

Mineral Industry Surveys

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PLATINUM-GROUP METALS IN DECEMBER 2021

Imports for consumption of platinum-group metals (PGMs), including waste and scrap, were 42,900 kilograms (kg) in December 2021, an increase of 91% compared with imports in November 2021 and more than double imports in December 2020. Annual imports of all PGMs in 2021 were essentially unchanged compared with imports in 2020 (table 1). The leading import sources for PGMs into the United States in December 2021 were, in descending order of quantity, Taiwan, South Africa, and Russia (tables 3, 4).

In December 2021, exports of PGM scrap decreased by 38% and palladium by 40% compared with those in November 2021, while exports of platinum and rhodium more than doubled, each. The leading destinations for PGM exports were, in descending order of quantity, Switzerland, United Kingdom, and Japan (tables 1, 5).

The Engelhard average December 2021 prices decreased by 11% for palladium, by 9% for platinum, by 6% for iridium, by 6% for ruthenium, and slightly for rhodium compared with average prices in the previous month. Compared with average prices in December 2020, the December 2021 average prices more than doubled for iridium and ruthenium, each. The average price of palladium decreased by 24%, rhodium by 14%, and platinum by 8% (fig. 1; tables 1, 2).

Industry News

Anglo American Platinum Ltd. (Amplats) (South Africa) announced the approval of a mine extension project into the Der Brochen orebody at the Mototolo platinum mine, located along the eastern limb of the Bushveld Complex in South Africa. The project will extend the life of the mine beyond 30 years. Project development was expected to begin the first quarter of 2022 (Anglo American Platinum Ltd., 2021b).

Amplats also completed a sales and purchase agreement with African Rainbow Minerals Ltd. (ARM) (South Africa) to divest its interests in the Bokoni platinum mine, located in the eastern limb of the Bushveld Complex in South Africa. The final transaction was expected to be fulfilled in 2022 after receiving government approval. Amplats ceased mining operations at the Bokoni Mine in 2017; however, technical studies in 2019 determined the mine could be restarted with additional investment. Once ARM has the mine operational again, Amplats agreed to purchase PGM concentrate from the mine for 23 years (Anglo American Platinum Ltd., 2021a).

References Cited

- Anglo American Platinum Ltd., 2021a, Anglo American Platinum announces the sale of its interest in Bokoni Mine: Johannesburg, South Africa, Anglo American Platinum Ltd. press release, December 20. (Accessed February 11, 2022, at <https://www.angloamericanplatinum.com/media/press-releases/2021/20-12-2021>.)
- Anglo American Platinum Ltd., 2021b, Anglo American Platinum approves Mototolo/Der Brochen life extension project, and provides an update on 2021 guidance and outlook: Johannesburg, South Africa, Anglo American Platinum Ltd. press release, December 10. (Accessed February 11, 2022, at <https://www.angloamericanplatinum.com/media/press-releases/2021/10-12-2021>.)

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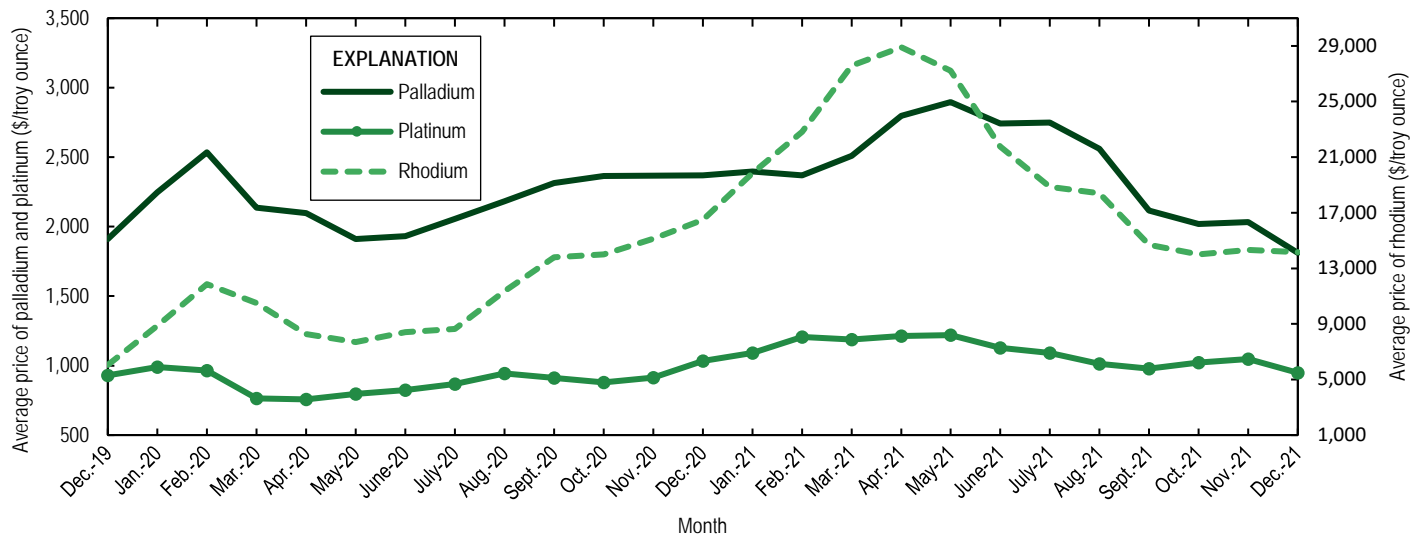


