	37	97	334	1,360	1,170			20	38		
Spain	182	104	116	35	83		20	7,770		328	554	1,510		
Taiwan	8,290 <sup>r</sup>	238	1,560	167	448	5	86	1,740	57	246	60	359		
Thailand	121					(2)	3	1,050	19	59				
Other	16,100	648	5,020	23	701	114	262	16,900	311	1,240	1,780	4,780		
Total	411,000 r	13,700	57,700	7,600	34,400	15,900	66,400	532,000 <sup>r</sup>	12,300	49,000	32,900	126,000		

<sup>&</sup>lt;sup>r</sup>Revised. -- 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>Less than ½ unit.