

Mineral Industry Surveys

For information, contact:

Amy C. Tolcin, Zinc Commodity Specialist
U.S. Geological Survey
989 National Center
Reston, VA 20192
Telephone: (703) 648-4940, Fax: (703) 648-7757
E-mail: atolcin@usgs.gov

Hodan A. Fatah (Data)
Telephone: (703) 648-4971
Fax: (703) 648-7975
E-mail: hfatah@usgs.gov

Internet: <http://minerals.usgs.gov/minerals>

ZINC IN JANUARY 2013

Domestic mine production (recoverable) of zinc in January 2013 was 64,100 metric tons (t). Average daily mine production in January was 2,070 t, 6% less than that in December 2012 but 10% more compared with that in January 2012.

The Platts Metals Week average price for North American Special High Grade (SHG) zinc for January 2013 was \$1.00 per pound, essentially unchanged from the December 2012 average price and 4% more than the January 2012 average price. The average London Metal Exchange Ltd. (LME) cash price of SHG zinc for January 2013 was \$2,032.86 per metric ton, essentially unchanged from the average price in December 2012 and 3% more than the average price in January 2012. During January 2013, global LME stocks decreased by 15,450 t to 1,205,275 t.

Eastern Alloys Inc. (Maybrook, NY), a major U.S. producer of zinc-based alloys, developed a new zinc-based die-casting alloy for under-the-hood automotive parts. The new zinc-based alloy, referred to as EZAC, is composed of aluminum, copper, and zinc and is the most creep resistant of the hot chamber die-casting zinc alloys. Creep refers to the permanent deformation of a material as a result of prolonged exposure to high temperatures and stress. Most zinc alloys have a low creep resistance and are not used in environments with high operating temperatures (Waite, 2013).

Big River Steel LLC filed for incorporation in late January. The new company planned to construct a \$1.1 billion steel mill in Osceola, AR, which would produce cold-rolled, electrical, galvanized, and hot-rolled steel sheet for the automotive and energy markets. The development of the mill was contingent on the Arkansas State Legislature's approval of a \$125 million bond to fund the project (Ngai, 2013b).

Update

Nucor Corp. (Charlotte, NC) publicly opposed Big River Steel's proposed steel mill in Osceola. In a memo sent to State

legislators, Nucor claimed the project would negatively affect its mills in Arkansas, particularly the nearby Hickman, AR, plant, which already produces cold-rolled, hot-rolled, and galvanized steel sheet. According to Nucor, the Hickman plant has not operated at full capacity since 2008 owing to reduced demand. Big River Steel conversely contended that its plant would focus on manufacturing high-grade steels that would not compete with the output from Nucor's mills in Arkansas. As of April 8, State funding for the project had been approved by the Legislature and was awaiting final approval from the Governor (Ngai, 2013a, c).

U.S. premiums for SHG zinc were reported to have averaged around 7.5 to 8.5 cents per pound in March. Despite a sustained global surplus of metal, U.S. SHG zinc premiums have generally increased during the past 12 months, which is indicative of a tightening SHG zinc supply in the U.S. spot market. Large amounts of zinc were thought to be tied up in financing deals in LME warehouses in the United States, particularly in New Orleans.

References Cited

- Ngai, Catherine, 2013a, Ark. House OKs Big River Steel funding: American Metal Market, April 8. (Accessed on April 8, 2013, via <http://www.amm.com/>)
- Ngai, Catherine, 2013b, Correnti to build a \$1.1B steel mill in Arkansas: American Metal Market, January 29. (Accessed on January 29, 2013, via <http://www.amm.com/>)
- Ngai, Catherine, 2013c, Nucor pushes back vs. Correnti's Big River Steel: American Metal Market, March 18. (Accessed on March 18, 2013, via <http://www.amm.com/>)
- Waite, Suzy, 2013, Die caster targeting auto market with new zinc alloy: American Metal Market, March 5. (Accessed March 5, 2013, via <http://www.amm.com/>)

TABLE 1
SALIENT ZINC STATISTICS¹

(Metric tons, unless otherwise specified)