Figure 1. Engelhard unfabricated average monthly prices for palladium, platinum, and rhodium in dollars per troy ounce from December 2019 through December 2021. Source: S&P Global Platts Metals Week.

TABLE 1
U.S. SALIENT PLATINUM-GROUP METALS STATISTICS¹

(Kilograms metal content, unless otherwise specified)

	2020	2021			
	January– December	October	November	December	January– December
Mine production: ²					
Palladium	14,600	1,160	1,160	1,160	14,100
Platinum	4,200	337	337	337	4,130
Total	18,800	1,500	1,500	1,500	18,300
Imports for consumption: ³					
Palladium	76,400	5,010	4,600	5,530	72,600
Platinum	64,800	6,020	11,000	8,100	67,800
Iridium	1,620	105	134	216	2,310
Osmium	1	--	--	--	1
Rhodium	20,700	1,580	1,150	1,610	16,500
Ruthenium	13,900	837	756	531	18,000
Waste and scrap ⁴	188,000	8,030	4,780	26,900	187,000
Total	365,000	21,600	22,400	42,900	364,000
Exports: ³					
Palladium	48,600	3,860	6,020	3,610	43,900
Platinum	28,900	1,720	1,670	4,030	29,400
Iridium, osmium, ruthenium	1,440	39	22	108	2,120
Rhodium	1,470	197	48	114	1,340
Waste and scrap ⁴	33,200	3,310	2,140	1,330	37,600
Total	114,000	9,120	9,900	9,200	114,000
Price, average (dollars per troy ounce): ⁵					
Palladium	2,205.27	2,018.33	2,033.90	1,811.14	2,419.18
Platinum	886.02	1,020.86	1,046.30	947.90	1,094.31
Iridium	1,633.51	4,714.29	4,500.00	4,216.67	5,158.40
Rhodium	11,205.06	13,990.48	14,325.00	14,166.67	20,254.10
Ruthenium	271.83	655.95	630.00	594.05	576.12

-- Zero.

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

²2021 data estimated based on publicly reported quarterly data.

³Source: U.S. Census Bureau.

⁴Includes waste and scrap for all platinum-group elements. Previously included within platinum.

⁵Source: S&P Global Platts Metals Week.

TABLE 2
PLATINUM-GROUP METALS PRICES¹

(Dollars per troy ounce)

	Palladium	Platinum	Iridium	Rhodium	Ruthenium
2020:					
Low:					
Price	1,585.00	610.00	1,490.00	6,000.00	255.00
Date	Mar. 17	Mar. 19	Jan.–Feb. ²	Mar. ²	Jan.–Apr. ²
High:					
Price	2,790.00	1,085.00	2,600.00	17,150.00	280.00
Date	Feb. 19	Dec. 31	Dec. 30 and 31	Dec. 31	May–Dec. ²
Price, average	2,205.27	886.02	1,633.51	11,205.06	271.83
2021:					
October:					
Low:					
Price	1,880.00	954.00	4,500.00	13,400.00	650.00
Date	Oct. 6	Oct. 4	Oct. ²	Oct. 4	Oct. ²
High:					
Price	2,170.00	1,066.00	5,000.00	14,300.00	675.00
Date	Oct. 14	Oct. 22	Oct. ²	Oct. 7	Oct. ²
Price, average	2,018.33	1,020.86	4,714.29	13,990.48	655.95
November:					
Low:					
Price	1,775.00	948.00	4,500.00	13,700.00	625.00
Date	Nov. 30	Nov. 30	Nov. ²	Nov. 29	Nov. ²
High:					
Price	2,180.00	1,098.00	4,500.00	14,500.00	650.00
Date	Nov. 18	Nov. 16	Nov. ²	Nov. ²	Nov. ²
Price, average	2,033.90	1,046.30	4,500.00	14,325.00	630.00
December:					
Low:					
Price	1,584.00	915.00	4,150.00	14,000.00	575.00
Date	Dec. 15	Dec. 14 and 15	Dec. ²	Dec. 1	Dec. ²
High:					
Price	2,000.00	990.00	4,500.00	14,250.00	625.00
Date	Dec. 28	Dec. 28	Dec. ²	Dec. ²	Dec. ²
Price, average	1,811.14	947.90	4,216.67	14,166.67	594.05
January–December:					
Low:					
Price	1,584.00	915.00	3,000.00	12,000.00	280.00
Date	Dec. 15	Dec. 14 and 15	Jan. ²	Sep. 15 and 16	Jan. ²
High:					
Price	3,020.00	1,298.00	6,400.00	30,000.00	825.00
Date	May 4	Feb. 19	Apr.–May ²	Mar. 22	May 21 and 24
Price, average	2,419.18	1,094.31	5,158.40	20,254.10	576.12

