

# Mineral Industry Surveys

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**For information, contact:**

Ruth F. Schulte, PGM Commodity Specialist  
National Minerals Information Center  
Telephone: (703) 648-4963  
Email: [rschulte@usgs.gov](mailto:rschulte@usgs.gov)

Christine Pisut (Data)  
Telephone: (703) 648-7942  
Email:

**Internet:** <https://www.usgs.gov/centers/national-minerals-information-center/mineral-industry-surveys>

## PLATINUM-GROUP METALS IN FEBRUARY 2022

Imports for consumption of platinum-group metals (PGMs), including waste and scrap, were 16,800 kilograms (kg) in February 2022, an increase of 22% compared with imports in January 2022, and a decrease of 66% compared with imports in February 2021 (table 1). The leading import sources for PGMs into the United States in February 2022 were, in descending order of quantity, South Africa, Russia, Germany, and Poland (tables 3, 4).

In February 2022, exports of platinum more than doubled and palladium increased by 79% compared with those in January 2022. Exports of PGM scrap and rhodium decreased by 30% and 35%, respectively, compared with those in January 2022. The leading destinations for PGM exports were, in descending order of quantity, Japan, the United Kingdom, and Germany (tables 1, 5).

The Engelhard average February 2022 prices increased by 15% for palladium, by 9% for rhodium, by 5% for platinum, and were unchanged for iridium compared with average prices in the previous month, while the average price decreased by 7% for ruthenium. Compared with average prices in February 2021, the February 2022 average price increased by 63% for ruthenium and was essentially unchanged for palladium. The average prices decreased by 5% for iridium, by 13% for platinum, and by 20% for rhodium compared with those of the previous year (fig. 1; tables 1, 2).

### Industry News

BASF SE (Germany) and Heraeus Group (Germany) formed a joint venture, BASF Heraeus (China) Metal Resource Co., Ltd., to recycle precious metals, including PGMs, from spent automotive catalysts. The joint venture would operate in Pinghu, China, and once approved by authorities would begin construction in 2022. Operations at the facility were anticipated to begin in 2023 (BASF SE, 2022).

### Reference Cited

BASF SE, 2022, BASF and Heraeus to form a joint venture offering world-class precious metal recycling solutions in China: Ludwigshafen and Hanau, Germany, BASF SE, news release, February 11. (Accessed April 13, 2022, at <https://www.basf.com/global/en/media/news-releases/2022/02/p-22-135.html>.)

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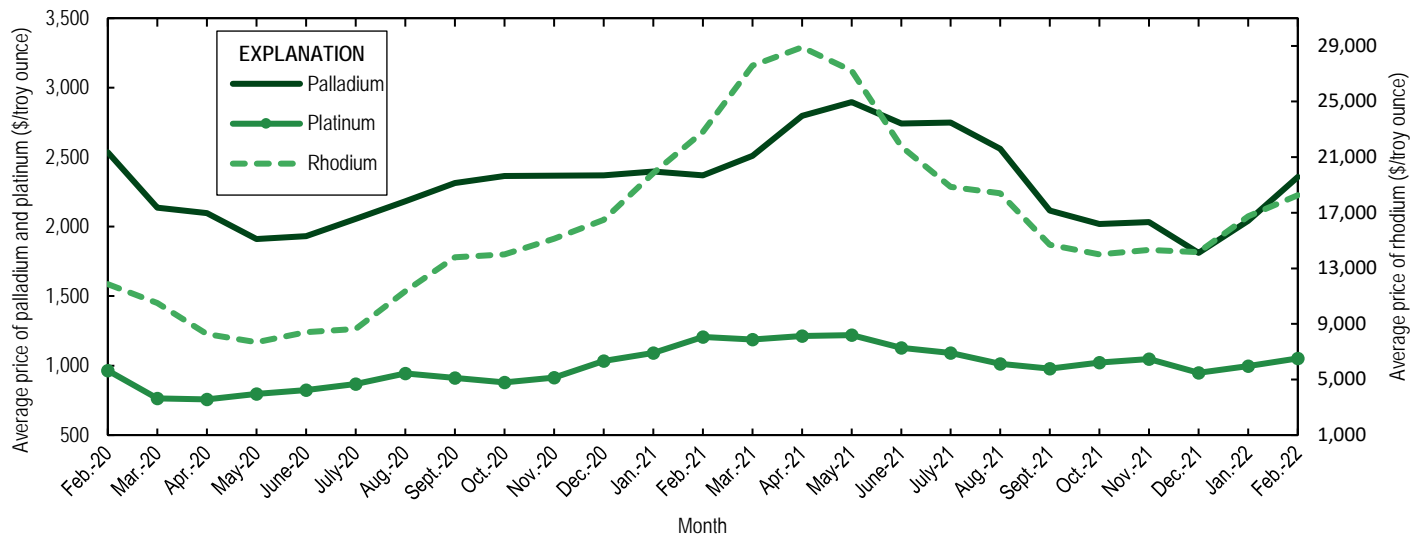


