

Mineral Industry Surveys

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PLATINUM-GROUP METALS IN SEPTEMBER 2018

Imports for consumption of platinum-group metals (PGMs), including waste and scrap, were 17,900 kilograms (kg) in September 2018, representing an increase of 8% and a decrease of 14% compared with August 2018 and September 2017, respectively. The leading import sources for PGMs into the United States were, in descending order, South Africa, Russia, and Germany (tables 3, 4). For January through September 2018, imports of palladium, platinum, and PGM scrap were 66,800 kg, 44,600 kg, and 30,500 kg, increases of 17%, 11%, and a decrease of 91%, respectively, compared with the similar periods in 2017.

Prices

Compared with the prior month, the Engelhard average September prices increased by 10%, 5%, 3%, and slightly for palladium, rhodium, ruthenium, and iridium, respectively, whereas the price of platinum remained essentially unchanged. Compared with September 2017, the September 2018 average prices increased by 302%, 114%, 49%, and 9% for ruthenium, rhodium, iridium, and palladium, respectively. The price of platinum decreased by 16% (figs. 1, 2; tables 1, 2).

Industry News

Sibanye-Stillwater produced 4,329 kg of platinum and palladium from its U.S. mines in the third quarter of 2018, a 4% decrease from that in the second quarter. Production included 3,338 kg of palladium and 991 kg of platinum from the East Boulder and Stillwater Mines in Montana. Sibanye-Stillwater also recovered (defined as recycling sold plus tolled returned) 5,201 kg of palladium, platinum, and rhodium from scrap catalytic converters at its metallurgical complex in Columbus, MT, during the third quarter of 2018. This represented a 6% decrease compared with that in the previous quarter resulting from work on one of the furnaces (Sibanye Gold Ltd., 2018, p. 3, 7).

On September 12, Heraeus Precious Metals GmbH & Co. KG announced the opening of its new precious metals plant in Nanjing, China. The facility would increase the company's precious metals and chemical products refining and recycling

capacities, especially for PGMs. Its recycling rate and chemical production capacity were expected to increase to 3,000 metric tons per year and three-fold, respectively (Heraeus Precious Metals GmbH & Co. KG, 2018).

On September 17, North American Palladium Ltd. announced the results of its newest feasibility study for its Lac des Iles Mine in northwestern Ontario. The report extended the life-of-mine by 1 year to 2027 with the average ore production rate doubling to 12,000 metric tons per day. The reserves were also updated from the data presented in the 2017 feasibility study to 40.9 million metric tons at an average grade of 2.31 grams per metric ton of palladium (North American Palladium Ltd., 2018).

Government and Legislation

On September 6, the U.S. Department of Agriculture announced the removal of a block on mining and mineral exploration in the Rainy River Watershed in Minnesota. This region includes a portion of the copper-nickel-PGM-bearing Duluth Complex (Kraker, 2018; U.S. Department of Agriculture, 2018).

On September 17, the Office of the U.S. Trade Representative published a final list of additional items imported from China that would be subject to an additional 10% tariff rate starting September 24, 2018, and increasing to 25% on January 1, 2019. Platinum-group metal-containing materials were included in the list under the following Harmonized Tariff Schedule of the United States codes: 7110.11.00 (platinum, unwrought or in powder form), 7110.19.00 (platinum, in semimanufactured forms), 7110.21.00 (palladium, unwrought or in powder form), 7110.29.00 (palladium, in semimanufactured forms), 7110.31.00 (rhodium, unwrought or in powder form), 7110.39.00 (rhodium, in semimanufactured forms), 7110.41.00 (iridium, osmium and ruthenium, unwrought or in powder form), 7110.49.00 (iridium, osmium and ruthenium, in semimanufactured forms), 7112.92.00 (platinum waste and scrap), and 7115.10.00 (platinum catalysts in the form of wire cloth or grill) (Office of the U.S. Trade Representative, 2018).

