

Mineral Industry Surveys

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TITANIUM IN THE FOURTH QUARTER 2024

In the fourth quarter of 2024, U.S. imports of titanium mineral concentrates, excluding titaniferous iron ore, totaled 277,000 metric tons (t) (gross weight) and included ilmenite (137,000 t), rutile (50,000 t), and titanium slag (89,800 t). Imports of ilmenite increased by 90% compared with imports in the third quarter of 2024. Imports of rutile increased by 18%, and imports of titanium slag increased by 3% compared with those in the third quarter of 2024 (table 4). Exports of all forms of titanium mineral concentrates in the fourth quarter of 2024 were 1,890 t, 7% less than exports in the prior quarter (table 2).

Imports of all forms of titanium pigment in the fourth quarter of 2024 were 50,800 t, a 17% decrease compared with those in the third quarter of 2024 (table 5). Exports of all forms of titanium pigment were 87,900 t, a 10% decrease compared with those in the prior quarter (table 2).

In the fourth quarter of 2024, total imports of titanium metal, excluding ferrotitanium, were 19,000 t and were primarily in the form of sponge (52%) and waste and scrap (36%) (table 3). Imports of sponge increased by 3% and imports of waste and scrap decreased by 10% compared with those in the prior quarter. Imports of ingot, powder, and other unwrought products were 867 t, 31% more than those in the prior quarter. Exports of all forms of titanium metal in the fourth quarter of 2024 decreased by 10% to 10,200 t from 11,300 t in the prior quarter (table 1).

Industry participation is key to the publication of aggregated totals of domestic titanium statistics. In the fourth quarter of 2024, 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 15 to 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 Samantha Ewing using the contact information listed above.

A worksheet has been added to the Excel table files that includes a button to remove text and numerical footnotes from data cells. This will allow users to only have numbers in data cells. Please see the worksheet titled "RemoveTextButton" for instructions on how to use the tool. Note: You must download the Excel file to use the tool.

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. U.S. titanium metal supply and demand.

[Data are rounded to no more than three significant digits; may not add to totals shown. Data are in metric tons, unless otherwise specified. Revised data are marked with a superscript "r."]

Source: U.S. Census Bureau.]

Product	2023					2024				
	1st quarter	2d quarter	3d quarter	4th quarter	1st quarter– 4th quarter	1st quarter	2d quarter	3d quarter	4th quarter	1st quarter– 4th quarter
Production										
Sponge	W	W	W	W	W	W	W	W	W	W
Ingot	W	W	W	W	W	W	W	W	W	W
Mill products	W	W	W	W	W	W	W	W	W	W
Exports										
Waste and scrap	2,690	2,070	2,290	2,630	9,690	2,740	3,120	2,990	2,610	11,500
Sponge	33	121	23	69	247	41	4	21	7	73
Ingot	1,540	1,190	1,200	1,300	5,230	1,710	1,400	1,290	998	5,400
Other unwrought	400	677	464	545	2,080	974	1,070	926	1,050	4,020
Bar, rod, profiles, wire	2,090	2,130	2,030	2,270	8,530	2,180	1,980	2,180	1,680	8,020
Bloom, sheet bar, slab	438	589	644	748	2,420	777	746	921	894	3,340
Other wrought	2,140	2,350	2,300	2,640	9,430	2,800	3,080	2,960	2,950	11,800
Total	9,340	9,130	8,950	10,200	37,600	11,200	11,400	11,300	10,200	44,100
Imports										
Waste and scrap	6,020	6,980	6,910	7,110	27,000	6,550	6,970	7,510	6,780	27,800
Sponge ¹	10,400	10,400	10,200	9,330	40,400	11,200	9,060	9,590 ^r	9,830	39,700
Ingot	632	661	65	282	1,640	223	316	539	682	1,760
Powder	69	75	79	36	258	77	51	91	60	279
Other unwrought	963	128	14	26	1,130	20	57	30	125	232
Wrought	1,280	1,280	1,100	931	4,590	1,040	1,190	1,000	1,200	4,430
Castings	7	12	33	32	85	10	11	6	3	31
Other	212	219	115	159	705	225	239	343	275	1,080
Total	19,600	19,800	18,500	17,900	75,800	19,300	17,900	19,100	19,000	75,300
Stocks, end of period										
Sponge, industry	W	W	W	W	W	W	W	W	W	W
Scrap	W	W	W	W	W	W	W	W	W	W
Ingot	W	W	W	W	W	W	W	W	W	W
Consumption										
Sponge	W	W	W	W	W	W	W	W	W	W
Scrap	W	W	W	W	W	W	W	W	W	W
Ingot	W	W	W	W	W	W	W	W	W	W
Shipments										
Ingot and slab (producer net shipments)	W	W	W	W	W	W	W	W	W	W
Mill products (net shipments), forging and extrusion bills	W	W	W	W	W	W	W	W	W	W
Mill products (net shipments), Other	W	W	W	W	W	W	W	W	W	W
Total	W	W	W	W	W	W	W	W	W	W
Castings	W	W	W	W	W	W	W	W	W	W
Receipts, scrap										
Home	W	W	W	W	W	W	W	W	W	W
Purchased	W	W	W	W	W	W	W	W	W	W
Total	W	W	W	W	W	W	W	W	W	W

¹Estimated by the U.S. Geological Survey.

