

Mineral Industry Surveys

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TIN IN DECEMBER 2004

Domestic consumption of primary tin in December was estimated by the U.S. Geological Survey to be 5% lower than that in November 2004 and 2% lower than that in December 2003. Preliminary domestic primary tin consumption for 2004 rose about 2% compared with preliminary figures for 2003.

The Platts Metals Week average composite price for tin in December was \$5.56 per pound, 4% lower than that in November 2004 and 37% higher than that in December 2003.

Imports of unwrought tin metal during the first 11 months of 2004 totaled 42,900 metric tons (t), an increase of 25% over that of the comparable period of 2003.

The benchmark London Metal Exchange (LME) 3-month tin prices plateaued for much of 2004 at about \$9,000 per ton, a level not seen since the "tin crisis" era of the 1980s. A dramatic upturn in consumption, driven in large part by restocking in the resurgent electronics sector, had been a key driver of tin's impressive performance. Global consumption was up 10% compared with that of 2003, led by China, Japan, and the United States. Long-term under-investment in production capacity, plus a shortage of concentrate owing to Indonesia's raw material export ban, meant that producers were unable to respond when the market needed more metal. Accordingly, a massive 20,000-t supply deficit was recorded in 2004. For 2005, the market seemed set to be more finely balanced. Production had started to rebound in Indonesia, China, Latin America, and soon Australia, and seemed ready to outpace consumption that had begun moderating. At yearend 2004, the effect of this re-balancing of the tin market fundamentals was evident in rising LME stocks and falling prices (Metal Bulletin, 2005).

Operations at Indonesia's major tin operations were not affected by the powerful earthquake near North Sumatra on December 26, 2004, and the devastating tsunami it unleashed on several coastal regions in southern and southeastern Asia (Platts Metals Week, 2005).

In Peru, Minsur SA increased its tin mine production by 3% to a new record level of 41,000 t of tin-in-concentrate in 2004, and its output of refined tin metal rose by 3% to 40,000 t, also a record. The Peruvian company may overtake Indonesia's PT Timah to become the world's leading tin miner, depending on Timah's yet-to-be-released fourth quarter results. Minsur's

production was expected to decline marginally in 2005, as ore grades at its San Rafael mine decline (CRU Week in the News, 2005§¹).

In Iran, Farokhshahr Steel Industry Co. (FSI), a newcomer to the Iranian steel sector, was scheduled to start up Iran's third electrolytic tinning line in 2005. This would be a new plant with a capacity of 150,000 metric tons per year (t/yr) for tinplate in widths of 820 to 1,100 millimeters (mm) and thicknesses of 0.15 mm to 0.5 mm. The plant is in Shahr-e-kord in Chaharmahalva-Bahktiyarp Province, about 500 kilometers south of Tehran. The total project cost, including a shearing line, was estimated to be about \$35 million. This would be the first private tinning line in Iran (Metal Bulletin Daily, 2004).

In Australia, the Sons of Gwalia (SOG) organization and its administrators announced an investment plan which involved the recommencement of underground mining within 18 months at the Greenbushes tantalum/tin mine in Western Australia. SOG also announced a new 3-year tantalum offtake agreement with HC Starck. Recent tin production from open pit operations at about 500 to 600 t/yr was expected to be increased by the expansion (CRU Tin Monitor, 2004).

In Australia, Van Dieman Mines announced that it expected to be producing tin from its Tasmanian operations by yearend 2005. Initial tin output was expected to be 1,700 t/yr of tin-in-concentrate, eventually rising to 2,000 t/yr. The firm expected tin to account for 60% of its revenues (CRU Tin Monitor, 2004).

In Australia, Malachite Resources NL allowed its option to purchase the Elsmore tin deposit to lapse. Malachite indicated it would focus attention on the nearby Sheep Station Hill and Newstead prospects in New South Wales instead. Recent exploration results from Sheep Station Hill have shown tin grades as high as 2.4%. Malachite was also exploring for tin at Mount Ramsay, Tasmania, a prospect owned by BHP Billiton (CRU Tin Monitor, 2004).

Japan has set the international pace in developing and adopting lead free solder since the late 1990s. While companies in Europe and the United States continue efforts to introduce

¹A reference that includes a section mark (§) is found in the Internet Reference Cited section.

lead free solder, the proportion of lead free solder used in Japan continues to exceed that of all other countries. Estimates suggest that 60% of all solder used by Japanese firms in 2004 was lead free. Senju Metal Industry Co. Ltd., one of Japan's leading solder makers, announced that it had recorded an overall increase of about 20% in solder sales compared with those of 2003. Senju attributed this to increases in demand for semiconductors, LCD screens, plasma TVs, and cellular telephones. In Japan, the most popular lead-free solder has a composition of 96.5% tin, 3% silver, and 0.5% copper (TIN World, 2004).

