

# Mineral Industry Surveys

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## TITANIUM IN THE FIRST QUARTER 2021

Industry participation is key to the publication of aggregated totals of domestic titanium statistics. In the first quarter of 2021, domestic production, consumption, shipments, and stocks of sponge, ingot, slab, and mill products were withheld to avoid disclosing company proprietary data owing to limited responses (table 1).

The U.S. Geological Survey's (USGS) National Minerals Information Center canvasses the nonfuel mining and mineral processing industry in the United States for data on mineral production, consumption, recycling, stocks, and shipments. Reporting is voluntary, and the USGS greatly appreciates the data provided by companies participating in the surveys throughout the United States. The data that companies provide are the foundation upon which the USGS builds its minerals information publications. Unless authorization is granted for release, the data furnished are aggregated to avoid disclosing company proprietary data and are treated as confidential by the Department of the Interior.

Companies may report on a monthly, quarterly, semiannual, and (or) annual basis, depending on the frequency of the

surveys. Canvass forms are mailed shortly after the end of the reporting period and are requested to be returned within about 30 days. In addition to reporting by paper canvass forms, companies can electronically submit data to contribute to this valuable effort. Companies already registered with the USGS can sign up to report electronically by selecting the "Sign up" link at <https://mids.er.usgs.gov>. To notify the USGS of a new operation, or for further information on registering for electronic submissions, visit <https://mids.er.usgs.gov>. The USGS titanium metal quarterly survey has a canvas code of G37. For more information on how to participate in the titanium surveys, please contact Amy Tolcin using the contact information listed above.

*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/nmic/>.*

TABLE 1  
COMPONENTS OF U.S. TITANIUM METAL SUPPLY AND DEMAND<sup>1</sup>

(Metric tons)

	2020				1st quarter– 4th quarter	2021 1st quarter
	1st quarter	2d quarter	3d quarter	4th quarter		
<b>Production:</b>						
Sponge	W	W	W	W	W	W
Ingot	W	W	W	W	W	W
Mill products	W	W	W	W	W	W
<b>Exports:</b>						
Waste and scrap	3,690	2,820	3,940	3,620 <sup>r</sup>	14,100	3,190
Sponge	257 <sup>r</sup>	263	160	30	711 <sup>r</sup>	8
Ingot	1,930	991	467	314	3,700	439
Other unwrought	450	372	361	388	1,570	354
Bar, rod, profiles, wire	1,960	1,240	1,010	972	5,180	902
Bloom, sheet bar, slab	324	289 <sup>r</sup>	502	434	1,550	573
Other wrought	2,700 <sup>r</sup>	2,250	1,600	1,490	8,040 <sup>r</sup>	1,400
Total	11,300	8,230	8,050 <sup>r</sup>	7,250 <sup>r</sup>	34,800	6,860
<b>Imports:</b>						
Waste and scrap	6,860	5,370	2,140 <sup>r</sup>	1,430	15,800	2,620
Sponge <sup>2</sup>	8,690 <sup>r</sup>	6,710 <sup>r</sup>	2,150	1,630	19,200	2,150
Ingot	317	300	52	545	1,210	220
Powder	43	73	40	38	195 <sup>r</sup>	44
Other unwrought	264	185	98	97	644	190
Wrought	2,190	1,360	1,150	1,320 <sup>r</sup>	6,030 <sup>r</sup>	1,430
Castings	31	13	10	4	58	13
Other	172	156	119 <sup>r</sup>	133 <sup>r</sup>	581 <sup>r</sup>	126
Total	18,600	14,200	5,750 <sup>r</sup>	5,200 <sup>r</sup>	43,700	6,790
<b>Stocks, end of period:</b>						
Sponge, industry	W	W	W	W	W	W
Scrap	W	W	W	W	W	W
Ingot	W	W	W	W	W	W
<b>Consumption:</b>						
Sponge	W	W	W	W	W	W
Scrap	W	W	W	W	W	W
Ingot	W	W	W	W	W	W
<b>Shipments:</b>						
Ingot and slab (producer net shipments)	W	W	W	W	W	W
<b>Mill products (net shipments):</b>						
Forging and extrusion billet	W	W	W	W	W	W
Other	W	W	W	W	W	W
Total	W	W	W	W	W	W
Castings	W	W	W	W	W	W
<b>Receipts, scrap:</b>						
Home	W	W	W	W	W	W
Purchased	W	W	W	W	W	W
Total	W	W	W	W	W	W

<sup>r</sup>Revised. W Withheld to avoid disclosing company proprietary data.

