

# Mineral Industry Surveys

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## TITANIUM IN THE THIRD QUARTER 2020

Industry participation is key to the publication of aggregated totals of domestic titanium statistics. In the third quarter of 2020, 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 Joseph Gambogi 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)

	2019			2020			
	3d quarter	4th quarter	1st quarter– 4th quarter	1st quarter	2d quarter	3d quarter	1st quarter– 3d quarter
<b>Production:</b>							
Sponge	W	W	W	W	W	W	W
Ingot	W	W	W	W	W	W	W
Mill products	W	W	W	W	W	W	W
<b>Exports:</b>							
Waste and scrap	3,640	4,120	15,000	3,690	2,820	3,940	10,500
Sponge	198	63	869	259	263	160	682
Ingot	1,340	2,030	7,260	1,930	991	467	3,390
Other unwrought	636	596	2,350	450	372	361	1,180
Bar, rod, profiles, wire	1,880	1,940	7,380	1,960	1,240	1,010	4,210
Bloom, sheet bar, slab	287	387	1,330	324	287	502	1,110
Other wrought	2,780	3,000	12,100	2,690	2,250	1,600	6,540
Total	10,800	12,100	46,300	11,300	8,230	8,040	27,600
<b>Imports:</b>							
Waste and scrap	7,490	7,510	30,100	6,860	5,370	2,130	14,400
Sponge <sup>2</sup>	8,150	6,820	30,000	8,670	6,740	2,150	17,600
Ingot	533	462	2,100	317	300	52	669
Powder	51	59	189	43	73	40	157
Other unwrought	324	131	1,070	264	185	98	547
Wrought	2,360	2,220	8,990	2,190	1,360	1,150	4,700
Castings	8	23	76	31	13	10	54
Other	260	189	888	172	156	128	456
Total	19,200	17,400	73,400	18,600	14,200	5,760	38,500
<b>Stocks, end of period:</b>							
Sponge, industry	W	W	W	W	W	W	W
Scrap	W	W	W	W	W	W	W
Ingot	W	W	W	W	W	W	W
<b>Consumption:</b>							
Sponge	W	W	W	W	W	W	W
Scrap	W	W	W	W	W	W	W
Ingot	W	W	W	W	W	W	W
<b>Shipments:</b>							
Ingot and slab (producer net shipments)	W	W	W	W	W	W	W
<b>Mill products (net shipments):</b>							
Forging and extrusion billet	W	W	W	W	W	W	W
Other	W	W	W	W	W	W	W
Total	W	W	W	W	W	W	W
Castings	W	W	W	W	W	W	W
<b>Receipts, scrap:</b>							
Home	W	W	W	W	W	W	W
Purchased	W	W	W	W	W	W	W
Total	W	W	W	W	W	W	W

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	2019			2020			
		3d quarter	4th quarter	1st quarter– 4th quarter	1st quarter	2d quarter	3d quarter	1st quarter– 3d quarter
<b>Metal:</b>								
Waste and scrap	8108.30.0000	3,640	4,120	15,000	3,690	2,820	3,940	10,500
<b>Unwrought:</b>								
Sponge	8108.20.0010	198	63	869	259	263	160	682
Ingot	8108.20.0030	1,340	2,030	7,260	1,930	991	467	3,390
Other	8108.20.0090	636	596	2,350	450	372	361	1,180
<b>Wrought:</b>								
Bar, rod, profiles, wire	8108.90.6031	1,880	1,940	7,380	1,960	1,240	1,010	4,210
Bloom, sheet bar, slab	8108.90.6020	287	387	1,330	324	287	502	1,110
Other	8108.90.8000	2,780	3,000	12,100	2,690	2,250	1,600	6,540
Ferrotitanium and ferrosilicon titanium	7202.91.0000	331	370	1,520	595	439	400	1,430
Ores and concentrates	2614.00.0000	1,160	7,430	12,200	3,280	17,800	3,830	24,900
<b>Pigment:</b>								
80% or more titanium dioxide	3206.11.0000	101,000	108,000	392,000	104,000	76,700	80,500	261,000
Other titanium dioxide	3206.19.0000	2,970	2,710	13,000	3,660	3,480	2,820	9,960
Unfinished titanium dioxide <sup>3</sup>	2823.00.0000	1,380	1,590	5,730	1,180	1,340	1,200	3,710

