

ZINC

(Data in thousand metric tons of zinc content unless otherwise noted)

Domestic Production and Use: The value of zinc mined in 2013, based on zinc contained in concentrate, was about \$1.60 billion. Zinc was mined in 4 States at 14 mines operated by 4 companies. Two facilities—one primary and the other secondary—produced the bulk of commercial-grade refined zinc metal. Of the total reported zinc consumed, about 80% was used in galvanizing, 6% in brass and bronze, 5% in zinc-base alloys, and 9% in other uses.

Salient Statistics—United States:	2009	2010	2011	2012	2013^e
Production:					
Mine, zinc in concentrate	736	748	769	738	760
Metal production					
At primary smelters	94	120	110	114	120
At secondary smelters	109	129	138	147	130
Imports for consumption:					
Zinc in ore and concentrate	74	32	27	6	3
Refined zinc	686	671	716	655	700
Exports:					
Zinc in ore and concentrate	785	752	660	592	650
Refined zinc	3	4	19	14	15
Shipments from Government stockpile	(¹)	—	—	—	—
Consumption, apparent, refined zinc ²	893	907	939	892	950
Price, average, cents per pound:					
North American ³	77.9	102.0	106.2	95.8	96.0
London Metal Exchange (LME), cash	75.1	98.0	99.5	88.3	87.0
Reported producer and consumer stocks, refined zinc, yearend	85	108	145	155	140
Employment:					
Mine and mill, number ⁴	1,580	1,790	2,240	2,310	2,540
Smelter primary, number	248	255	244	252	252
Net import reliance ⁵ as a percentage of apparent consumption (refined zinc)	77	73	74	71	74

Recycling: In 2013, about 60% (150,000 tons) of the refined zinc produced in the United States was recovered from secondary materials at both primary and secondary smelters. Secondary materials included galvanizing residues and crude zinc oxide processed from electric arc furnace dust.

Import Sources (2009–12): Ore and concentrate: Peru, 76%; Ireland, 8%; Mexico, 8%; Canada, 7%; and other, 1%. Metal: Canada, 72%; Mexico, 13%; Peru, 7%; Spain, 2%; and other, 6%. Waste and scrap: Canada, 65%; Mexico, 31%; Dominican Republic, 2%; and other, 2%. Combined total: Canada, 69%; Mexico, 13%; Peru, 10%; and other, 8%.

Tariff: Item	Number	Normal Trade Relations⁶ 12–31–13
Zinc ores and concentrates, Zn content	2608.00.0030	Free.
Zinc oxide and zinc peroxide	2817.00.0000	Free.
Unwrought zinc, not alloyed:		
Containing 99.99% or more zinc	7901.11.0000	1.5% ad val.
Containing less than 99.99% zinc:		
Casting-grade	7901.12.1000	3% ad val.
Other	7901.12.5000	1.5% ad val.
Zinc alloys	7901.20.0000	3% ad val.

Depletion Allowance: 22% (Domestic), 14% (Foreign).

Government Stockpile:

Material	Stockpile Status—9–30–13⁷		Disposal plan FY 2013	Disposals FY 2013
	Uncommitted inventory	Authorized for disposal		
Zinc	7	7	—	—

ZINC

Events, Trends, and Issues: Global zinc mine production in 2013 was essentially unchanged at 13.5 million tons. According to the International Lead and Zinc Study Group, refined zinc production in 2013 increased by 3% to 13.0 million tons, and metal consumption rose by 5% to 12.9 million tons, resulting in a production-to-consumption surplus of 120,000 tons of refined zinc. A smaller surplus of 115,000 tons was expected in 2014.

Domestic zinc mine production increased slightly in 2013 from that of 2012 owing to increases in zinc production at a zinc-lead mine in Alaska and two zinc-mining complexes in Tennessee. Zinc metal production decreased by 4% owing to a decline in secondary production; a zinc-recycling company closed its smelter in Pennsylvania in the latter half of the year as it began production at its new recycling facility in North Carolina. Apparent zinc consumption increased by 7% in 2013 from that of 2012 owing to a similar rise in net imports of unwrought zinc.

The monthly average North American Special High Grade (SHG) zinc price began the year at \$1.00 per pound in January, peaked at \$1.05 per pound in February, and then declined through May when it reached a low of \$0.92 per pound. By mid-October, prices averaged about \$0.95 per pound. North American SHG zinc premiums began the year at 8 cents per pound and rose to around 9 to 9.5 cents per pound by October.

Concern over increasing premiums and long load-out queues at LME warehouses prompted action by the LME and regulatory agencies. The LME approved new delivery rate policies effective April 2014 requiring warehouses to deliver out more metal than they load in until their metals queues fall to fewer than 50 days. The U.S. Commodity Futures Trading Commission began a preliminary investigation into the metal warehousing businesses of certain banks and trading companies.

World Mine Production and Reserves: Reserves estimates for Bolivia, Canada, India, Ireland, Mexico, and the United States were revised based on company data. The reserves estimate for Australia was revised based on data provided by Geoscience Australia, and the reserves estimate for Peru was revised based on data from the Ministerio de Energia y Minas del Peru.

	Mine production ⁸		Reserves ⁹
	2012	2013 ^e	
United States	738	760	10,000
Australia	1,510	1,400	64,000
Bolivia	405	400	5,200
Canada	641	550	7,000
China	4,900	5,000	43,000
India	758	800	11,000
Ireland	338	330	1,300
Kazakhstan	371	370	10,000
Mexico	660	600	18,000
Peru	1,280	1,290	24,000
Other countries	1,930	1,950	57,000
World total (rounded)	13,500	13,500	250,000

World Resources: Identified zinc resources of the world are about 1.9 billion metric tons.

Substitutes: Aluminum, plastics, and steel substitute for galvanized sheet. Aluminum, magnesium, and plastics are major competitors as diecasting materials. Aluminum alloy, cadmium, paint, and plastic coatings replace zinc for corrosion protection; aluminum alloys substitute for brass. Many elements are substitutes for zinc in chemical, electronic, and pigment uses.

^eEstimated. — Zero.

¹Less than ½ unit.

²Apparent consumption from 2009 through 2011 does not necessarily reflect reported industry stock changes. Stocks increased during these years owing to an increased response rate from industry.

³Platts Metals Week price for North American SHG zinc; based on the LME cash price plus premiums or discounts, depending on market conditions.

⁴Includes mine and mill employment at all zinc-producing mines. Source: Mine Safety and Health Administration.

⁵Defined as imports – exports + adjustments for Government and industry stock changes. The net import reliance from 2009 to 2011 does not necessarily reflect reported industry stock changes. Stocks increased during these years owing to an increased response rate from industry.

⁶No tariff for Canada, Mexico, and Peru for items shown.

⁷[See Appendix B for definitions.](#)

⁸Zinc content of concentrate and direct shipping ore.

⁹[See Appendix C for resource/reserve definitions and information concerning data sources.](#)