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

<sup>2</sup>Estimated by the U.S. Geological Survey.

TABLE 2  
U.S. EXPORTS OF TITANIUM PRODUCTS<sup>1</sup>

(Metric tons)

	HTS <sup>2</sup> Code	2020				1st quarter–	2021
		1st quarter	2d quarter	3d quarter	4th quarter	4th quarter	1st quarter
<b>Metal:</b>							
Waste and scrap	8108.30.0000	3,690	2,820	3,940	3,620 <sup>†</sup>	14,100	3,190
<b>Unwrought:</b>							
Sponge	8108.20.0010	257 <sup>†</sup>	263	160	30	711 <sup>†</sup>	8
Ingot	8108.20.0030	1,930	991	467	314	3,700	439
Other	8108.20.0090	450	372	361	388	1,570	354
<b>Wrought:</b>							
Bar, rod, profiles, wire	8108.90.6031	1,960	1,240	1,010	972	5,180	902
Bloom, sheet bar, slab	8108.90.6020	324	289 <sup>†</sup>	502	434	1,550	573
Other	8108.90.8000	2,700 <sup>†</sup>	2,250	1,600	1,490	8,040 <sup>†</sup>	1,400
Ferrotitanium and ferrosilicon titanium	7202.91.0000	595	439	400	446	1,880	375
Ores and concentrates	2614.00.0000	3,280	17,800	4,190 <sup>†</sup>	3,560	28,800 <sup>†</sup>	2,550
<b>Pigment:</b>							
80% or more titanium dioxide	3206.11.0000	103,000 <sup>†</sup>	76,500 <sup>†</sup>	80,000 <sup>†</sup>	108,000 <sup>†</sup>	368,000 <sup>†</sup>	122,000
Other titanium dioxide	3206.19.0000	3,680 <sup>†</sup>	3,480	2,820	3,420	13,400	3,670
Unfinished titanium dioxide <sup>3</sup>	2823.00.0000	1,180	1,340	1,200	1,120	4,840	4,040

<sup>†</sup>Revised.

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

<sup>2</sup>Harmonized Tariff Schedule of the United States.

<sup>3</sup>Unmixed and not surface treated.

Source: U.S. Census Bureau.

TABLE 3  
U.S. IMPORTS FOR CONSUMPTION OF TITANIUM METAL<sup>1</sup>

(Metric tons)

	HTS <sup>2</sup> Code	2020				1st quarter–	2021
		1st quarter	2d quarter	3d quarter	4th quarter	4th quarter	1st quarter
<b>Waste and scrap:</b>							
	8108.30.0000						
Canada		527	250	135	226	1,140	350
China		149	171	161	42	524	27
France		1,000	573	72 <sup>r</sup>	35	1,680 <sup>r</sup>	462
Germany		1,170	927	714	226	3,030	393
Italy		433	306	16	26	781	36
Japan		1,140	1,020	431	311	2,900	139
Korea, Republic of		265	268	62	102	698	98
Mexico		333	135	215	116	799	214
Singapore		165	159	29	9	361	62
Spain		178	104	--	20	303	74
United Kingdom		900 <sup>r</sup>	878 <sup>r</sup>	180	172	2,130 <sup>r</sup>	471
Other		598 <sup>r</sup>	579 <sup>r</sup>	125	145 <sup>r</sup>	1,450 <sup>r</sup>	290
Total		6,860	5,370	2,140 <sup>r</sup>	1,430	15,800	2,620
<b>Unwrought:</b>							
<b>Sponge:</b>							
	8108.20.0010						
Japan		7,760	6,060 <sup>r</sup>	1,650	1,440	16,900	2,030
Kazakhstan <sup>c</sup>		690 <sup>r</sup>	543 <sup>r</sup>	482	158	1,870 <sup>r</sup>	52
Korea, Republic of		--	--	--	--	--	36
Russia		40	14	--	--	53	31
Ukraine		162	86	--	20	268	--
Other		37	1	14	10	62	(3)
Total		8,690 <sup>r</sup>	6,710 <sup>r</sup>	2,150	1,630	19,200	2,150
<b>Ingot:</b>							
	8108.20.0030						
Kazakhstan		72	101	15	51	238	--
Russia		241	199	36	494	970	220
Other		5	--	1	(3)	6	--
Total		317	300	52	545	1,210	220
Powder	8108.20.0015	43	73	40	38	195 <sup>r</sup>	44
Other	8108.20.0095	264	185	98	97	644	190
<b>Wrought:</b>							
Bar, rod, profiles, wire	8108.90.6031	610	379	352	256	1,600	406
Bloom, sheet bar, slab	8108.90.6020	33	19	34 <sup>r</sup>	154	240 <sup>r</sup>	320
Plate, sheet, strip, foil	8108.90.6045	1,420	744	623	766 <sup>r</sup>	3,550 <sup>r</sup>	552
Tube and pipe	8108.90.6060	75	96	97	56	324	43
Other	8108.90.6075	56 <sup>r</sup>	121	48	91	315 <sup>r</sup>	104
Total		2,190	1,360	1,150	1,320 <sup>r</sup>	6,030 <sup>r</sup>	1,430
<b>Other articles of titanium:</b>							
Castings	8108.90.3030	31	13	10	4	58	13
Other	8108.90.3060	172	156	119 <sup>r</sup>	133 <sup>r</sup>	581 <sup>r</sup>	126
Ferrotitanium and ferrosilicon titanium	7202.91.0000	1,080	804	238	727	2,850	1,350