<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	2019			2020			
		3d quarter	4th quarter	1st quarter– 4th quarter	1st quarter	2d quarter	3d quarter	1st quarter– 3d quarter
<b>Waste and scrap:</b>								
	8108.30.0000							
Canada		566	484	1,750	527	250	135	913
China		99	129	383	149	171	161	482
France		903	1,030	3,640	1,000	573	62	1,640
Germany		1,560	1,290	5,120	1,170	927	714	2,810
Italy		520	480	2,210	433	306	16	755
Japan		1,250	1,230	4,830	1,140	1,020	431	2,590
Korea, Republic of		165	311	1,230	265	268	62	596
Mexico		372	389	1,650	333	135	215	682
Singapore		166	110	715	165	159	29	353
United Kingdom		1,110	1,370	5,780	903	889	180	1,970
Other		782 <sup>r</sup>	685 <sup>r</sup>	2,800 <sup>r</sup>	777 <sup>r</sup>	672 <sup>r</sup>	125	1,570
Total		7,490	7,510	30,100	6,860	5,370	2,130	14,400
<b>Unwrought:</b>								
<b>Sponge:</b>								
	8108.20.0010							
Japan		7,180	5,810	26,600	7,760	6,080	1,650	15,500
Kazakhstan <sup>e</sup>		787	797	2,940	675	564	482	1,720
Poland		34	--	105	--	--	--	--
Russia		27	14	73	40	14	--	53
Ukraine		85	144	243	162	86	--	248
Other		33	54	89	37	1	14	52
Total		8,150	6,820	30,000	8,670	6,740	2,150	17,600
<b>Ingot:</b>								
	8108.20.0030							
Kazakhstan		131	188	391	72	101	15	188
Russia		380	267	1,530	241	199	36	475
Other		23	8	180	5	--	1	6
Total		533	462	2,100	317	300	52	669
Powder	8108.20.0015	51	59	189	43	73	40	157
Other	8108.20.0095	324	131	1,070	264	185	98	547
<b>Wrought:</b>								
Bar, rod, profiles, wire	8108.90.6031	648	576	2,340	610	379	352	1,340
Bloom, sheet bar, slab	8108.90.6020	257	577	1,560	33	19	26	78
Plate, sheet, strip, foil	8108.90.6045	1,080	908	4,040	1,420	744	623	2,790
Tube and pipe	8108.90.6060	229	79	505	75	96	97	268
Other	8108.90.6075	152	82	543	57	121	48	225
Total		2,360	2,220	8,990	2,190	1,360	1,150	4,700
<b>Other articles of titanium:</b>								
Castings	8108.90.3030	8	23	76	31	13	10	54
Other	8108.90.3060	260	189	888	172	156	128	456
Ferrotitanium and ferrosilicon titanium	7202.91.0000	545	927	3,390	1,080	804	238	2,130

<sup>e</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.

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	2019			2020			
		3d quarter	4th quarter	1st quarter– 4th quarter	1st quarter	2d quarter	3d quarter	1st quarter– 3d quarter
<b>Ilmenite:</b>	2614.00.6020							
Australia		38,700	9,620	113,000	67,000	18,300	--	85,300
Madagascar		25,000	47,200	250,000	65,800	48,000	101,000	214,000
Mozambique		61,000	--	172,000	--	34,800	--	34,800
Norway		--	--	--	--	--	190	190
Senegal		26,100	49,400	131,000	20,800	--	21,500	42,200
Ukraine		20,000	--	60,300	20,000	--	20,000	40,000
Total		171,000	106,000	726,000	174,000	101,000	142,000	417,000
<b>Titanium slag:</b>	2620.99.5000							
Canada		22,100	10,000	74,000	8	27,000	10,000	37,100
South Africa		90,300	64,100	369,000	72,700	78,500	69,300	221,000
Other		20,400	8	30,100	5,000	15,000	15,000	35,000
Total		133,000	74,100	473,000	77,700	121,000	94,300	293,000
<b>Rutile:</b>	2614.00.6040							
Australia		241	27,600	78,400	14,200	7,250	120	21,600
Kenya		--	5,000	37,600	13,200	--	--	13,200
South Africa		31,200	62,000	188,000	20,100	35,200	35,500	90,800
Other		112	10,100	20,200	2,570	343	52	2,960
Total		31,600	105,000	324,000	50,100	42,800	35,600	129,000
<b>Synthetic rutile:</b>	2614.00.3000							
Australia		12,000	--	12,000	--	--	--	--
South Africa		--	5,000	5,000	--	--	--	--
Other		42	1,200	1,340	--	40	40	80
Total		12,000	6,200	18,300	--	40	40	80
Titaniferous iron ore, Canada <sup>3</sup>	2614.00.6020	41	--	41	--	--	--	--