	2012		2013 January
	January– December	December	
Production:			
Mine, zinc content of concentrate ²	738,000 ^r	70,600 ^r	66,400
Mine, recoverable zinc ²	713,000 ^r	68,200 ^r	64,100
Smelter, refined zinc ^{6,3}	261,000 ^r	22,700 ^r	22,700
Consumption of refined zinc:			
Apparent ^{4,5}	939,000 ^r	78,600	77,600
Imports for consumption:			
Ore and concentrate (zinc content)	6,140	499	204
Refined zinc	655,000	57,500	55,300
Exports:			
Ore and concentrate (zinc content)	592,000	8,350	2
Refined zinc	14,100	254	397
Price:⁶			
London Metal Exchange cash, average, dollars per metric ton	1,947.73	2,037.18	2,032.86
Platts Metals Week North American, average, cents per pound	95.76	99.93	100.25

⁶Estimated. ^rRevised.

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

²Reported zinc content in both zinc and lead concentrates.

³Includes zinc metal used to manufacture zinc oxide.

⁴Smelter production plus imports for consumption minus domestic exports plus stock change.

⁵The collection of monthly consumer stocks data is in the process of being discontinued. As of January 2013, apparent consumption is equal to smelter production plus imports for consumption minus domestic exports.

⁶Special High Grade Zinc.

TABLE 2
MINE AND SMELTER PRODUCTION OF ZINC
IN THE UNITED STATES¹

(Metric tons)

Period	Mine ²		Smelter ³
	Zinc content	Recoverable	
2012:			
January	60,100	58,000	21,700
February	59,600	57,500	21,700
March	60,400	58,400	21,700
April	62,600	60,400	22,600
May	62,300	60,200	22,600
June	56,600	54,700	22,600
July	60,600	58,600	20,000
August	58,900	56,900	20,000
September	62,300	60,200	20,000
October ^f	57,500	55,500	22,700
November ^f	67,000	64,800	22,700
December ^f	70,600	68,200	22,700
January–December ^f	738,000	713,000	261,000
2013, January	66,400	64,100	22,700

^cEstimated. ^fRevised.

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

²Includes the zinc content in both lead and zinc concentrates.

³Includes zinc metal used to manufacture zinc oxide.

TABLE 3
U.S. IMPORTS FOR CONSUMPTION OF ZINC¹

(Gross weight, unless otherwise specified)

Material	2012		2013 January	
	Quantity (metric tons)	Value (thousands)	Quantity (metric tons)	Value (thousands)
Ore and concentrate (zinc content)	6,140	\$11,200	204	\$427
Unwrought:				
Refined (slab) zinc	655,000	1,320,000	55,300	115,000
Zinc alloys	20,600	41,900	715	1,510
Wrought:				
Bars, rods, profiles, wire	2,570	7,270	213	631
Plates, sheets, strip, foil	2,920	12,700	364	1,450
Other:				
Dross, ashes, fume (zinc content)	23,200	26,800	1,330	1,540
Powders, flakes, dust	28,200	80,500	1,840	5,490
Waste and scrap	20,000	24,600	1,080	1,260
Chemicals:				
Oxide	82,700	158,000	7,470	15,400
Chloride	190	1,490	21	185
Sulfate	56,300	51,100	3,410	3,030
Compounds, other ²	3,460	10,500	262	866

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

²Includes zinc sulfide (HTS 2830.90.1000 and 2830.90.1500), chromates of zinc or of lead (HTS 2841.90.4500), and lithopone and other pigments and preparations based on zinc sulfide (HTS 3206.42.000).

Source: U.S. Census Bureau.

TABLE 4
U.S. IMPORTS OF ZINC, BY TYPE OF MATERIAL AND COUNTRY¹

(Metric tons, gross weight, unless otherwise specified)

Material and country	General imports		Imports for consumption	
	2012	2013 January	2012	2013 January
Ore and concentrate (zinc content):				
Canada	3,450	204	3,450	204
Mexico	2,680	--	2,680	--
Total	6,140	204	6,140	204
Refined (slab) zinc:				
Argentina	--	1,000	--	1,000
Australia	26,500	--	29,000	--
Brazil	7,020	498	7,020	498
Canada	463,000	39,300	463,000	39,300
Korea, Republic of	--	--	471	--
Mexico	94,400	8,880	94,400	8,880
Netherlands	1,300	--	1,320	--
Peru	58,300	5,580	58,300	5,580
Spain	1	--	729	--
Other	167 ^r	7	167 ^r	7
Total	651,000	55,300	655,000	55,300
Oxide:				
Australia	1,080	138	1,080	138
Belgium	175	--	175	--
Canada	42,500	4,250	42,500	4,250
China	675	88	675	88
Germany	3,210	466	3,210	466
Japan	3,050	99	3,050	99
Mexico	25,900	2,270	25,900	2,270
Netherlands	5,240	63	5,240	63
Peru	170	39	170	39
Turkey	355	40	355	40
United Kingdom	47	1	47	1
Other	360 ^r	15	360 ^r	15
Total	82,700	7,470	82,700	7,470

^rRevised. -- Zero.

