

# Mineral Industry Surveys

## For information, contact:

Amy C. Tolcin, Zinc Commodity Specialist  
National Minerals Information Center  
Telephone: (703) 648-4940  
Email: atolcin@usgs.gov

Michelle B. Blackwell (Data)

Telephone: (703) 648-7943

Email: mblackwell@usgs.gov

**Internet:** <https://www.usgs.gov/centers/national-minerals-information-center/mineral-industry-surveys>

## ZINC IN NOVEMBER 2023

Domestic mine production (recoverable) of zinc in November 2023 was 55,100 metric tons (t) (tables 1, 2). Mine production (recoverable) for the year through November was 674,000 t, essentially unchanged compared with that in the same period in 2022. Average daily (recoverable) mine production in November was 1,840 t, 23% less than the amount in the previous month but 19% more compared with that in November 2022 (fig. 1, table 2).

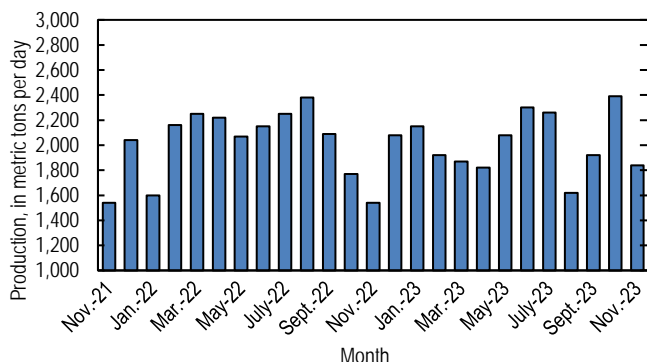


Figure 1. Average daily domestic zinc mine production (recoverable) from November 2021 through November 2023.

## Stocks and Prices

There were no London Metal Exchange Ltd. (LME) stocks of Special High Grade (SHG) zinc held in U.S. warehouses at the end of November 2023, unchanged since the end of January 2023 and down from 350 t at the end of November 2022. Global LME stocks were 224,275 t at the end of November 2023, 2.7 times more than stocks at the end of October 2023 and 5.4 times more than stocks at the end of November 2022 (fig. 2, table 9). Most of the global stock increase in November occurred in Singapore. Reported off-warrant stocks of SHG zinc in LME-approved warehouses at the end of November 2023 decreased to 24,017 t from 74,846 t at the end of October 2023; of which 93% were held in Asia and 7% in Europe (London Metal Exchange Ltd., 2024).

The monthly average S&P Global Platts Metals Week North American SHG zinc price in November 2023 was 141 cents per pound, essentially unchanged compared with that in

the previous month and 18% less than that in November 2022. The November 2023 average LME cash price for SHG zinc was \$2,543 per metric ton (115 cents per pound), 4% more than that in the previous month but 13% less than that in November 2022 (fig. 3, table 8).

The North American premium to the LME cash price in November 2023 averaged 25 cents per pound, 9% less than that in the previous month and 34% less compared with that in November 2022 (fig. 3, table 8).

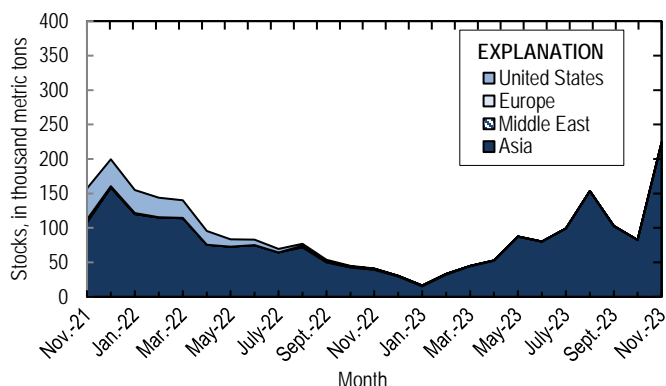


Figure 2. Global LME stocks of Special High Grade zinc, end of month, from November 2021 through November 2023. Source: London Metal Exchange Ltd.

## World News

A fire occurred at the Ozernoye zinc-lead mine project in the Republic of Buryatia in Siberia, Russia. Ore production was reported to have already commenced, but mill rampup may be delayed. At full production, the mine was expected to produce about 350,000 metric tons per year of zinc in concentrate and would be the largest zinc mine in Russia. Ozernoye was also projected to be the largest zinc mine to start commercial production in 2024 (Devitt and Lyrchikova, 2023; Onstad, 2023).