Figure 1. Engelhard unfabricated average monthly prices for palladium, platinum, and rhodium in dollars per troy ounce from February 2020 through February 2022. Source: S&P Global Platts Metals Week.

TABLE 1  
U.S. SALIENT PLATINUM-GROUP METALS STATISTICS<sup>1</sup>

(Kilograms metal content, unless otherwise specified)

	2021		2022		
	December	January– December	January	February	January– February
Mine production: <sup>2</sup>					
Palladium	1,020	13,700	1,020	1,020	2,050
Platinum	300	4,020	300	300	600
Total	1,320	17,700	1,320	1,320	2,650
Imports for consumption: <sup>3</sup>					
Palladium	5,530	72,600	5,370	6,840	12,200
Platinum	8,100	67,800	4,000	4,250	8,240
Iridium	216	2,310	98	182	279
Osmium	--	1	--	--	--
Rhodium	1,610	16,500	1,080	1,160	2,240
Ruthenium	531	18,000	882	988	1,870
Waste and scrap <sup>4</sup>	26,900	187,000	2,290	3,370	5,670
Total	42,900	364,000	13,700	16,800	30,500
Exports: <sup>3</sup>					
Palladium	3,610	43,900	2,760	4,960	7,720
Platinum	4,030	29,400	1,440	4,040	5,480
Iridium, osmium, ruthenium	108	2,120	186	248	434
Rhodium	114	1,340	98	64	162
Waste and scrap <sup>4</sup>	1,330	37,600	3,450	2,400	5,850
Total	9,200	114,000	7,930	11,700	19,600
Price, average (dollars per troy ounce): <sup>5</sup>					
Palladium	1,811.14	2,419.18	2,041.60	2,357.16	2,195.33
Platinum	947.90	1,094.31	997.50	1,051.58	1,023.85
Iridium	4,216.67	5,158.40	4,150.00	4,150.00	4,150.00
Rhodium	14,166.67	20,254.10	16,737.50	18,265.79	17,482.05
Ruthenium	594.05	576.12	568.25	530.00	549.62

-- Zero.

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

<sup>2</sup>Data estimated based on publicly reported quarterly data.

<sup>3</sup>Source: U.S. Census Bureau.

<sup>4</sup>Includes waste and scrap for all platinum-group elements. Previously included within platinum.

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

TABLE 2  
PLATINUM-GROUP METALS PRICES<sup>1</sup>

(Dollars per troy ounce)

	Palladium	Platinum	Iridium	Rhodium	Ruthenium
2021:					
Low:					
Price	1,584.00	915.00	3,000.00	12,000.00	280.00
Date	Dec. 15	Dec. 14 and 15	Jan. <sup>2</sup>	Sep. 15 and 16	Jan. <sup>2</sup>
High:					
Price	3,020.00	1,298.00	6,400.00	30,000.00	825.00
Date	May 4	Feb. 19	Apr.–May <sup>2</sup>	Mar. 22	May 21 and 24
Price, average	2,419.18	1,094.31	5,158.40	20,254.10	576.12
2022:					
January:					
Low:					
Price	1,860.00	935.00	4,150.00	14,300.00	530.00
Date	Jan. 6	Jan. 10	Jan. <sup>2</sup>	Jan. 3	Jan. <sup>2</sup>
High:					
Price	2,455.00	1,059.00	4,150.00	17,650.00	575.00
Date	Jan. 31	Jan. 20	Jan. <sup>2</sup>	Jan. <sup>2</sup>	Jan. <sup>2</sup>
Price, average	2,041.60	997.50	4,150.00	16,737.50	568.25
February:					
Low:					
Price	2,230.00	1,018.00	4,150.00	17,000.00	530.00
Date	Feb. 11	Feb. 7 and 15	Feb. <sup>2</sup>	Feb. <sup>2</sup>	Feb. <sup>2</sup>
High:					
Price	2,690.00	1,105.00	4,150.00	20,250.00	530.00
Date	Feb. 24	Feb. 24	Feb. <sup>2</sup>	Feb. <sup>2</sup>	Feb. <sup>2</sup>
Price, average	2,357.16	1,051.58	4,150.00	18,265.79	530.00
January–February:					
Low:					
Price	1,860.00	935.00	4,150.00	14,300.00	530.00
Date	Jan. 6	Jan. 10	Jan.–Feb. <sup>2</sup>	Jan. 3	Jan.–Feb. <sup>2</sup>
High:					
Price	2,690.00	1,105.00	4,150.00	20,250.00	575.00
Date	Feb. 24	Feb. 24	Jan.–Feb. <sup>2</sup>	Feb. <sup>2</sup>	Jan. <sup>2</sup>
Price, average	2,195.33	1,023.85	4,150.00	17,482.05	549.62