Table 2. U.S. exports of titanium product.

[Data are rounded to no more than three significant digits; may not add to totals shown. Data are in metric tons, unless otherwise specified. Source: U.S. Census Bureau.]

Product and Schedule B code	2023					2024				
	1st quarter	2d quarter	3d quarter	4th quarter	1st quarter– 4th quarter	1st quarter	2d quarter	3d quarter	4th quarter	1st quarter– 4th quarter
Metal										
Waste and scrap (8108.30.0000)	2,690	2,070	2,290	2,630	9,690	2,740	3,120	2,990	2,610	11,500
Metal, unwrought										
Sponge (8108.20.0010)	33	121	23	69	247	41	4	21	7	73
Ingot (8108.20.0030)	1,540	1,190	1,200	1,300	5,230	1,710	1,400	1,290	998	5,400
Other (8108.20.0090)	400	677	464	545	2,080	974	1,070	926	1,050	4,020
Metal, wrought										
Bar, rod, profiles, wire (8108.90.6031)	2,090	2,130	2,030	2,270	8,530	2,180	1,980	2,180	1,680	8,020
Bloom, sheet bar, slab (8108.90.6020)	438	589	644	748	2,420	777	746	921	894	3,340
Other (8108.90.8000)	2,140	2,350	2,300	2,640	9,430	2,800	3,080	2,960	2,950	11,800
Pigment										
80% or more titanium dioxide (3206.11.0000)	60,900	67,000	68,800	69,400	266,000	74,400	86,500	93,100	83,500	337,000
Other titanium dioxide (3206.19.0000)	3,050	2,640	2,620	2,590	10,900	2,920	2,530	2,900	2,500	10,800
Unfinished titanium dioxide ¹ (2823.00.0000)	2,910	2,840	2,960	2,870	11,600	2,750	2,940	1,900	1,910	9,490
Other										
Ferrotitanium and ferrosilicon titanium (7202.91.0000)	396	331	251	282	1,260	336	361	200	265	1,160
Ores and concentrates (2614.00.0000)	56,900	40,400	12,000	424	110,000	1,450	1,910	2,030	1,890	7,290

¹Unmixed and not surface treated.

Table 3. U.S. imports of titanium metal.

[Data are rounded to no more than three significant digits; may not add to totals shown. Data are in metric tons, unless otherwise specified. Estimated data are marked with a superscript "e." Source: U.S. Census Bureau.]

Product and HTS ¹ Code	2023					2024				
	1st quarter	2d quarter	3d quarter	4th quarter	1st quarter– 4th quarter	1st quarter	2d quarter	3d quarter	4th quarter	1st quarter– 4th quarter
Waste and scrap (8108.30.0000)										
Canada	495	731	552	811	2,590	673	595	553	588	2,410
China	218	222	141	256	837	275	328	281	269	1,150
France	867	793	718	711	3,090	688	741	807	770	3,010
Germany	661	878	1,060	927	3,520	546	891	1,000	833	3,270
Italy	349	305	269	322	1,240	384	324	350	286	1,340
Japan	831	765	923	900	3,420	733	782	743	773	3,030
Korea, Republic of	167	296	574	533	1,570	692	545	733	562	2,530
Mexico	407	550	369	413	1,740	389	420	429	451	1,690
Poland	203	281	280	245	1,010	254	258	289	291	1,090
Singapore	210	273	216	409	1,110	250	352	292	249	1,140
United Kingdom	1,120	967	1,050	1,030	4,170	1,060	1,130	1,400	1,240	4,830
Other	486	922	759	556	2,720	609	599	637	470	2,320
Total	6,020	6,980	6,910	7,110	27,000	6,550	6,970	7,510	6,780	27,800
Unwrought, sponge (8108.20.0010)										
China	56	20	21	57	154	190	150	510	218	1,070
Japan	8,330	7,850	7,580	7,620	31,400	7,670	5,910	6,480	7,640	27,700
Kazakhstan ^e	1,070	738	795	597	3,200	1,210	766	84	340	2,400
Saudi Arabia	936	1,780	1,780	1,060	5,560	2,090	2,220	2,520	1,600	8,430
Other	21	20	17	(²)	59	24	20	0	33	77
Total	10,400	10,400	10,200	9,330	40,400	11,200	9,060	9,590	9,830	39,700
Unwrought, ingot (8108.20.0030)										
Kazakhstan	496	652	65	282	1,500	209	285	524	524	1,540
Russia	135	8	0	0	144	13	8	7	0	28
Other	(²)	(²)	0	(²)	(²)	(²)	22	8	158	188
Total	632	661	65	282	1,640	223	316	539	682	1,760
Unwrought										
Powder (8108.20.0015)	69	75	79	36	258	77	51	91	60	279
Other (8108.20.0095)	963	128	14	26	1,130	20	57	30	125	232
Wrought										
Bar, rod, profiles, wire (8108.90.6031)	743	587	444	419	2,190	383	301	359	401	1,440
Bloom, sheet bar, slab (8108.90.6020)	64	3	5	46	119	78	0	1	6	85
Plate, sheet, strip, foil (8108.90.6045)	268	475	412	296	1,450	373	740	409	473	1,990
Tube and pipe (8108.90.6060)	58	62	60	64	245	75	57	59	61	253
Other (8108.90.6075)	149	150	177	105	581	129	91	173	261	654
Total	1,280	1,280	1,100	931	4,590	1,040	1,190	1,000	1,200	4,430
Wrought, other articles of titanium										
Castings (8108.90.3030)	7	12	33	32	85	10	11	6	3	31
Other (8108.90.3060)	212	219	115	159	705	225	239	343	275	1,080
Ferrotitanium and ferrosilicon titanium (7202.91.0000)										
Total	490	1,050	953	959	3,450	407	624	489	500	2,020

