

Mineral Industry Surveys

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TIN IN DECEMBER 2011

Domestic consumption of primary tin in December 2011 was estimated to be 2,220 metric tons (t), a decrease of 10% from that in November 2011, and a decrease of 34% from that in December 2010. Preliminary estimates for tin imports for consumption in 2011 were 34,200 t, a decrease of 3% compared with the those for the comparable period of 2010. For 2011, Peru, Bolivia, Indonesia, and Malaysia, in descending order, were the leading sources of refined tin imports.

The Platts Metals Week average composite price of tin in December 2011 was \$11.63 per pound, compared with \$12.95 per pound in November 2011 and \$15.66 per pound in December 2010. The Platts Metals Week average composite tin price in 2011 was \$15.75 per pound and represented a 27% increase from the \$12.40 price for 2010. Industry observers attributed the substantial price increase to a widening of the world excess of consumption compared to production.

ITRI Ltd. (2011) (Frogmore, United Kingdom) estimated that global tin demand in 2015 would be about 400,000 metric tons per year (t/yr). Mineral resources at existing operations have been depleted, and production costs could rise considerably. World refined tin usage increased to an alltime high of more than 370,000 t in 2007, powered mainly by the rapid industrialization of China, a global boom in consumer electronics, and a rapid transition to the use of lead-free solders. During the next decade, technological changes likely would affect tin consumption in the current main applications of electronics, solder, and tinplate. Miniaturization, new assembly technologies, and lower coating weights could reduce consumption. Offsetting this, are prospects for new applications in tin chemicals, energy-related technologies such as lithium-ion batteries, and steel alloys. ITRI expected that these changes would increase world tin consumption by 15,000 t/yr or 4% to 5% for the next 5 to 10 years.

World production of refined tin has been fairly stable at about 350,000 t/yr in recent years, dropping in 2008–09 in line with the decline in world consumption as a result of the global financial crisis. Meanwhile, mine production, which peaked at

about 325,000 t in 2008, has been declining. The growing gap between mine and refined tin production, especially in China, has been filled by increased secondary refined tin production, which exceeded 60,000 t for the first time in 2010. Two-thirds or more of tin mine production was from China and Indonesia and production in both countries has been declining or, at best, stable, and these downward trends are expected to continue (ITRI Ltd., 2011).

ITRI and Greenfields Research Ltd. (London, United Kingdom) completed a 2-year project to build a “Tin Production Costs Model,” which was intended to help to quantify the parameters of the future tin price range. The floor price of tin, identified by marginal cash operating costs, was rising rapidly, owing mainly to falling grades at Indonesian alluvial operations, while the high capital costs of replacement hard-rock mining capacity would also raise the long-term industry equilibrium price. The report identifies about 60 new mine projects with a combined potential capacity of more than 100,000 t/yr of tin-in-concentrates, which could come onstream in the next 5 to 10 years. These are mainly low-grade primary deposits, including a number of polymetallic projects whose economics are helped by the recovery of coproducts, and also include several large tailings retreatment projects (ITRI Ltd., 2011). These potential new projects, if they come to fruition, could produce enough new tin to tilt the supply-demand balance toward an excess of supply and result in a decline in the tin price.

Update

On March 16, 2012, the Platts Metals Week composite price for tin was \$14.39 per pound.

Reference Cited

ITRI Ltd., 2011, Tin at the crossroads—Tin industry review 2011: Frogmore, United Kingdom, ITRI Ltd. news release, November 7, 2 p. (Accessed March 21, 2012, at http://www.itri.co.uk/index.php?option=com_zoo&task=Item&item_id=2239&Itemid=143.)

TABLE 1
SALIENT TIN STATISTICS¹

(Metric tons, unless otherwise noted)

	2011			
	2010 ^b	November	December	January– December
Production, secondary ^{c, 2}	11,100	922	926	11,100
Consumption:				
Primary	26,900	2,450 ^r	2,220	28,300
Secondary	6,220	523 ^r	529	6,280
Imports for consumption, metal	35,300	3,120	2,650	34,200
Exports, metal	5,630	133	307	5,450
Stocks at end of period	6,920	6,700 ^r	5,230	5,230
Prices (average cents per pound): ³				
Metals Week composite ⁴	1,239.64	1,294.59	1,163.42	1,574.67
Metals Week New York dealer	954.13	1,003.57	913.69	1,215.90
London, standard grade, cash	925.15	963.23	881.80	1,184.05
Kuala Lumpur	922.17	973.71	889.74	1,187.54

^aEstimated. ^bPreliminary. ^rRevised.

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

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

³Source: Platts Metals Week.