<sup>1</sup>Quotes from Engelhard.

<sup>2</sup>Occurred 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 LOCALITY<sup>1</sup>

(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)
2021:										
December	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
2022:										
January	145	4,860	2,540	80,200	145	12,700	1,150	45,200	17	672
February:										
Australia	--	--	--	--	--	--	(2)	14	1	33
Austria	--	--	--	--	--	--	20	1,440	--	--
Barbados	--	--	--	--	--	--	--	--	(2)	6
Belgium	--	--	624	20,000	--	--	--	--	--	--
Canada	16	532	--	--	--	--	47	1,500	17	631
China	--	--	--	--	--	--	(2)	3	--	--
Colombia	--	--	--	--	11	383	--	--	--	--
Costa Rica	--	--	--	--	--	--	60	2,130	--	--
Czechia	--	--	--	--	--	--	1	15	--	--
France	--	--	8	253	--	--	15	440	--	--
Germany	--	--	--	--	109	4,040	383	28,100	(2)	8
Ireland	(2)	18	10	355	(2)	9	--	--	--	--
Italy	--	--	391	13,300	--	--	(2)	3	--	--
Japan	--	--	--	--	200	6,510	15	365	--	--
Korea, Republic of	--	--	67	2,190	--	--	--	--	--	--
Mexico	--	--	--	--	--	--	3	108	--	--
Russia	--	--	301	9,720	--	--	--	--	--	--
Singapore	--	--	--	--	24	7,550	10	307	--	--
South Africa	--	--	968	31,600	11	360	--	--	--	--
Switzerland	--	--	16	551	--	--	279	9,640	--	--
Taiwan	--	--	--	--	--	--	25	960	--	--
United Kingdom	136	3,890	1	30	1	83	476	26,400	(2)	4
Total	152	4,440	2,390	78,000	357	18,900	1,330	71,500	19	682
January–February	297	9,300	4,920	158,000	502	31,600	2,490	117,000	35	1,350

-- Zero.

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

<sup>2</sup>Less than ½ unit.

Source: U.S. Census Bureau.

TABLE 4  
U.S. IMPORTS FOR CONSUMPTION OF PLATINUM-GROUP METALS, BY COUNTRY OR LOCALITY<sup>1</sup>

(Kilograms metal content, unless otherwise specified)