¹Harmonized Tariff Schedule of the United States.

²Less than ½ unit.

Table 4. U.S. imports of titanium concentrates.

[Data are rounded to no more than three significant digits; may not add to totals shown. Data are in metric tons, unless otherwise specified. Source: U.S. Census Bureau.]

Product and HTS ¹ Code	2023					2024				
	1st quarter	2d quarter	3d quarter	4th quarter	1st quarter– 4th quarter	1st quarter	2d quarter	3d quarter	4th quarter	1st quarter– 4th quarter
Ilmenite (2614.00.6020)										
Madagascar	15,000	40,000	12,500	30,000	97,500	69,500	0	29,000	82,000	181,000
Mozambique	65,000	44,000	30,000	38,100	177,000	61,000	0	43,200	36,300	140,000
Senegal	20,000	20,000	10,000	15,000	65,000	35,000	25,000	0	0	60,000
Ukraine	20,000	0	0	0	20,000	0	0	0	18,700	18,700
Other	12,600	230	6,300	40	19,100	10,000	0	4	40	10,100
Total	133,000	104,000	58,800	83,100	379,000	175,000	25,000	72,200	137,000	410,000
Titanium slag (2620.99.5000)										
Canada	17,000	52,000	33,400	54,200	157,000	3	42,900	47,300	55,300	146,000
Norway	0	15,000	0	25,000	40,000	0	20,000	40,000	28,500	88,500
South Africa	15,000	17,600	23,500	8,770	64,900	28,700	17,200	0	6,020	52,000
Other	0	0	0	853	853	0	0	(²)	0	(²)
Total	32,000	84,600	56,900	88,800	262,000	28,800	80,200	87,300	89,800	286,000
Rutile (2614.00.6040)										
Australia	14,500	33,900	10,100	15,200	73,700	25,200	12,400	594	39,500	77,600
Kenya	12,000	0	10	0	12,000	10,000	0	123	223	10,300
South Africa	44,700	58,800	7,770	1,730	113,000	30,400	9,770	29,600	7,710	77,400
Ukraine	308	0	0	58	366	0	0	10,900	2,620	13,500
Other	1	81	98	2	181	51	271	1,070	1	1,400
Total	71,600	92,700	17,900	17,000	199,000	65,600	22,500	42,300	50,000	180,000
Synthetic rutile (2614.00.3000)										
Australia	0	0	160	0	160	0	0	0	0	0
Other	0	0	0	108	108	1	0	17	0	17
Total	0	0	160	108	268	1	0	17	0	17
Titaniferous iron ore³ (2614.00.6020), Canada										
Total	7,510	22	0	0	7,530	0	0	0	6	6

¹Harmonized Tariff Schedule of the United States.²Less than ½ unit.³Includes 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.

Table 5. U.S. imports of titanium pigment.

[Data are rounded to no more than three significant digits; may not add to totals shown. Data are in metric tons, unless otherwise specified. Source: U.S. Census Bureau.]