¹Quotes from Engelhard.

²Occurred multiple days in month(s) listed.

Source: S&P Global Platts Metals Week.

TABLE 3
U.S. IMPORTS FOR CONSUMPTION OF PLATINUM METAL, BY COUNTRY OR LOCALITY¹

(Kilograms metal content, unless otherwise specified)

Country or locality	Platinum grain and nuggets		Platinum sponge		Other unwrought platinum		Platinum, other		Platinum coins	
	Quantity	Value (thousands)	Quantity	Value (thousands)	Quantity	Value (thousands)	Quantity	Value (thousands)	Quantity	Value (thousands)
2020, January–December	162	\$4,780	30,900	\$874,000	5,370	\$255,000	25,900	\$853,000	2,510	\$75,300
2021:										
October	118	3,800	3,870	125,000	576	23,200	1,350	56,000	114	3,930
November	28	980	6,650	246,000	430	17,200	3,770	142,000	112	4,000
December:										
Australia	--	--	--	--	--	--	(2)	13	5	204
Belgium	--	--	607	19,800	--	--	--	--	--	--
Canada	47	1,470	--	--	--	--	76	2,630	32	1,040
Colombia	--	--	--	--	53	1,600	--	--	--	--
Costa Rica	--	--	--	--	--	--	120	4,270	--	--
Czechia	--	--	--	--	--	--	4	162	--	--
France	--	--	--	--	--	--	16	573	--	--
Germany	--	--	54	1,760	73	2,520	146	7,170	3	103
Hong Kong	--	--	64	2,190	--	--	--	--	--	--
India	--	--	20	647	--	--	--	--	--	--
Ireland	--	--	--	--	(2)	10	--	--	--	--
Italy	--	--	911	30,500	--	--	--	--	--	--
Japan	--	--	--	--	117	5,300	11	214	--	--
Mexico	--	--	--	--	--	--	5	192	--	--
Russia	--	--	200	6,310	--	--	--	--	--	--
Rwanda	--	--	--	--	--	--	--	--	1	13
Singapore	--	--	--	--	2	152	14	541	--	--
South Africa	--	--	4,170	152,000	--	--	9	291	--	--
Switzerland	--	--	554	19,000	--	--	683	21,300	1	18
United Kingdom	37	1,210	--	--	26	840	38	1,980	(2)	6
Total	84	2,680	6,580	232,000	271	10,400	1,120	39,400	43	1,390
January–December	590	20,800	44,700	1,600,000	5,400	247,000	15,800	662,000	1,400	49,200

-- Zero.

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

²Less than ½ unit.

Source: U.S. Census Bureau.

TABLE 4
U.S. IMPORTS FOR CONSUMPTION OF PLATINUM-GROUP METALS, BY COUNTRY OR LOCALITY¹

(Kilograms metal content, unless otherwise specified)