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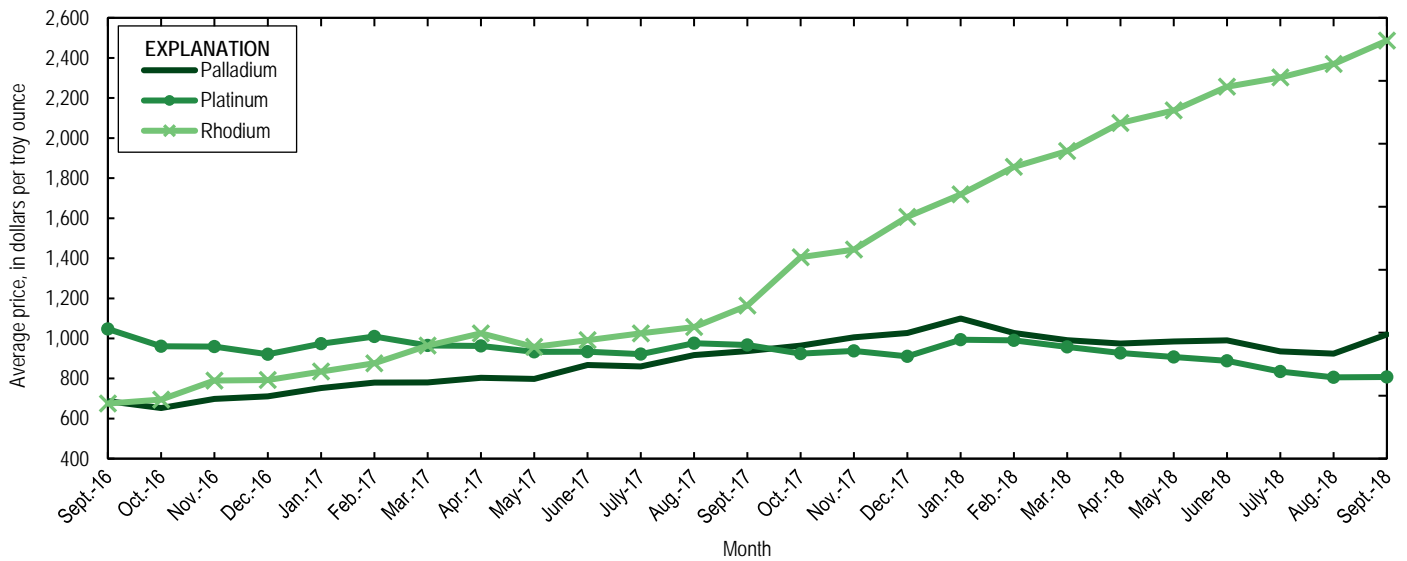


Figure 1. Engelhard unfabricated average monthly prices for palladium, platinum, and rhodium from September 2016 through September 2018. Source: Platts

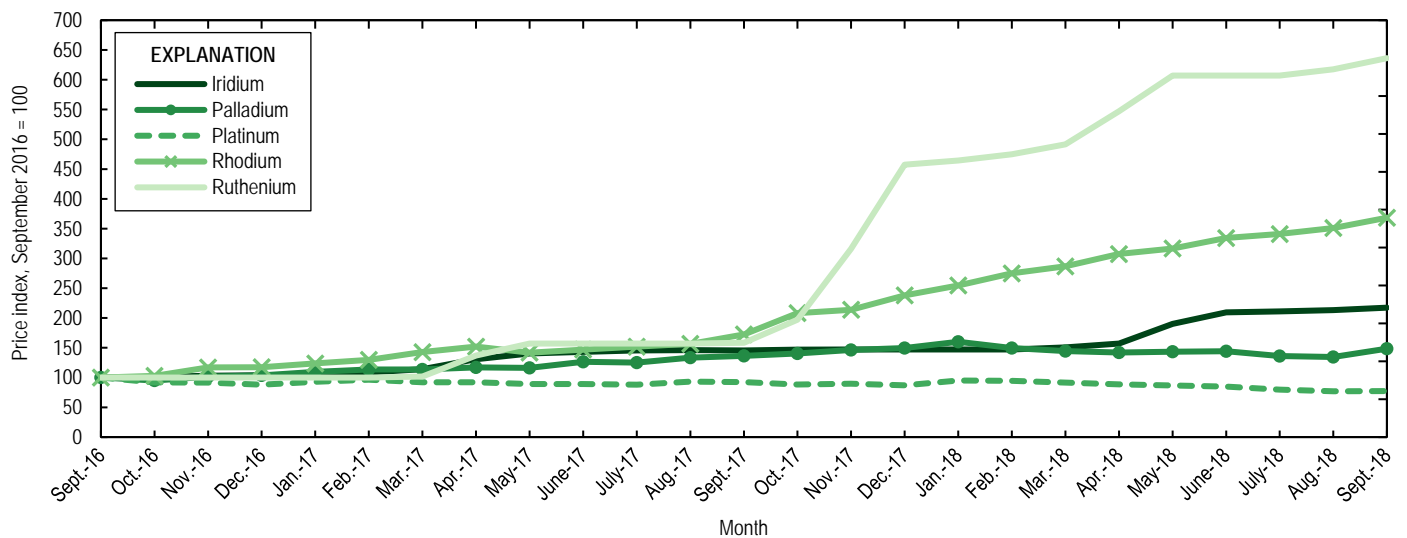


Figure 2. Indexed Engelhard unfabricated average monthly prices for iridium, palladium, platinum, rhodium, and ruthenium from September 2016 through September 2018. Prices are indexed to September 2016. Source: Platts Metals Week.