Update

On February 18, 2005, the Platts Metals Week composite price for tin was \$5.23 per pound.

References Cited

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Internet Reference Cited

- CRU Week in the News, 2005, (January 13), TIN, accessed January 13, 2005, via <http://www.crumonitor.com>.

TABLE 1
SALIENT TIN STATISTICS¹

(Metric tons, unless otherwise noted)

	2004			
	2003	November	December	January-December
Production, secondary ^{e,2}	7,880	900	900	10,800
Consumption:				
Primary	32,900	3,270 ^r	3,110	38,000
Secondary	4,490	677	672	8,200
Imports for consumption, metal	37,100	3,760	NA	NA
Exports, metal	3,690	338	NA	NA
Stocks at end of period	7,950	6,410 ^r	6,150	XX
Prices (average cents per pound): ³				
Metals Week composite ⁴	339.84	580.02	555.57	XX
Metals Week New York dealer	232.36	437.62	414.33	XX
London, standard grade, cash	222.00	411.00	387.00	XX
Kuala Lumpur	221.67	408.48	392.12	XX

^eEstimated. ^rRevised. NA Not available. XX Not applicable.

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
2003:			
December	437.61	378.77	404.65
Year	437.61	303.14	339.84
2004:			
January	439.98	424.94	432.53
February	456.45	429.49	442.15
March	549.13	459.43	495.71
April	596.03	561.93	575.65
May	624.98	575.07	592.12
June	622.44	568.24	589.38
July	583.13	565.64	576.07
August	590.50	563.04	573.74
September	585.04	566.00	576.55
October	586.56	568.98	578.10
November	584.93	570.24	580.02
December	569.06	505.64	555.27

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)	
2003	W	2,510,000	7,790	3.1	2,190,000
2004:					
January	W	210,000	657	3.1	167,000
February	W	197,000	623	3.2	169,000
March	2,720	189,000	565	3.0	188,000
April	W	190,000	625	3.3	168,000
May	W	192,000	612	3.2	148,000
June	W	190,000	607	3.2	188,000
July	W	191,000	902	4.7	174,000
August	W	195,000	597	3.1	168,000
September	W	195,000	623	3.2	154,000
October	W	199,000	628	3.1	163,000
November	W	204,000	675	3.3	180,000
December	W	196,000	588	3.0	NA

NA Not available. W Withheld to avoid disclosing company proprietary data.

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	2004			
	2003	October	November	January- November
Imports:				
Metal (unwrought tin):				
Bolivia	5,720	40	454	4,420
Brazil	3,000	599	450	4,060
Chile	636	--	80	281
China	4,340	398	370	4,940
Indonesia	3,070	100	40	4,540
Japan	136	--	--	540
Malaysia	490	805	742	5,630
Peru	19,100	1,490	1,560	17,300
Switzerland	(2)	--	--	178
Thailand	--	60	40	460
United Kingdom	143	--	19	97
Other	426	3	--	472
Total	37,100	3,490	3,760	42,900
Other (gross weight):				
Alloys	3,820	386	645	4,980
Bars and rods	338	62	85	616
Foil, tubes, pipes	4	--	4	6
Plates, sheets, strip	270	62	48	505
Waste and scrap	921	479	672	1,880
Miscellaneous	2,670	396	287	3,100
Total	8,030	1,390	1,740	11,100
Exports (metal)	3,690	344	338	3,420

-- Zero.

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

²Less than 1/2 unit.

Source: U.S. Census Bureau.

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

(Metric tons of contained tin)

Product	2004							
	2003	November			December			January- December
		Primary	Secondary	Total	Primary	Secondary	Total	
Alloys (miscellaneous) ²	W	247 ^r	W	247 ^r	246	W	246	2,790
Babbitt	2,570	28	W	28	22	W	22	223
Bar tin and anodes	849	11	W	11	11	W	11	142
Bronze and brass	2,600	94 ^r	102	196 ^r	89	97	186	2,470
Chemicals	8,720	704	W	704	704	W	704	8,450
Collapsible tubes and foil	W	W	W	W	W	W	W	W
Solder	10,600	779	265	1,040	715	265	980	12,600
Tinning	833	37	--	37	39	--	39	469
Tinplate ³	7,790	675	--	675	588	--	588	7,360
Tin powder	W	W	--	W	W	--	W	W
White metal ⁴	W	W	--	W	W	--	W	W
Other	2,180	91 ^r	10	101 ^r	91	10	101	968
Total reported	37,400	2,670 ^r	377	3,040 ^r	2,510	372	2,880	35,400
Estimated undistributed consumption ⁵	--	600	300	900	600	300	900	10,800
Grand total	37,400	3,270 ^r	677	3,940 ^r	3,110	672	3,780	46,200

^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.

²Includes terne metal.

³Includes secondary pig tin and tin components of tinplating chemical solutions.

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

⁵Estimated consumption of plants reporting on an annual basis.