CBH Resources Ltd. (Australia) announced that its Rasp silver-zinc-lead mine in Broken Hill, New South Wales, Australia, will go through a staged closure in 2023 and 2024. Toho Zinc Co. Ltd. (Japan), the owner of CBH, determined that it was not able to further invest in the mine to continue operations in a medium- to long-term period. CBH planned to

sell the mine for potential development of the remaining resources. In the fiscal year ending March 31, 2023, CBH produced 33,700 t of zinc concentrate at Rasp (CBH Resources Ltd., 2023; Toho Zinc Co. Ltd., 2023, p. 8).

References Cited

CBH Resources Ltd., 2023, CBH Resources Ltd (CBH) to progress to staged closure of Rasp Mine: North Sydney, New South Wales, Australia. CBH Resources Ltd. press release, November 13, 1 p. (Accessed November 13, 2023, at [https://www.cbhresources.com.au/files/7116/9994/2488/Media\\_Release\\_13-Nov-23\\_Final\\_Approved.pdf](https://www.cbhresources.com.au/files/7116/9994/2488/Media_Release_13-Nov-23_Final_Approved.pdf).)

Devitt, Polina, and Lyrchikova, Anastasia, 2023, Fire put out at plant of Russia's largest zinc deposit: Reuters, November 8. (Accessed November 8, 2023, at <https://www.nasdaq.com/articles/fire-put-out-at-plant-of-russias-largest-zinc-deposit>.)

London Metal Exchange Ltd., 2024, Off-warrant stock reporting: London, United Kingdom, London Metal Exchange Ltd. (Accessed January 22, 2024, via <https://www.lme.com/en/Market-data/Reports-and-data/Warehouse-and-stocks-reports/Off-warrant-stock-reporting>.)

Onstad, Eric, 2023, Metals—Zinc jumps on supply worries, Russian project fire report: Reuters, November 8. (Accessed November 8, 2023, at <https://www.nasdaq.com/articles/metals-zinc-jumps-on-supply-worries-russian-project-fire-report>.)

Toho Zinc Co. Ltd., 2023, 2022 final account IR information FY 2022: Tokyo, Japan, Toho Zinc Co. Ltd. news release, May 12, 39 p. (Accessed January 22, 2024, at [https://www.toho-zinc.co.jp/ir/library/pdf/news\\_20230512.pdf](https://www.toho-zinc.co.jp/ir/library/pdf/news_20230512.pdf).)

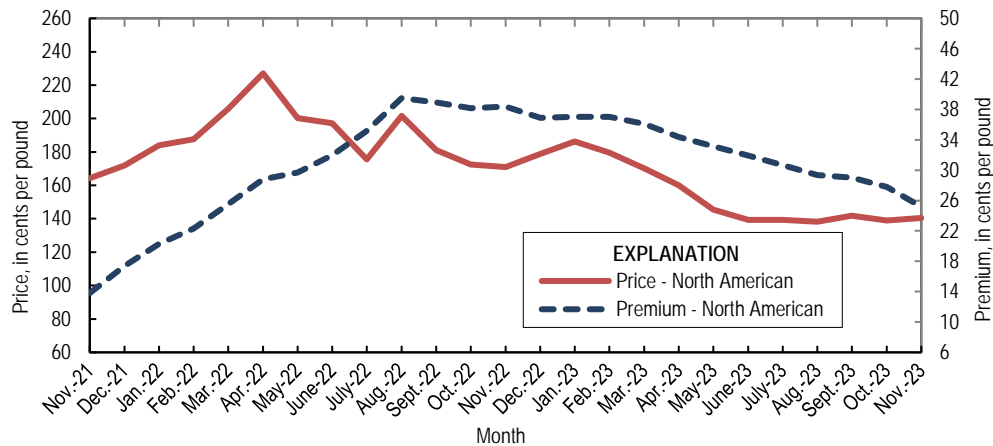


Figure 3. Average monthly North American price and premium for Special High Grade zinc from November 2021 through November 2023. The North American price is based on the London Metal Exchange cash price plus the North American premium. Source: S&P Global Platts Metals Week.

List services and web feed subscribers are the first to receive notification of USGS minerals information publications and data releases. For information on how to subscribe, go to <https://www.usgs.gov/centers/national-minerals-information-center/minerals-information-publication-list-services>.