-- 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	2019			2020			
		3d quarter	4th quarter	1st quarter– 4th quarter	1st quarter	2d quarter	3d quarter	1st quarter– 3d quarter
80% or more titanium dioxide:	3206.11.0000							
Australia		2,060	137	7,480	537	5,030	5,420	11,000
Belgium		2,850	3,320	13,700	3,790	3,350	2,300	9,440
Canada		19,000	15,800	81,600	16,300	25,100	27,300	68,700
China		3,200	3,700	13,400	5,220	8,670	7,260	21,100
Czechia		1,290	1,370	5,550	1,430	1,640	1,370	4,450
Germany		6,410	3,050	17,400	5,140	5,320	4,630	15,100
Japan		1,260	1,170	5,320	1,220	1,110	731	3,060
Mexico		1,150	741	4,100	1,450	2,500	5,010	8,960
Norway		850	1,000	4,170	819	1,360	2,280	4,450
Spain		2,860	3,960	12,600	2,660	3,120	4,180	9,960
Other		4,320	3,480	19,200	3,770	5,050	3,900	12,700
Total		45,300	37,700	184,000	42,400	62,200	64,400	169,000
Other titanium dioxide:	3206.19.0000							
Canada		3,250	2,510	11,600	3,330	3,380	3,310	10,000
China		337	347	1,490	471	660	419	1,550
Germany		116	76	370	128	144	128	399
Italy		100	1	476	218	181	135	535
Mexico		52	151	325	211	201	70	482
Other		164 <sup>r</sup>	244 <sup>r</sup>	1,310	209 <sup>r</sup>	544 <sup>r</sup>	185	938
Total		4,020	3,330	15,600	4,570	5,110	4,250	13,900
Unfinished titanium dioxide: <sup>3</sup>	2823.00.0000							
Canada		2,120	2,100	5,620	807	598	771	2,180
China		2,430	1,400	9,050	1,750	2,270	3,290	7,310
Czechia		508	299	1,090	197	185	81	463
France		481	536	2,010	530	1,240	651	2,420
Germany		955	877	3,300	482	495	640	1,620
India		417	477	2,280	412	517	723	1,650
Japan		95	153	519	127	174	66	367
Korea, Republic of		354	276	1,240	531	791	364	1,680
Other		224 <sup>r</sup>	285 <sup>r</sup>	1,160 <sup>r</sup>	145 <sup>r</sup>	629 <sup>r</sup>	357	1,130
Total		7,580	6,400	26,300	4,980	6,890	6,940	18,800
Grand total		56,900	47,500	226,000	51,900	74,200	75,600	202,000

<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)

		2019				2020		
		1st quarter	2d quarter	3d quarter	4th quarter	1st quarter	2d quarter	3d quarter
<b>Concentrate:</b>								
Ilmenite, CIF, China <sup>1</sup>	dollars per metric ton	170-180	180-190	190-210	190-210	210-230	210-230	230-250
Titanium slag, import <sup>2</sup>	do.	790-872	731-861	787-1,026	805-955	640-890	630-990	590-800
<b>Rutile, natural:<sup>1</sup></b>								
Bagged, f.o.b. Australian ports	do.	1,045-1,350	1,150-1,350	1,250-1,350	1,250-1,300	1,300-1,350	1,300-1,350	1,300-1,350
Bulk, f.o.b. Australian ports	do.	1,000-1,100	1,100-1,200	1,100-1,200	1,100-1,200	1,150-1,200	1,150-1,200	1,150-1,200
<b>Metal:</b>								
Sponge metal, Japan, import <sup>2</sup>	dollars per kilogram	10.50	10.30	10.60	10.60	10.20	9.50	11.30
Titanium mill products	producer price index <sup>3</sup>	174	173	174	172	173	171	173
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	0.85-0.90	0.85-0.90	0.85-0.90	0.85-0.90
Ferrotitanium, 70% (max. 4.5% Al) per pound Ti <sup>4</sup>	do.	2.90-3.10	2.90-3.10	2.90-3.10	2.90-3.10	2.90-3.10	2.20-2.25	2.20-2.25
<b>Pigment:</b>								
Titanium dioxide pigment, import <sup>2</sup>	dollars per metric ton	2,680	2,780	2,770	2,740	2,790	2,660	2,690
Titanium dioxide pigment <sup>5</sup>	producer price index <sup>3</sup>	208	NA	NA	NA	NA	NA	NA

do. Ditto. NA Not available.

<sup>1</sup>Source: Fastmarkets IM.

<sup>2</sup>Unit value based on landed-duty-paid U.S. imports for consumption.

<sup>3</sup>June 1982=100. Source: U.S. Department of Labor, Bureau of Labor Statistics.

<sup>4</sup>Source: S&P Global Platts Metals Week.

<sup>5</sup>The last titanium dioxide pigment producer price index update was February 2019.