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

Source: U.S. Census Bureau.

TABLE 5
U.S. EXPORTS OF ZINC¹

(Gross weight, unless otherwise specified)

Material	2012		2013	
	Quantity (metric tons)	Value (thousands)	January	
			Quantity (metric tons)	Value (thousands)
Ore and concentrate (zinc content)	592,000	\$806,000	2	\$6
Unwrought:				
Refined (slab) zinc	14,100	14,900	397	404
Zinc alloys	17,900	46,000	1,930	4,920
Wrought:				
Bars, rods, profiles, wire	17,700	28,900	703	1,370
Plates, sheets, strip, foil	6,040	20,600	365	1,190
Other:				
Dross, ashes, fume (zinc content)	34,900	19,900	618	959
Powders, flakes, dust	14,200	33,200	594	1,700
Waste and scrap	90,500	107,000	4,340	5,150
Chemicals:				
Oxide	41,800	50,200	1,420	1,970
Chloride	902	1,590	207	269
Sulfate	774	1,160	34	45
Compounds, other ²	8,690	15,000	1,170	1,800

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

²Includes zinc sulfide (Schedule B 2830.90.1000 and 2830.90.1500), chromates of zinc or of lead (Schedule B 2841.90.4500), and lithopone and other pigments and preparations based on zinc sulfide (Schedule B 3206.42.0000).

Source: U.S. Census Bureau.

TABLE 6
AVERAGE PRICES FOR SPECIAL HIGH GRADE ZINC

Period	North	London Metal Exchange	
	American ¹	cash ²	
	¢/lb.	¢/lb.	\$/t
2012:			
January	96.84	89.83	1,980.38
February	100.57	93.34	2,057.86
March	99.54	92.27	2,034.21
April	97.82	90.56	1,996.47
May	94.79	87.53	1,929.68
June	91.43	84.16	1,855.49
July	91.30	83.95	1,850.82
August	89.77	82.26	1,813.46
September	98.31	90.80	2,001.81
October	94.88	86.70	1,911.42
November	93.88	86.36	1,904.01
December	99.93	92.41	2,037.18
January–December	95.76	88.35	1,947.73
2013, January	100.25	92.21	2,032.86

¹Platts Metals Week North American price. Based on the London Metal Exchange cash price plus premium.

²Average of the cash buyer price and the cash seller and settlement price.

Source: Platts Metals Week.

TABLE 7
LONDON METAL EXCHANGE (LME) STOCKS OF SPECIAL HIGH GRADE ZINC, END OF PERIOD¹

(metric tons)

Period	United States				Europe	Other	Total LME
	Detroit, MI	New Orleans, LA	Other	Total			
2012:							
January	83,600	522,000	46,800	652,000	34,000	156,000	843,000
February	82,300	550,000	46,800	679,000	33,300	155,000	867,000
March	83,900	581,000	40,900	706,000	32,500	158,000	897,000
April	96,900	598,000	32,700	728,000	31,500	167,000	927,000
May	97,100	637,000	21,100	755,000	31,000	153,000	939,000
June	108,000	683,000	18,500	810,000	31,800	153,000	995,000
July	109,000	706,000	16,800	832,000	33,100	132,000	997,000
August	110,000	667,000	15,400	792,000	32,600	126,000	951,000
September	110,000	703,000	14,800	828,000	32,600	129,000	990,000
October	111,000	724,000	14,100	849,000	189,000	132,000	1,170,000
November	114,000	803,000	13,000	930,000	197,000	107,000	1,230,000
December	116,000	800,000	12,000	928,000	198,000	94,900	1,220,000
2013, January	116,000	784,000	11,400	912,000	208,000	85,500	1,210,000

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

Source: London Metal Exchange, Ltd.