⁴The 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 PRICE¹

(Cents per pound)

Period	High	Low	Average
2010	1,719.49	937.69	1,239.64
2011:			
January	1,802.34	1,583.57	1,644.54
February	1,937.62	1,798.67	1,885.16
March	1,934.68	1,738.66	1,842.63
April	1,982.96	1,884.94	1,942.35
May	1,967.66	1,615.32	1,752.83
June	1,673.32	1,492.92	1,544.58
July	1,727.07	1,542.52	1,641.43
August	1,702.85	1,339.10	1,471.85
September	1,542.20	1,190.36	1,378.31
October	1,389.64	1,237.99	1,323.47
November	1,339.87	1,231.26	1,294.59
December	1,246.16	856.78	1,163.42

¹The 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 STATES¹

(Metric tons, unless otherwise noted)

Period	Tinplate waste (waste, strips, cobble, etc.) (gross weight)	Tinplate (all forms)			Shipments ²
		Gross weight	Tin content	Tin per metric ton of plate (kilograms)	
2010	18,163	1,416,758	6,920	4.9	2,032,937
2011:					
January	2,650 ^r	114,000 ^r	565 ^r	5.0 ^r	118,000
February	2,410 ^r	107,000 ^r	532 ^r	5.0 ^r	117,000
March	2,390 ^r	115,000 ^r	550 ^r	4.8 ^r	156,000
April	1,800 ^r	101,000 ^r	498 ^r	4.9 ^r	146,000
May	2,190 ^r	117,000 ^r	559 ^r	4.8 ^r	141,000
June	2,540	127,000	573	4.5	161,000
July	1,590	112,000	531	4.8	150,000
August	1,530	85,400	545	6.4	156,000
September	1,550	98,200	561	5.7	137,000
October	1,090	86,800	528	6.1	129,000
November	1,140	94,700	463	4.9	133,000
December	689	71,800	424	5.9	131,000
Total	21,600	1,230,000	6,330	5.2	1,680,000

^rRevised.

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

²Source: American Iron and Steel Institute monthly publication.

TABLE 4
U.S. TIN IMPORTS FOR CONSUMPTION AND EXPORTS¹

(Metric tons)

Country or product	2011			
	2010	November	December	January– December ²
Imports:				
Metal (unwrought tin):				
Belgium	--	4	--	261
Bolivia	6,060	346	100	5,680
Brazil	75	75	150	676
Chile	641	--	--	60
China	887	31	--	1,490
Indonesia	3,970	280	25	4,930
Malaysia	4,500	375	275	3,980
Peru	16,500	1,670	2,100	14,000
Singapore	996	250	--	645
Thailand	1,310	75	--	2,310
Other	327	19	1	156
Total	35,300	3,120	2,650	34,200
Other (gross weight):				
Alloys	1,290	110	133	2,000
Bars and rods	3,190	202	163	2,620
Foil, tubes, pipes	80	14	5	113
Plates, sheets, strip	135	--	(3)	52
Waste and scrap	57,300	4,810	5,250	57,700
Miscellaneous	3,540	96	105	2,740
Total	65,500	5,230	5,660	65,300
Exports (metal)	5,630	133	307	5,450

-- Zero.

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

²May include revisions.

³Less than ½ unit.

Source: U.S. Census Bureau.

TABLE 5
CONSUMPTION OF TIN IN THE UNITED STATES, BY FINISHED PRODUCT¹

(Metric tons of contained tin)

Product	2011							
	2010 ^p	November			December			January– December ²
		Primary	Secondary	Total	Primary	Secondary	Total	
Alloys (miscellaneous) ³	6,070	542 ^r	W	542 ^r	537	W	537	6,520
Babbitt	220	16	W	16	16	W	16	222
Bar tin and anodes	239	11 ^r	1 ^r	12 ^r	10	1	11	134
Bronze and brass	2,000	381	70 ^r	451 ^r	191	76	267	3,380
Chemicals	2,590	209 ^r	W	209 ^r	200	W	200	2,640
Collapsible tubes and foil	W	W	W	W	W	W	W	W
Solder	3,710	170 ^r	142	312 ^r	173	143	316	3,770
Tinning	331	16	--	16	25	--	25	275
Tinplate ⁴	6,600	463	W	463	424	W	424	6,350
Tin powder	192	15	W	15	15	W	15	192
White metal ⁵	W	W	W	W	W	W	W	W
Other	416	28	10 ^r	38 ^r	25	9	34	364
Total reported	22,400	1,850 ^r	223 ^r	2,070 ^r	1,620	229	1,850	23,800
Estimated undistributed consumption ⁶	10,800	600	300	900	600	300	900	10,800
Grand total	33,200	2,450 ^r	523 ^r	2,970 ^r	2,220	529	2,750	34,600

^pPreliminary. ^rRevised. W Withheld to avoid disclosing company proprietary data; included with "Other." -- Zero.

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

²May include revisions.

³Includesterne metal.

⁴Includes secondary pig tin and tin components of tinplating chemical solutions.

⁵Includes pewter, britannia metal, and jewelers' metal.

⁶Estimated consumption of plants reporting on an annual basis.