TABLE 1  
SALIENT ZINC STATISTICS<sup>1</sup>

(Metric tons, unless otherwise specified)

	2022	2023		
	January– December <sup>p</sup>	October	November	January– November <sup>2</sup>
Production:				
Mine, zinc content of concentrate <sup>3</sup>	766,000 <sup>r</sup>	75,700	56,400	690,000
Mine, recoverable zinc <sup>3</sup>	747,000	74,000	55,100	674,000
Smelter, refined zinc <sup>e,4</sup>	220,000	18,000	18,000	198,000
Consumption of refined zinc, apparent <sup>5</sup>	974,000	64,600	60,800	843,000
Imports for consumption:				
Ore and concentrate (zinc content)	4,870	176	308	16,000
Refined zinc	762,000	46,700	42,900	649,000
Exports:				
Ore and concentrate (zinc content)	644,000	45,400	33,200	625,000
Refined zinc	8,070	91	114	3,920
Price: <sup>6</sup>				
London Metal Exchange cash, average, dollars per metric ton	3,484.42	2,448.75	2,543.25	2,661.83
North American, <sup>7</sup> average, cents per pound	190.19	138.87	140.52	152.70

<sup>e</sup>Estimated. <sup>p</sup>Preliminary. <sup>r</sup>Revised.

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

<sup>2</sup>May include revisions to previously published data.

<sup>3</sup>Reported zinc content in both zinc and lead concentrates.

<sup>4</sup>Monthly and annual smelter production data are estimated to avoid disclosing company proprietary data and do not reflect actual production reported to the U.S. Geological Survey.

<sup>5</sup>Smelter production plus imports for consumption minus domestic exports. Apparent consumption may not reflect actual consumption owing to significant changes in unreported stocks.

<sup>6</sup>Special High Grade Zinc.

<sup>7</sup>S&P Global Platts Metals Week.

TABLE 2  
MINE AND SMELTER PRODUCTION OF ZINC  
IN THE UNITED STATES<sup>1</sup>

(Metric tons)

Period	Mine <sup>2</sup>		Smelter <sup>e, 3</sup>
	Zinc content	Recoverable	
2022:			
November	47,300	46,200	18,000
December	65,800	64,400	18,000
January–December	766,000 <sup>r</sup>	747,000	220,000
2023:			
January	68,300	66,800	18,000
February	55,200	53,900	18,000
March	59,500	58,100	18,000
April	55,900	54,600	18,000
May	65,900	64,500	18,000
June	70,700	69,100	18,000
July	72,000	69,900	18,000
August	51,300	50,100	18,000
September	58,900	57,500	18,000
October	75,700	74,000	18,000
November	56,400	55,100	18,000
January–November	690,000	674,000	198,000

<sup>e</sup>Estimated. <sup>r</sup>Revised.

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

<sup>2</sup>Includes the zinc content in both lead and zinc concentrates.

<sup>3</sup>Monthly and annual smelter production data are estimated to avoid disclosing company proprietary data and do not reflect actual production reported to the U.S. Geological Survey.

TABLE 3  
U.S. SHIPMENTS OF  
GALVANIZED STEEL SHEET AND STRIP<sup>1</sup>

Period	Quantity (metric tons)
2022:	
November	1,320,000
December	1,250,000
January–November	15,100,000
January–December	16,300,000
2023:	
January	1,420,000 <sup>r</sup>
February	1,390,000 <sup>r</sup>
March	1,510,000 <sup>r</sup>
April	1,410,000
May	1,440,000
June	1,410,000
July	1,360,000
August	1,410,000
September	1,280,000
October	1,330,000
November	1,290,000
January–November	15,200,000

<sup>r</sup>Revised.

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

Source: American Iron and Steel Institute.

TABLE 4  
U.S. IMPORTS FOR CONSUMPTION OF ZINC<sup>1</sup>

(Gross weight, unless otherwise specified)

Material	2022		2023			
	Quantity (metric tons)	Value (thousands)	November		January–November <sup>2</sup>	
			Quantity (metric tons)	Value (thousands)	Quantity (metric tons)	Value (thousands)
Ore and concentrate (zinc content)	4,870	\$9,880	308	\$283	16,000	\$17,100
Unwrought:						
Refined zinc	762,000	2,710,000	42,900	128,000	649,000	2,070,000
Zinc alloys	3,770	15,200	514	1,570	4,540	15,600
Wrought:						
Bars, rods, profiles, wire	3,500	16,200	279	1,070	3,600	14,800
Plates, sheets, strip, foil	1,680	9,840	148	672	1,580	8,790
Ash and residues: <sup>3</sup>						
Hard zinc spelter	--	--	--	--	(4)	22
Zinc dross and skimmings	4,370	8,550	459	758	5,360	8,740
Other (zinc content)	5,610	12,000	45	64	1,680	1,230
Other:						
Powders, flakes, dust	19,800	92,600	1,980	8,300	16,000	70,500
Waste and scrap	10,900	23,300	1,150	2,150	10,200	20,800
Chemicals:						
Lithopone	1,110	4,520	4	46	230	1,050
Zinc chloride	419	2,830	81	352	675	3,450
Zinc oxide	104,000	371,000	8,480	24,200	90,800	290,000
Zinc sulfate	95,200	124,000	7,000	6,070	64,300	59,700
Zinc sulfide	1,930	9,710	191	971	2,130	12,200

-- Zero.