<sup>c</sup>Estimated. <sup>r</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>Harmonized Tariff Schedule of the United States.

<sup>3</sup>Less than ½ unit.

Source: U.S. Census Bureau.

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

(Metric tons)

	HTS <sup>2</sup> Code	2020				1st quarter–	2021
		1st quarter	2d quarter	3d quarter	4th quarter	4th quarter	1st quarter
<b>Ilmenite:</b>	2614.00.6020						
Australia		67,000	18,300	--	26,200	112,000	--
Madagascar		65,800	48,000	101,000	3,900	218,000	91,000
Mozambique		--	34,800	--	34,500	69,200	35,800
Norway		--	--	190	--	190	--
Senegal		20,800	--	21,500	--	42,200	--
Ukraine		20,000	--	20,000	--	40,000	--
Total		174,000	101,000	142,000	64,600	481,000	127,000
<b>Titanium slag:</b>	2620.99.5000						
Canada		8	27,000	10,000	46,600	83,700	19,900
South Africa		72,700	78,500	69,300	80,300	301,000	75,800
Other		5,000	15,000	15,000	15,000	50,000	--
Total		77,700	121,000	94,300	142,000	435,000	95,700
<b>Rutile:</b>	2614.00.6040						
Australia		14,200	7,250	120	--	21,600	17,100
Kenya		13,200	--	--	--	13,200	10,000
South Africa		20,100	35,200	35,500	29,600	120,000	30,500
Other		2,570	343	52	296	3,260	473
Total		50,100	42,800	35,600	29,900	158,000	58,100
<b>Synthetic rutile:</b>	2614.00.3000						
Australia		--	--	--	41	41	--
China		--	--	--	7	7	--
Sierra Leone		--	40	40	--	80	--
Total		--	40	40	48	128	--
<b>Titaniferous iron ore, Canada<sup>3</sup></b>	2614.00.6020	--	--	--	35,500	35,500	--

-- Zero.

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

<sup>2</sup>Harmonized Tariff Schedule of the United States.

<sup>3</sup>Includes materials consumed for purposes other than the production of titanium commodities, principally heavy aggregate and steel-furnace flux. Titaniferous iron ore from Canada is classified as ilmenite under the Harmonized Tariff Schedule of the United States and is not included in the previous ilmenite totals.

Source: U.S. Census Bureau.

TABLE 5  
U.S. IMPORTS FOR CONSUMPTION OF TITANIUM PIGMENT<sup>1</sup>

(Metric tons)

