

Mineral Industry Surveys

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SILICON IN JANUARY 2020

Domestic production of silicon materials was 33,100 metric tons (t) in January 2020, an 11% increase from December 2019 production and 19% less than January 2019 production (fig. 1, table 1). Net shipments were 26,000 t, 12% more than shipments in December 2019 and 16% less than shipments in January 2019.

Ending stocks were 16,700 t in January 2020, 12% less than stocks in December 2019 and 27% less than those in January 2019 (table 1). Adjustments in stocks included in-plant consumption of ferrosilicon to produce magnesium ferrosilicon and other alloys. All comparative statistics were calculated based on unrounded, gross-weight figures.

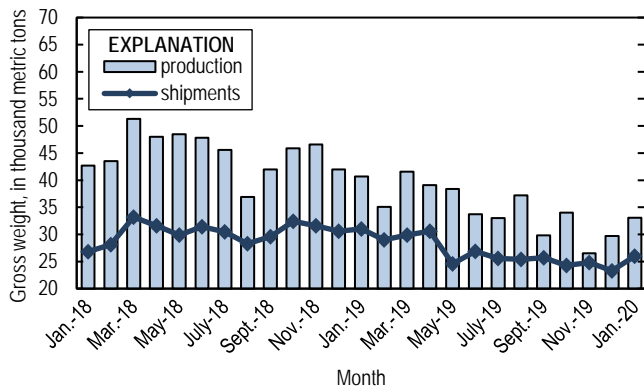


Figure 1. Monthly domestic production of total silicon materials and net shipments from January 2018 through January 2020 (may include revisions to previously published data).

Prices

The average U.S. spot price for silicon metal was 94.70 cents per pound in January 2020, slightly more than the average price in December 2019 and 19% less than that in January 2019. The average U.S. spot price for ferrosilicon, 50% grade, was unchanged from the average price in December 2019 and was slightly more than the average price in January 2019. The average U.S. spot price for ferrosilicon, 75% grade, was slightly more than the average price in December 2019 and 24% less than that in January 2019 (fig. 2).

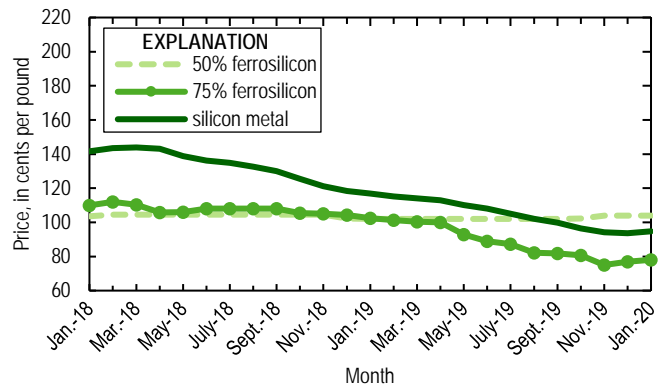


Figure 2. Average monthly spot prices for silicon metal and ferrosilicon 50% and 75% grades, contained silicon, January 2018 through January 2020. Source: CRU Group and S&P Global Platts.

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TABLE 1
 PRODUCTION, SHIPMENTS, AND STOCKS OF SILICON ALLOYS
 AND METAL IN THE UNITED STATES^{1,2,3}

(Metric tons, gross weight)

	Gross production ³	Net shipments	Producers' stocks, end of period
2019:			
January	40,700	31,000	22,900
February	35,100	29,000	19,400
March	41,600	29,900	22,300
April	39,100	30,600	23,000
May	38,400	24,600	28,400
June	33,700	26,900	29,000
July	33,000	25,600	29,000
August	37,200	25,400	31,800
September	29,800	25,700	27,900
October	34,000	24,300	27,800
November	26,500	24,800	22,200
December	29,700	23,300	18,900
January–December	419,000	321,000	18,900
2020, January	33,100	26,000	16,700

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

²Includes ferrosilicon, miscellaneous silicon alloys, and silicon metal, excluding semiconductor and solar grades, except where noted.

³Includes USGS estimates.

⁴Ferrosilicon production includes material consumed in the production of miscellaneous silicon alloys.

TABLE 2
PRICES FOR FERROSILICON AND SILICON METAL IN JANUARY 2020

		Low	Average	High	Average low, mid, and high
Ferrosilicon:					
50% ferrosilicon ¹	cents per pound of contained silicon	103.00	XX	105.00	103.00–104.00–105.00
75% ferrosilicon ²	do.	77.00	78.00	81.00	XX
Silicon metal, 553 grade ³	cents per pound	92.00	94.70	97.00	XX

do. Ditto. XX Not applicable.

¹CRU Group transaction price, duty paid, f.o.b. Pittsburgh, producing plant or Chicago/Pittsburgh warehouse. Average price reported for price range.

²S&P Global Platts, in U.S. warehouse, U.S. origin and imported material. Average price reported for all transactions during the month.

³S&P Global Platts, duty paid, delivered Midwest, U.S. spot and imported 553 grade silicon metal (minimum 98.50% silicon). Average price reported for all transactions during the month.

