

# Mineral Industry Surveys

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## TIN IN DECEMBER 2001

Domestic consumption of primary tin in December was estimated by the U.S. Geological Survey to be 5% lower than that in November and 6% lower than that in December 2000.

The Platts Metals Week average composite price for tin in December was \$2.90 per pound, 1% higher than that in November and 19% lower than that in December 2000. There was an almost steady price decline through most of 2001.

In Indonesia, the country's largest tin producer, PT Timah, announced its intention to sell its 25% stake in PT Koba Tin in order to raise capital and stave off the threat of bankruptcy. Koba is one of three firms that Timah owns jointly and plans to sell, but it is the only one of the three producing tin. Timah officials hoped to conclude the divestment in 2002 (American Metal Market, 2002b).

In Indonesia, the Ministry of Industry and Trade is reportedly backing a proposal to revise a ministerial decree on the export of tin concentrates. The adaptation would outlaw the export of tin concentrates. The provincial Governments of Bangka and Belitung already have pledged to support a ban on exports in order to protect Timah and private tin producer Koba. Both Timah and Koba have been plagued by illegal mining, which accounted for the vast majority of Indonesian tin ore exports in 2001. More than 4,000 illegal tin mining units, each averaging production of around 10 metric tons (t) per year of ore, are believed to be in operation on both companies' lease areas. At the end of 2001, 800-2,000 t per month of tin-in-concentrate was being exported from Bangka, mainly via Singapore to Malaysia and Thailand. Under increasing pressures from illegal mining as well as surging concentrate exports, Timah announced a production cut of 15% at the end of 2001. All of the company's existing inland mines, of which only 147 of 308 were operational in the final quarter of 2001, and a number of its operating high-cost dredges could be closed down (American Metal Market, 2002a).

In London, it was reported that the Nigerian Government's efforts to market the country's mineral resources have started to get results. British-based RBG Resources Plc has decided

to form a tin mining joint venture with Nigerian Mining Corp. (NMC). NMC said that more than 7,000 t of cassiterite and 3,000 t of columbite already had been produced from the deposit. RBG indicated that it had started working with NMC on development of the property. RBG would contribute mining expertise as well as equipment and financing to the project in exchange for 100% of the ore produced (American Metal Market, 2002c).

In China, it was reported by Antaika, the information center of the China National Nonferrous Metals Industry, that China's total unwrought tin output for the period January-November 2001 dipped to 81,000 tons, down 15% from the corresponding period in 2000. Antaika attributed the decline to weak prices and the shutdown of several mines. Officials expected the mines in the Nandan County of Guangxi to remain shut through 2002, due to the failure to comply with state safety standards. Nandan County accounts for about 50% of China's tin concentrate output. Much of China's production will come from Yunnan Tin Corp., which plans to produce 20,000-25,000 t of tin ingot in 2002 (Platts Metals Week, 2002a).

In Malaysia, officials at Malaysia Smelting Corp. (MSC) announced that refined tin metal capacity will be increased to 38,000 t annually from the previous 26,000 t yearly. Output has been enhanced by the company's recent acquisition of Iluka Resources Ltd.'s (Australia) 75% stake in Koba Tin. Koba has an annual capacity of 12,000 t (Platts Metals Week, 2002b).

Matsushita Electric Industrial Co. Ltd., best known for its "Panasonic" brand of consumer electronic and digital communications products, announced the development of an easy, efficient, and safe solder recycling process. Conventional processes use heat or high pressure to separate reusable solder from waste solder residue. In the new process, specially treated sesame seed waste is added to the melted compound solder residue of flow soldering machines to separate the reusable solder from the compound. The recycled pure solder can be formed into bars and used in the same way as

solder made from virgin materials. There presently are three Japanese and four overseas patents pending on this new method (Soldering and Assembly Technology, 2002).

### **Update**

On February 2, 2002, the Platts Metals Week composite price for tin was \$2.80 per pound.

### **References Cited**

American Metal Market, 2002a, Indonesia to ban tin concentrates exports:

- American Metal Market, v. 110, no. 8, January 11, p. 5.  
———2002b, PT Timah planning to sell stake in PT Koba Tin: American Metal Market, v. 110, no. 18, January 28, p. 6.  
———2002c, RBG Resources finances, advises Nigerian tin site: American Metal Market, v. 110, no. 15, January 23, p. 4.  
Platts Metals Week, 2002a, China's January-November tin output down 15%: Platts Metals Week, v. 73, no. 2, January 14, p. 14.  
———2002b, Koba ups MSC capacity: Platts Metals Week, v. 73, no. 3, January 21, p. 12.  
Soldering and Assembly Technology, 2002, Matsushita Electric develops unique solder recycling solution using sesame: Soldering and Assembly Technology, issue 4, p. 21.

TABLE 1  
SALIENT TIN STATISTICS 1/

(Metric tons, unless otherwise noted)

	2001			
	2000	November	December	January-December
Production, secondary e/ 2/	15,100	900	900	10,800
<u>Consumption:</u>				
Primary	38,100	3,270 r/	3,110	39,200
Secondary	8,940	859 r/	864	10,400
Imports for consumption, metal	44,900	2,820	NA	NA
Exports, metal	6,640	323	NA	NA
Stocks at end of period	10,400	7,470	7,700	XX
<u>Prices (average cents per pound): 3/</u>				
Metals Week composite 4/	370.16	287.17	289.63	XX
Metals Week New York dealer	254.92	190.88	191.03	XX
London, standard grade, cash	246.00	183.00	182.00	XX
Kuala Lumpur	244.12	178.48	183.09	XX

e/ Estimated. r/ Revised. NA Not available. XX Not applicable.