Country or locality	Palladium ²		Iridium ²		Osmium ²		Rhodium ²		Ruthenium ²		Waste and scrap ³	
	Quantity	Value (thousands)	Quantity	Value (thousands)	Quantity	Value (thousands)	Quantity	Value (thousands)	Quantity	Value (thousands)	Quantity	Value (thousands)
2020, January–December	76,400	\$4,490,000	1,620	\$70,100	1	\$17	20,700	\$4,590,000	13,900	\$117,000	188,000	\$1,500,000
2021:												
October	5,010	350,000	105	16,300	--	--	1,580	700,000	837	17,000	8,030	171,000
November	4,600	320,000	134	17,300	--	--	1,150	534,000	756	14,800	4,780	185,000
December: ⁴												
Australia	--	--	--	--	--	--	--	--	--	--	15	500
Belgium	434	27,700	--	--	--	--	180	72,300	--	--	6	837
Brazil	--	--	--	--	--	--	--	--	--	--	95	4,440
Canada	520	32,900	--	--	--	--	1	75	--	--	359	18,800
France	(5)	7	--	--	--	--	--	--	--	--	39	1,490
Germany	8	519	16	2,260	--	--	358	180,000	183	3,010	1	26
Guatemala	--	--	--	--	--	--	--	--	--	--	20	636
Italy	320	18,200	1	201	--	--	89	33,300	--	--	--	--
Japan	102	2,380	48	8,160	--	--	(5)	110	7	92	--	--
Korea, Republic of	232	13,600	--	--	--	--	23	10,900	--	--	--	--
Malaysia	--	--	--	--	--	--	--	--	--	--	50	1,510
Mexico	10	129	--	--	--	--	--	--	--	--	710	22,700
New Zealand	--	--	--	--	--	--	--	--	--	--	215	7,390
Norway	--	--	--	--	--	--	--	--	--	--	39	1,260
Russia	1,650	101,000	--	--	--	--	110	49,900	--	--	--	--
Saudi Arabia	--	--	--	--	--	--	--	--	--	--	25	759
South Africa	2,230	158,000	135	15,200	--	--	818	413,000	342	5,500	--	--
Switzerland	23	1,370	--	--	--	--	--	--	--	--	--	--
Taiwan	--	--	--	--	--	--	--	--	--	--	25,000 ⁶	2,720
United Kingdom	--	--	16	2,310	--	--	32	13,900	--	--	256	8,350
Other	5	54	--	--	--	--	--	--	--	--	74	1,880
Total	5,530	357,000	216	28,100	--	--	1,610	773,000	531	8,600	26,900	73,300
January–December	72,600	5,390,000	2,310	285,000	1	17	16,500	9,850,000	18,000	247,000	187,000	2,380,000

-- Zero.

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

²Unwrought and other forms.

³Includes waste and scrap for all platinum-group elements.

⁴The 20 countries and (or) localities with the greatest total platinum-group metal imports are listed. All others are included in the "Other" category.

⁵Less than ½ unit.

⁶Referred to the U.S. Census Bureau for verification.

Source: U.S. Census Bureau.

TABLE 5
U.S. EXPORTS OF PLATINUM-GROUP METALS, BY COUNTRY OR LOCALITY¹

(Kilograms metal content, unless otherwise specified)

Country or locality	Palladium ²		Platinum ²		Iridium, osmium and ruthenium ^{2,3}		Rhodium ²		Waste and scrap ⁴	
	Quantity	Value (thousands)	Quantity	Value (thousands)	Quantity	Value (thousands)	Quantity	Value (thousands)	Quantity	Value (thousands)
2020, January–December	48,600	\$2,900,000	28,900	\$930,000	1,440	\$24,900	1,470	\$426,000	33,200	\$1,400,000
2021:										
October	3,860	244,000	1,720	56,600	39	587	197	85,400	3,310	265,000
November	6,020	336,000	1,670	62,400	22	668	48	21,600	2,140	226,000
December: ⁵										
Australia	1	95	8	278	14	67	--	--	--	--
Austria	--	--	18	942	1	12	--	--	--	--
Belgium	118	7,160	64	1,970	1	9	16	7,160	--	--
Brazil	81	5,480	3	79	--	--	--	--	--	--
Canada	68	4,300	21	742	--	--	(6)	16	1	23
China	2	160	25	881	9	189	16	7,300	--	--
Costa Rica	(6)	10	50	1,710	4	18	--	--	--	--
Germany	56	3,630	126	5,740	(6)	6	--	--	321	94,600
Hong Kong	8	529	10	313	15	2,260	2	566	27	858
Ireland	1	61	27	936	2	12	--	--	--	--
Israel	26	1,660	1	33	--	--	--	--	--	--
Italy	636	36,800	131	3,960	1	15	(6)	8	--	--
Japan	84	5,160	97	3,170	3	308	--	--	847	50,100
Korea, Republic of	15	952	3	96	1	5	--	--	--	--
Mexico	2	141	20	742	(6)	11	--	--	--	--
Norway	--	--	39	1,340	--	--	--	--	--	--
Singapore	(6)	27	152	4,950	--	--	--	--	--	--
Switzerland	820	46,800	3,000	91,200	--	--	--	--	--	--
Taiwan	209	13,200	8	372	32	252	--	--	--	--
United Kingdom	1,460	83,700	207	8,750	24	691	79	35,700	135	33,400
Other	19	1,220	27	940	1	20	--	--	1	41
Total	3,610	211,000	4,030	129,000	108	3,870	114	50,700	1,330	179,000
January–December	43,900	3,370,000	29,400	1,110,000	2,120	54,400	1,340	803,000	37,600	3,360,000

-- Zero.

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

²Unwrought and other forms.

³Gross weight.

⁴Includes waste and scrap for all platinum-group elements. Previously categorized as "Platinum waste and scrap."

⁵The 20 countries and (or) localities with the greatest total platinum-group metal exports are listed. All others are included in the "Other" category.

⁶Less than ½ unit.

Source: U.S. Census Bureau.