TABLE 3
U.S. EXPORTS OF FERROSILICON AND SILICON METAL IN 2020^{1,2}

(Metric tons, unless otherwise specified)

Country or locality	January		Value
	Gross weight	Contained weight	
Ferrosilicon:			
More than 55% silicon:			
Canada	249	150	\$348,000
France	80	48	95,100
Mexico	136	82	321,000
United Kingdom	86	51	134,000
Total	551	331	898,000
Other ferrosilicon:			
Belgium	36	16	25,200
Canada	21	10	35,700
Finland	20	10	29,800
Mexico	228	49	349,000
Total	305	85	440,000
Total ferrosilicon	856	416	1,340,000
Metal:			
More than 99.99% silicon:			
China	357	357	6,120,000
Czechia	13	13	321,000
Germany	232	232	1,690,000
Japan	1,000	1,000	36,400,000
Korea, Republic of	526	526	6,800,000
Norway	82	82	750,000
Peru	15	15	75,700
Singapore	22	22	472,000
Taiwan	305	305	1,950,000
Vietnam	53	53	57,300
Other [8 countries and (or) localities]	20	20	2,700,000
Total	2,630	2,630	57,300,000
99.00%–99.99% silicon:			
Mexico	3	3	8,350
Pakistan	5	5	7,400
Total	8	8	15,800
Other silicon:			
Australia	4	4	4,970
Canada	3	3	14,500
France	2	2	2,670
Germany	(3)	(3)	7,020
Israel	1	1	11,000
Korea, Republic of	(3)	(3)	6,460
Singapore	9	9	11,800
South Africa	(3)	(3)	7,870
United Kingdom	12	11	15,500
Total	32	31	81,700
Total silicon metal	2,670	2,660	57,400,000

¹Presentation of monthly data is based on the quantities (gross weight) of the leading countries and (or) localities.

²Data are rounded to no more than three significant digits; may not add to totals shown.

³Less than ½ unit.

Source: U.S. Census Bureau.

TABLE 4
U.S. IMPORTS OF FERROSILICON AND SILICON METAL IN 2020^{1,2}

(Metric tons, unless otherwise specified)

Country or locality	January		Value
	Gross weight	Contained weight	
Ferrosilicon:			
55%–80% silicon, more than 3% Ca:			
China	40	21	\$89,400
France	18	11	39,100
Total	58	32	129,000
55%–80% silicon, other:			
Brazil	841	633	1,010,000
Canada	1,100	805	2,310,000
France	126	84	335,000
Iceland	1,820	1,440	1,780,000
India	26	19	40,400
Kazakhstan	1,660	1,270	1,930,000
Malaysia	754	568	699,000
Paraguay	845	667	1,550,000
Russia	12,400	9,450	13,500,000
South Africa	274	201	375,000
Other [1 country and (or) locality]	6	5	46,000
Total	19,900	15,100	23,600,000
Magnesium ferrosilicon:			
Argentina	38	17	36,200
Canada	848	388	1,500,000
India	31	13	47,800
Total	917	419	1,590,000
Other ferrosilicon:			
Brazil	216	93	248,000
Canada	968	319	1,180,000
China	107	47	184,000
India	20	9	26,700
Slovakia	38	17	27,300
Total	1,350	485	1,660,000
Total ferrosilicon	22,200	16,100	27,000,000
Metal:			
More than 99.99% silicon:			
Brazil	121	121	323,000
China	11	11	1,350,000
Denmark	(3)	(3)	26,300
Germany	36	36	1,920,000
Japan	27	27	1,050,000
Russia	(3)	(3)	7,870
Taiwan	17	17	1,930,000
Total	212	212	6,600,000
99.00%–99.99% silicon:			
Australia	434	430	932,000
Bosnia and Herzegovina	1,190	1,180	1,960,000
Brazil	1,250	1,240	2,700,000
Canada	1,480	1,470	3,610,000
Iceland	180	179	281,000
Malaysia	300	299	422,000

See footnotes at end of table.

TABLE 4—Continued
 U.S. IMPORTS OF FERROSILICON AND SILICON METAL IN 2020^{1,2}

(Metric tons, unless otherwise specified)

Country or locality	January		Value
	Gross weight	Contained weight	
Metal—Continued:			
99.00%–99.99% silicon:			
Norway	1,050	1,040	\$2,670,000
South Africa	200	198	239,000
Total	6,080	6,040	12,800,000
Other silicon:			
Australia	96	95	204,000
Belgium	40	38	85,800
Brazil	1,840	1,790	4,050,000
Canada	118	114	274,000
China	16	15	17,300
Germany	(3)	(3)	2,680
Japan	1	1	20,500
Norway	170	166	246,000
South Africa	20	20	36,100
Total	2,300	2,240	4,940,000
Total silicon metal	8,590	8,490	24,400,000

¹Presentation of monthly data is based on the quantities (gross weight) of the leading countries and (or) localities.

²Data are rounded to no more than three significant digits; may not add to totals shown.

³Less than ½ unit.

Source: U.S. Census Bureau.