1/ Data are rounded to no more than three significant digits, except prices.

2/ Includes tin recovered from alloys and tinplate. The detinning of tinplate (coated steel) yields only a small part of the total.

3/ Source: Platts Metals Week.

4/ The Metals Week composite price is a calculated formula, not a market price, that includes fixed and finance charges, and a risk factor. It is normally substantially higher than other tin prices.

TABLE 2  
METALS WEEK COMPOSITE PRICE 1/

(Cents per pound)

Period	High	Low	Average
<u>2000:</u>			
December	361.83	355.46	359.43
Year	405.27	355.46	370.16
<u>2001:</u>			
January	359.89	350.60	355.86
February	355.03	349.76	352.96
March	352.74	341.70	348.45
April	346.75	340.32	342.70
May	348.21	336.94	342.78
June	344.36	325.63	332.74
July	321.14	291.50	306.98
August	285.47	270.73	280.33
September	278.39	262.81	268.50
October	275.81	264.30	270.42
November	301.03	272.87	287.17
December	297.98	283.04	289.64

1/ The Metals Week composite price is a calculated formula, not a market price, that includes fixed and finance charges, and a risk factor. It is normally substantially higher than other tin prices.

Source: Platts Metals Week.

TABLE 3  
TINPLATE PRODUCTION AND SHIPMENTS IN THE UNITED STATES 1/

(Metric tons, unless otherwise noted)

Period	Tinplate waste (waste, strips, cobbles, etc.) (gross weight)	Tinplate (all forms)			Shipments 2/
		Gross weight	Tin content	Tin per metric ton of plate (kilograms) r/	
2000	119,000	1,320,000 r/	8,800	6.7	2,290,000
2000:					
December	8,020	73,800 r/	628 r/	8.5	162,000
2001:					
January	7,480	148,000	710	4.8	179,000
February	7,310	144,000 r/	679	4.7	160,000
March	8,360	153,000 r/	663	4.3	167,000
April	6,830	142,000 r/	698	4.9	162,000
May	6,310	140,000 r/	679	4.9	181,000
June	6,070	132,000 r/	666	5.1	175,000
July	5,660	131,000 r/	651 r/	5.0	167,000
August	6,370	144,000	649 r/	4.5	185,000
September	6,210	149,000	668 r/	4.5	160,000
October	6,470	146,000	695 r/	4.8	183,000
November	6,550	146,000	702 r/	4.8	161,000
December	3,880	136,000	668 r/	4.9	NA

r/ Revised. NA Not available.

1/ Data are rounded to no more than three significant digits.

2/ Source: American Iron and Steel Institute monthly publication.

TABLE 4  
U.S. TIN IMPORTS FOR CONSUMPTION AND EXPORTS 1/

(Metric tons)

Country or product	2001			January- November
	2000	October	November	
Imports:				
Metal (unwrought tin):				
Bolivia	6,330	215	413	5,590
Brazil	5,860	380	701	4,890
Chile	2,630	--	--	122
China	10,200	159	220	6,220
Hong Kong	397	--	--	20
Indonesia	5,320	180	340	3,620
Malaysia	214	140	141	504
Peru	12,800	900	970	12,200
Russia	145	--	--	141
Singapore	20	40	--	145
United Kingdom	514	--	--	118
Other	434	25	28	433
Total	44,900	2,040	2,820	34,000
Other (gross weight):				
Alloys	4,370	217	421	3,000
Bars and rods	993	65	17	493
Foil, tubes, pipes	(2/)	(2/)	(2/)	1
Plates, sheets, strip	588	1	475	54
Waste and scrap	2,340	18	66	3,600
Miscellaneous	8,510	1,280	226	12,400
Total	16,800	1,580	1,210	19,600
Exports (metal)	6,640	304	323	4,090

-- Zero.

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

2/ Less than 1/2 unit.

Source: U.S. Census Bureau.

TABLE 5  
CONSUMPTION OF TIN IN THE UNITED STATES, BY FINISHED PRODUCT 1/

(Metric tons of contained tin)

Product	2001							
	2000	November			December			January-December
		Primary	Secondary	Total	Primary	Secondary	Total	
Alloys (miscellaneous) 2/	W	123	W	123	123	W	123	1,500
Babbitt	1,510	24	W	24	24	W	24	338
Bar tin and anodes	714	21	W	21	20	W	20	248
Bronze and brass	1,450	98	116	214	76	124	200	2,650
Chemicals	8,040	668	W	668	668	W	668	8,020
Collapsible tubes and foil	W	W	W	W	W	W	W	W
Solder	12,700	875 r/	395 r/	1,270 r/	796	394	1,190	16,200
Tinning	1,200	73 r/	--	73 r/	70	--	70	906
Tinplate 3/	8,800	702 r/	--	702 r/	668	--	668	7,570
Tin powder	W	W	W	W	W	W	W	W
White metal 4/	W	W	W	W	W	W	W	W
Other	3,640	78 r/	49 r/	127 r/	60	46	106	1,360
Total reported	38,100	2,660 r/	560 r/	3,220 r/	2,510	564	3,070	38,800
Estimated undistributed consumption 5/	--	600	300	900	600	300	900	10,800
Grand total	38,100 r/	3,260 r/	860 r/	4,120 r/	3,110	864	3,970	49,600

r/ Revised. W Withheld to avoid disclosing company proprietary data; included with "Other." -- Zero.

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

2/ Includes terne metal.

3/ Includes secondary pig tin and tin components of tinning chemical solutions.

4/ Includes pewter, britannia metal, and jewelers' metal.

5/ Estimated consumption of plants reporting on an annual basis.