Country or locality	Palladium <sup>2</sup>		Iridium <sup>2</sup>		Osmium <sup>2</sup>		Rhodium <sup>2</sup>		Ruthenium <sup>2</sup>		Waste and scrap <sup>3</sup>	
	Quantity	Value (thousands)	Quantity	Value (thousands)	Quantity	Value (thousands)	Quantity	Value (thousands)	Quantity	Value (thousands)	Quantity	Value (thousands)
2021:												
December	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
2022:												
January	5,370	321,000	98	10,500	--	--	1,080	552,000	882	15,400	2,290	109,000
February: <sup>4</sup>												
Australia	--	--	--	--	--	--	--	--	--	--	17	1,180
Belgium	319	21,900	--	--	--	--	212	113,000	--	--	--	--
Brazil	--	--	--	--	--	--	--	--	--	--	29	2,980
Canada	267	18,300	--	--	--	--	1	79	--	--	340	29,200
Colombia	--	--	--	--	--	--	--	--	--	--	26	970
France	(5)	5	--	--	--	--	--	--	--	--	18	678
Germany	490	37,900	9	90	--	--	293	166,000	258	3,870	317	10,500
Italy	211	15,300	1	163	--	--	39	21,200	--	--	118	3,840
Japan	11	261	2	185	--	--	0	85	23	339	--	--
Korea, Republic of	166	12,300	--	--	--	--	44	18,300	--	--	--	--
Lebanon	--	--	--	--	--	--	--	--	--	--	30	983
Mexico	22	753	--	--	--	--	(5)	50	--	--	567	17,100
Nigeria	--	--	--	--	--	--	--	--	--	--	57	1,760
Norway	62	4,710	--	--	--	--	--	--	--	--	--	--
Pakistan	--	--	--	--	--	--	--	--	--	--	38	1,270
Poland	--	--	--	--	--	--	--	--	--	--	1,310	5,720
Russia	3,450	232,000	16	2,070	--	--	77	40,000	58	970	--	--
South Africa	1,830	117,000	124	10,600	--	--	474	243,000	649	9,160	--	--
United Arab Emirates	--	--	--	--	--	--	--	--	--	--	70	2,290
United Kingdom	4	320	30	2,920	--	--	21	10,900	--	--	377	12,100
Other	12	510	--	--	--	--	--	--	--	--	63	2,480
Total	6,840	462,000	182	16,000	--	--	1,160	612,000	988	14,300	3,370	93,100
January–February	12,200	783,000	279	26,500	--	--	2,240	1,160,000	1,870	29,800	5,670	202,000

-- Zero.

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

<sup>2</sup>Unwrought and other forms.

<sup>3</sup>Includes waste and scrap for all platinum-group elements.

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

<sup>5</sup>Less than ½ unit.

Source: U.S. Census Bureau.

TABLE 5  
U.S. EXPORTS OF PLATINUM-GROUP METALS, BY COUNTRY OR LOCALITY<sup>1</sup>

(Kilograms metal content, unless otherwise specified)

Country or locality	Palladium <sup>2</sup>		Platinum <sup>2</sup>		Iridium, osmium and ruthenium <sup>2,3</sup>		Rhodium <sup>2</sup>		Waste and scrap <sup>4</sup>	
	Quantity	Value (thousands)	Quantity	Value (thousands)	Quantity	Value (thousands)	Quantity	Value (thousands)	Quantity	Value (thousands)
2021:										
December	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
2022:										
January	2,760	144,000	1,440	47,300	186	2,990	98	48,500	3,450	321,000
February: <sup>5</sup>										
Belgium	183	13,600	--	--	3	19	--	--	--	--
Brazil	132	9,830	2	68	--	--	--	--	--	--
Canada	579	43,900	45	1,690	--	--	(6)	23	8	231
China	2	129	24	830	1	28	--	--	--	--
Costa Rica	2	140	54	1,880	6	50	--	--	--	--
Croatia	--	--	95	2,610	--	--	--	--	--	--
Germany	952	38,900	46	2,400	227	3,950	19	12,600	321	68,400
Hong Kong	19	1,370	1,340	43,500	--	--	--	--	--	--
India	3	198	100	3,000	--	--	--	--	--	--
Ireland	2	118	28	1,100	(6)	6	--	--	--	--
Italy	351	27,000	527	17,800	1	15	5	2,750	48	1,020
Japan	631	48,000	199	6,620	1	7	31	18,500	1,690	94,900
Korea, Republic of	26	1,720	230	33,800	--	--	--	--	--	--
Singapore	1	82	49	1,530	--	--	--	--	--	--
South Africa	--	--	--	--	--	--	--	--	30	1,140
Sweden	--	--	--	--	--	--	--	--	99	3,260
Switzerland	687	41,600	306	10,000	--	--	--	--	49	1,500
Taiwan	85	5,870	(6)	16	(6)	3	--	--	--	--
United Arab Emirates	--	--	15	528	--	--	--	--	29	965
United Kingdom	1,260	93,700	940	30,900	3	102	8	4,770	127	50,500
Other	43	2,950	47	2,290	7	151	--	--	1	20
Total	4,960	329,000	4,040	161,000	248	4,330	64	38,600	2,400	222,000
January–February	7,720	474,000	5,480	208,000	434	7,320	162	87,100	5,850	543,000

-- Zero.

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

<sup>2</sup>Unwrought and other forms.

<sup>3</sup>Gross weight.

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

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

<sup>6</sup>Less than ½ unit.

Source: U.S. Census Bureau.