Product and HTS ¹ Code	2023					2024				
	1st quarter	2d quarter	3d quarter	4th quarter	1st quarter– 4th quarter	1st quarter	2d quarter	3d quarter	4th quarter	1st quarter– 4th quarter
80% or more titanium dioxide (3206.11.0000)										
Australia	390	1,740	1,020	553	3,700	1,550	2,170	2,730	2,010	8,460
Belgium	1,100	573	700	1,260	3,630	1,930	1,800	1,490	1,320	6,550
Canada	22,100	21,700	24,200	21,500	89,400	22,800	24,800	23,300	19,200	90,200
China	4,680	5,490	5,310	4,470	20,000	5,370	6,780	6,130	3,970	22,200
Germany	1,580	2,200	2,320	2,470	8,580	3,220	3,130	3,790	2,920	13,100
Japan	782	1,190	1,370	1,110	4,450	906	1,140	1,210	904	4,160
Mexico	9,920	8,840	9,400	6,480	34,600	6,890	7,930	1,250	323	16,400
Spain	2,410	2,280	2,020	2,340	9,050	2,200	2,180	3,440	3,550	11,400
Other	4,690	4,160	3,990	4,600	17,400	3,720	6,660	8,430	7,050	25,900
Total	47,700	48,100	50,300	44,700	191,000	48,600	56,600	51,800	41,300	198,000
Other titanium dioxide (3206.19.0000)										
Canada	3,550	3,370	3,760	3,500	14,200	3,830	3,800	3,870	3,350	14,800
China	237	190	166	147	741	45	18	198	57	319
France	381	182	5	10	577	200	206	31	12	449
India	342	200	297	348	1,190	233	389	271	298	1,190
Italy	217	200	160	256	832	240	352	79	8	679
Mexico	152	127	231	196	706	180	64	111	127	483
Other	418	336	355	281	1,390	355	458	477	582	1,870
Total	5,300	4,600	4,980	4,730	19,600	5,080	5,290	5,030	4,440	19,800
Unfinished titanium dioxide² (2823.00.0000)										
Canada	203	204	186	224	817	232	358	158	181	929
China	2,530	2,310	1,680	1,430	7,950	1,980	1,690	1,710	1,840	7,220
France	1,190	501	852	461	3,000	20	278	474	942	1,710
Germany	161	688	327	681	1,860	403	483	331	377	1,590
India	234	561	489	342	1,630	482	559	358	490	1,890
Korea, Republic of	257	464	291	440	1,450	565	511	1,180	717	2,980
Other	258	207	323	299	1,090	516	370	356	575	1,820
Total	4,840	4,930	4,140	3,870	17,800	4,200	4,250	4,570	5,120	18,100
Grand total	57,800	57,700	59,400	53,300	228,000	57,900	66,200	61,400	50,800	236,000

¹Harmonized Tariff Schedule of the United States.²Unmixed and not surface treated.

Table 6. Titanium materials prices.

[Data are in dollars per metric ton, unless otherwise specified. Revised data are marked with a superscript "r." NA, not available.]

Product and unit	2023				2024			
	1st quarter	2d quarter	3rd quarter	4th quarter	1st quarter	2d quarter	3rd quarter	4th quarter
Mineral concentrates¹								
Ilmenite, cost, insurance, freight, China	408	404	385	358	339	330	330	325
Rutile, Bagged, free on board (f.o.b.) Australian ports	2,200	2,200	2,200	2,040	1,860	1,850	1,810	1,730
Rutile, Bulk, f.o.b. Australian ports	1,500	1,480	1,480	1,390	1,330	1,330	1,280	1,250
Titanium slag²								
Canada, import	1,160	1,150	1,130	1,140	2,140	1,060	1,110	1,000
Norway, import	NA	1,000	NA	840	NA	871	853	828
South Africa, import	793	901	982	953	959	936	NA	928
Metal								
Sponge metal, Japan, import (dollars per kilogram) ²	11.30	12.20	12.80	13.10	13.10	13.60	14.00	13.40
Titanium mill products (producer price index ³)	206	208	209	211	211	214	217 ^r	220
Titanium scrap, turnings, unprocessed ([Ti-6Al-4V] [dollars per pound]) ⁴	2.25	2.25	2.25	2.25	2.25	2.25	2.25	2.25
Ferrotitanium, 70% (max. 4.5% Al) per pound Ti (dollars per pound) ⁴	3.10	3.45	4.32	3.50	3.41	3.32	3.34	3.42
Pigment²								
80% or more titanium dioxide, import	3,320	3,310	3,170	3,150	3,120	3,150	3,220	3,200

¹Source: Fastmarkets IM.²Unit value based on landed-duty-paid U.S. imports for consumption.³June 1982=100. Source: U.S. Department of Labor, Bureau of Labor Statistics.⁴Source: S&P Global Platts Metals Week.