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

(Kilograms metal content, unless otherwise specified)

	2017	2018			
	January– December	July	August	September	January– September
Mine production: ²					
Platinum	3,980	330 ^r	330 ^r	330	3,040
Palladium	13,600	1,110 ^r	1,110 ^r	1,110	10,400
Total	17,600	1,440 ^r	1,440 ^r	1,440	13,500
Imports for consumption: ³					
Platinum	416,000 ⁴	8,230	8,280	7,200	75,100
Palladium	86,000	8,400	6,570	7,640	66,800
Iridium	1,420	39	86	129	755
Osmium	856	--	--	--	25
Ruthenium	14,500	1,210	679	1,570	12,900
Rhodium	11,600	1,120	848	1,320	10,900
Total	530,000	19,000	16,500	17,900	166,000
Exports: ³					
Platinum	211,000	2,250	8,740	3,460	38,300
Palladium	52,300	5,460	5,560	3,640	44,600
Iridium, osmium, ruthenium	939	69	307	403	2,070
Rhodium	844	181	418	118	2,820
Total	266,000	7,970	15,000	7,620	87,700
Price, average (dollars per troy ounce): ⁵					
Palladium	874.30	935.33	924.17	1,019.68	994.04
Platinum	951.23	835.00	807.91	807.84	901.69
Iridium	908.35	1,421.43	1,435.65	1,463.42	1,229.37
Rhodium	1,112.59	2,302.38	2,369.78	2,486.32	2,126.47
Ruthenium	76.86	255.00	259.35	267.11	235.79

^rRevised. -- Zero.

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

²Data estimated based on publicly reported quarterly data.

³Source: U.S. Census Bureau.

⁴All or part of these data have been referred to the U.S. Census Bureau for verification.

⁵Source: Platts Metals Week.

TABLE 2
PLATINUM-GROUP METALS PRICES¹

(Dollars per troy ounce)

	Palladium	Platinum	Iridium	Rhodium	Ruthenium
2017:					
Low:					
Price	710.00	880.00	700.00	765.00	42.00
Date	Jan. 3	Dec. 13	Jan. ²	Jan. 3	Jan.–Mar. ²
High:					
Price	1,062.00	1,035.00	990.00	1,725.00	195.00
Date	Dec. 28	Feb. 27	Aug. ² and Oct.–Dec. ²	Dec. ²	Dec. ²
Average	874.30	951.23	908.35	1,112.59	76.86
2018:					
August:					
Low:					
Price	854.00	778.00	1,430.00	2,340.00	255.00
Date	Aug. 15	Aug. 15	(2)	(2)	(2)
High:					
Price	985.00	840.00	1,450.00	2,400.00	265.00
Date	Aug. 30	Aug. 9	(2)	Aug. 30 and 31	(2)
Average	924.17	807.91	1,435.65	2,369.78	259.35
September:					
Low:					
Price	972.00	775.00	1,450.00	2,400.00	265.00
Date	Sep. 4	Sep. 4	(2)	(2)	(2)
High:					
Price	1,099.00	833.00	1,485.00	2,590.00	270.00
Date	Sep. 28	Sep. 24	(2)	(2)	(2)
Average	1,019.68	807.84	1,463.42	2,486.32	267.11
January–September:					
Low:					
Price	854.00	775.00	990.00	1,700.00	195.00
Date	Aug. 15	Sep. 4	Jan.–Feb. ²	Jan. ²	Jan. ² , Feb. 1 and 2
High:					
Price	1,134.00	1,023.00	1,485.00	2,590.00	270.00
Date	Jan. 15	Jan. 25	Sep. ²	Sep. ²	Sep. ²
Average	994.04	901.69	1,229.37	2,126.47	235.79

¹Quotes from Engelhard.

²Occurred multiple days in month(s) listed.