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

<sup>2</sup>May include revisions to previously published data.

<sup>3</sup>Other than from the manufacture of iron and steel; containing mainly zinc.

<sup>4</sup>Less than ½ unit.

Source: U.S. Census Bureau.

TABLE 5  
U.S. IMPORTS OF ZINC, BY TYPE OF MATERIAL AND COUNTRY OR LOCALITY<sup>1</sup>

(Metric tons, gross weight, unless otherwise specified)

Material and country or locality	General imports			Imports for consumption		
	2022	2023		2022	2023	
		November	January–November <sup>2</sup>		November	January–November <sup>2</sup>
Ore and concentrate (zinc content):						
Canada	1,610	234	2,060	1,610	234	2,060
China	358	--	--	358	--	--
Korea, Republic of	--	--	3,860	--	--	3,860
Peru	2,670	--	--	2,670	--	--
Turkey	--	--	9,950	--	--	9,950
Other	232	74	83	232	74	83
Total	4,870	308	16,000	4,870	308	16,000
Refined zinc:						
Australia	69,000	248	40,000	74,000	248	40,000
Belgium	--	59	345	1,800	59	345
Brazil	--	3,980	26,400	10	3,980	26,400
Bulgaria	--	--	43	--	--	43
Canada	378,000	27,100	320,000	378,000	27,100	320,000
China	(3)	27	2,070	502	27	2,070
Denmark	(3)	--	--	(3)	--	--
Finland	--	705	705	--	705	705
Germany	983	--	10	983	--	10
India	--	19	4,950	--	19	4,950
Italy	3	--	27	3	--	27
Japan	2	40	1,790	2	40	1,790
Kazakhstan	17,700	--	39,400	17,700	--	39,400
Korea, Republic of	88,600	373	50,800	94,000	373	50,800
Luxembourg	--	--	75	--	--	75
Mexico	108,000	6,740	98,000	108,000	6,740	98,000
Netherlands	--	--	--	1,240	--	--
Nigeria	320	--	--	320	--	--
Peru	52,900	3,620	61,100	52,900	3,620	61,100
Poland	241	--	780	241	--	780
Singapore	21	--	25	21	--	25
Spain	5,500	--	--	31,600	--	--
Taiwan	21	--	9	21	--	9
Thailand	(3)	--	--	(3)	--	--
United Kingdom	20	--	1,640	20	--	1,640
Total	722,000	42,900	649,000	762,000	42,900	649,000
Oxide:						
Canada	44,200	2,800	33,200	44,200	2,800	33,200
China	800	30	187	800	30	171
Germany	1,870	224	704	1,870	224	704
Greece	375	183	870	375	183	870
India	83	231	670	83	231	670
Japan	1,210	33	462	1,210	33	462
Korea, Republic of	428	8	316	428	8	316
Mexico	41,300	4,240	45,300	41,300	4,240	45,300
Netherlands	6,900	210	3,150	6,900	210	3,150
Peru	5,850	312	5,210	5,850	312	5,210
Other	608 <sup>†</sup>	200	740	559 <sup>†</sup>	200	765
Total	104,000	8,480	90,800	104,000	8,480	90,800

<sup>†</sup>Revised. -- Zero.

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

<sup>2</sup>May include revisions to previously published data.

<sup>3</sup>Less than ½ unit.

Source: U.S. Census Bureau.

TABLE 6  
U.S. EXPORTS OF ZINC<sup>1</sup>

(Gross weight, unless otherwise specified)

Material	2022		2023			
	Quantity (metric tons)	Value (thousands)	November		January–November <sup>2</sup>	
			Quantity (metric tons)	Value (thousands)	Quantity (metric tons)	Value (thousands)
Ore and concentrate (zinc content)	644,000	\$1,530,000	33,200	\$53,500	625,000	\$943,000
Unwrought:						
Refined zinc	8,070	28,300	114	392	3,920	13,000
Zinc alloys	44,300	124,000	2,420	8,320	33,000	106,000
Wrought:						
Bars, rods, profiles, wire	3,220	21,200	226	908	2,050	9,700
Plates, sheets, strip, foil	5,830	24,800	423	1,980	5,020	20,900
Ash and residues: <sup>3</sup>						
Hard zinc spelter	12,300	29,300	1,920	3,730	13,300	25,500
Other (zinc content)	26,900	52,900	2,090	3,840	22,600	37,000
Other:						
Powders, flakes, dust	10,600	51,700	507	2,470	6,750	32,700
Waste and scrap	190,000	183,000	2,700	3,110	41,700	49,500
Chemicals:						
Lithopone	510	1,900	4	20	362	1,230
Zinc chloride	1,250	1,550	38	54	1,160	1,960
Zinc oxide	71,300	137,000	4,530	6,710	65,700	99,200
Zinc sulfate	808	769	10	9	475	405
Zinc sulfide	2,400	14,500	292	922	1,950	11,700

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

<sup>2</sup>May include revisions to previously published data.