	HTS <sup>2</sup> Code	2020				1st quarter–	2021
		1st quarter	2d quarter	3d quarter	4th quarter	4th quarter	1st quarter
80% or more titanium dioxide:	3206.11.0000						
Australia		537	5,030	5,420	693	11,700	928
Belgium		3,770 <sup>r</sup>	3,350	2,300	2,580	12,000	1,980
Canada		16,300	25,100	27,300	20,400	89,100	26,100
China		5,210 <sup>r</sup>	8,670	7,260	6,680	27,800	6,770
Czechia		1,430	1,640	1,370	1,540	5,980	1,320
Germany		5,140	5,320	4,630	5,110 <sup>r</sup>	20,200	5,260
Mexico		1,450	2,500	4,990 <sup>r</sup>	2,990	11,900 <sup>r</sup>	577
Norway		819	1,360	2,280	1,760	6,210	1,040
Spain		2,660	3,120	4,180	4,300	14,300	2,150
Ukraine		873	2,070	969	923	4,840	1,290
Other		4,110 <sup>r</sup>	4,090 <sup>r</sup>	3,660 <sup>r</sup>	6,440 <sup>r</sup>	18,300 <sup>r</sup>	4,360
Total		42,300 <sup>r</sup>	62,200	64,400	53,400	222,000	51,800
Other titanium dioxide:	3206.19.0000						
Canada		3,330	3,380	3,300 <sup>r</sup>	3,280	13,300	3,570
China		471	660	419	220	1,770	363
Italy		218	181	135	143	677	199
Mexico		211	201	70	131	613	119
Other		337	687 <sup>r</sup>	313	309 <sup>r</sup>	1,650	237
Total		4,560 <sup>r</sup>	5,110	4,240 <sup>r</sup>	4,090	18,000	4,490
Unfinished titanium dioxide: <sup>3</sup>	2823.00.0000						
Canada		807	598	771	291	2,470	1,270
China		1,750	2,290 <sup>r</sup>	3,290	1,510	8,830 <sup>r</sup>	1,100
Czechia		197	185	81	117	579	187
France		530	1,240	651	450	2,870	404
Germany		482	495	640	487 <sup>r</sup>	2,100 <sup>r</sup>	492
India		412	517	723	164	1,820	616
Korea, Republic of		531	791	364	365	2,050	294
Other		272 <sup>r</sup>	803	423	315	1,810	329
Total		4,980	6,910 <sup>r</sup>	6,940	3,700 <sup>r</sup>	22,500	4,690
Grand total		51,800 <sup>r</sup>	74,300 <sup>r</sup>	75,600	61,200 <sup>r</sup>	263,000	60,900

<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>Harmonized Tariff Schedule of the United States.

<sup>3</sup>Unmixed and not surface treated.

Source: U.S. Census Bureau.

TABLE 6  
PRICES FOR TITANIUM MATERIALS

(End of period)

		2020				2021
		1st quarter	2d quarter	3d quarter	4th quarter	1st quarter
<b>Concentrate:</b>						
Ilmenite, CIF, China <sup>1</sup>	dollars per metric ton	210-230	210-230	230-250	230-250	260-270
<b>Titanium slag, import<sup>2</sup></b>						
Canada	do.	NA	990	1,090	1,010	1,100
Norway	do.	NA	800	800	790	NA
South Africa	do.	640	630	590	540	510
<b>Rutile, natural:<sup>1</sup></b>						
Bagged, f.o.b. Australian ports	do.	1,300-1,350	1,300-1,350	1,300-1,350	1,300-1,350	1,300-1,400
Bulk, f.o.b. Australian ports	do.	1,150-1,200	1,150-1,200	1,150-1,200	1,150-1,200	1,200-1,300
<b>Metal:</b>						
Sponge metal, Japan, import <sup>2</sup>	dollars per kilogram	10.20	10.30 <sup>1</sup>	11.30	11.50	11.10
Titanium mill products	producer price index <sup>3</sup>	173	171	173	171	168
Titanium scrap, turnings, unprocessed (Ti-6Al-4V) <sup>4</sup>	dollars per pound	0.85-0.90	0.85-0.90	0.85-0.90	1.00-1.10	1.50-1.90
Ferrotitanium, 70% (max. 4.5% Al) per pound Ti <sup>4</sup>	do.	2.90-3.10	2.20-2.25	2.20-2.25	3.00-3.30	4.00-4.30
Pigment, Titanium dioxide pigment, import <sup>2</sup>	dollars per metric ton	2,790	2,660	2,690	2,650	2,740

<sup>1</sup>Revised. do. Ditto. NA Not available.

<sup>2</sup>Source: Fastmarkets IM.

<sup>3</sup>Unit value based on landed-duty-paid U.S. imports for consumption.

<sup>4</sup>June 1982=100. Source: U.S. Department of Labor, Bureau of Labor Statistics.

<sup>5</sup>Source: S&P Global Platts Metals Week.