<sup>3</sup>Other than from the manufacture of iron and steel; containing mainly zinc.

Source: U.S. Census Bureau.



TABLE 7  
U.S. EXPORTS OF ZINC, BY TYPE OF MATERIAL AND COUNTRY OR LOCALITY<sup>1</sup>

(Metric tons, gross weight, unless otherwise specified)

Material and country or locality	2022	2023	
		November	January–November <sup>2</sup>
Ore and concentrate (zinc content):			
Australia	19,300	--	63,500
Belgium	45,200	--	48,700
Canada	241,000	31,300	241,000
China	49,400	--	29,000
Finland	23,300	--	23,900
Japan	63,400	--	37,400
Korea, Republic of	120,000	1,880	118,000
Netherlands	3,080	--	--
Spain	79,500	--	61,100
Other	43	--	2,840
Total	644,000	33,200	625,000
Refined zinc:			
Belgium	758	--	--
Brazil	--	--	1,880
Canada	1,460	27	762
Italy	2,470	--	10
Mexico	2,840	75	1,230
Other	543	12	39
Total	8,070	114	3,920
Oxide:			
Belgium	387	20	260
Brazil	285	4	143
Canada	3,710	782	2,810
Colombia	275	1	213
Finland	797	100	815
India	828	13	1,110
Italy	108	--	175
Japan	38	28	390
Mexico	63,500	3,520	58,300
United Kingdom	145	1	268
Other	1,260	60	1,310
Total	71,300	4,530	65,700

-- Zero.

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

<sup>2</sup>May include revisions to previously published data.

Source: U.S. Census Bureau.

TABLE 8  
AVERAGE PRICES FOR SPECIAL HIGH GRADE ZINC

Period	North American		London Metal Exchange	
	Premium	Price <sup>1</sup>	cash <sup>2</sup>	
	¢/lb.	¢/lb.	¢/lb.	\$/t
2022:				
November	38.4	170.98	132.58	2,922.97
December	36.9	178.75	141.86	3,127.50
January–December	32.1	190.19	158.05	3,484.42
2023:				
January	37.0	186.20	149.17	3,288.55
February	37.0	179.60	142.57	3,143.04
March	36.1	170.16	134.06	2,955.59
April	34.4	160.11	125.74	2,772.06
May	33.1	145.49	112.36	2,477.10
June	31.9	139.33	107.39	2,367.64
July	30.7	139.33	108.68	2,395.99
August	29.4	138.23	108.88	2,400.48
September	29.0	141.86	112.84	2,487.75
October	27.8	138.87	111.07	2,448.75
November	25.2	140.52	115.36	2,543.25
January–November	32.0	152.70	120.74	2,661.84

<sup>1</sup>S&P Global Platts Metals Week North American price. Based on the London Metal Exchange cash price plus the North American premium.

<sup>2</sup>Average of the cash buyer price and the cash seller and settlement price.

Source: S&P Global Platts Metals Week.

TABLE 9  
LONDON METAL EXCHANGE (LME) STOCKS OF SPECIAL HIGH GRADE ZINC, END OF PERIOD

(Metric tons)

Period	United States			Asia	Europe	Middle East	Total LME
	Baltimore, MD	New Orleans, LA	Total				
2022:							
November	350	--	350	39,550	25	1,300	41,225
December	25	--	25	29,425	25	1,000	30,475
2023:							
January	--	--	--	15,475	--	1,000	16,475
February	--	--	--	32,225	--	1,000	33,225
March	--	--	--	44,300	--	750	45,050
April	--	--	--	52,525	--	400	52,925
May	--	--	--	87,400	--	50	87,450
June	--	--	--	80,225	--	50	80,275
July	--	--	--	99,300	--	50	99,350
August	--	--	--	153,525	--	50	153,575
September	--	--	--	102,725	--	50	102,775
October	--	--	--	82,650	--	50	82,700
November	--	--	--	224,225	--	50	224,275

-- Zero.

Source: London Metal Exchange, Ltd.