Source: 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 waste and scrap		Platinum coins	
	Quantity	Value (thousands)	Quantity	Value (thousands)	Quantity	Value (thousands)	Quantity	Value (thousands)	Quantity	Value (thousands)	Quantity	Value (thousands)
2017:												
January–December	1,580	\$49,000	39,300	\$1,200,000	3,530	\$113,000	8,040	\$255,000	363,000 ²	\$1,050,000 ²	837	\$27,600
2018:												
July	1	52	4,600	127,000	249	8,090	379	10,800	2,830	80,800	177	5,010
August	762	19,400	2,980	81,000	182	5,670	823	24,500	3,440	100,000	97	2,680
September: ³												
Australia	--	--	--	--	--	--	--	--	34	916	2	29
Belgium	--	--	11	295	--	--	--	--	36	1,250	--	--
Bolivia	--	--	--	--	--	--	--	--	57	1,680	--	--
Canada	4	101	--	--	--	--	50	1,380	231	9,620	135	3,940
France	--	--	--	--	--	--	18	396	17	474	--	--
Germany	--	--	673	18,000	54	1,570	328	9,940	78	3,120	1	41
India	--	--	114	2,890	--	--	--	--	--	--	--	--
Italy	--	--	151	3,860	--	--	--	--	3	115	--	--
Japan	--	--	--	--	(4)	64	(4)	9	152	4,800	--	--
Korea, Republic of	--	--	52	1,310	--	--	--	--	--	--	--	--
Malaysia	--	--	--	--	--	--	--	--	46	956	--	--
Mexico	1	24	--	--	2	91	--	--	496	13,300	--	--
Nigeria	--	--	--	--	--	--	--	--	40	1,110	--	--
Norway	--	--	86	2,190	--	--	6	274	--	--	--	--
Poland	--	--	--	--	--	--	--	--	109	316	--	--
Russia	--	--	233	5,920	--	--	--	--	--	--	--	--
Singapore	--	--	--	--	(4)	11	13	508	152	4,700	--	--
South Africa	--	--	2,250	58,900	154	4,000	--	--	--	--	--	--
Switzerland	--	--	54	1,420	--	--	300	7,890	--	--	--	--
United Kingdom	22	682	--	--	(4)	12	616	17,700	325	9,550	7	202
Other	--	--	--	--	24	819	2	53	58	1,430	6	149
Total	27	808	3,620	94,800	235	6,560	1,330	38,100	1,830	53,300	150	4,360
January–September	949	25,300	33,600	988,000	2,320	74,300	6,970	223,000	30,500	797,000	742	22,900

-- Zero.

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

²All or part of these data have been referred to the U.S. Census Bureau for verification.

³The 20 countries and (or) localities with the greatest total platinum imports are listed. All others are included in the "Other" category.

⁴Less 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	Unwrought palladium		Palladium, other		Iridium ²		Osmium ²		Ruthenium ²		Rhodium ²	
	Quantity	Value (thousands)	Quantity	Value (thousands)	Quantity	Value (thousands)	Quantity	Value (thousands)	Quantity	Value (thousands)	Quantity	Value (thousands)
2017:												
January–December	75,000	\$2,080,000	11,000	\$320,000	1,420	\$38,100	856	\$1,740	14,500	\$34,200	11,600	\$386,000
2018:												
July	7,310	226,000	1,100	36,000	39	1,360	--	--	1,210	8,930	1,120	80,800
August	5,450	165,000	1,130	34,200	86	3,100	--	--	679	5,410	848	62,100
September:												
Belgium	30	896	--	--	--	--	--	--	--	--	38	2,850
Canada	--	--	662	22,800	--	--	--	--	--	--	1	30
China	--	--	--	--	9	411	--	--	--	--	--	--
Germany	1,110	36,200	1	23	3	61	--	--	475	4,140	260	20,800
Italy	235	7,410	1	16	--	--	--	--	--	--	114	8,850
Japan	100	946	2	48	--	--	--	--	--	--	29	2,220
Korea, Republic of	--	--	--	--	--	--	--	--	--	--	11	808
Norway	124	3,860	--	--	--	--	--	--	--	--	--	--
Russia	3,580	109,000	240	8,160	--	--	--	--	10	78	82	6,170
South Africa	1,550	50,200	--	--	116	5,200	--	--	722	5,640	774	57,400
Switzerland	--	--	9	287	--	--	--	--	--	--	--	--
United Kingdom	--	--	2	71	(3)	11	--	--	367	3,050	8	633
Other ⁴	--	--	(3)	5	--	--	--	--	--	--	--	--
Total	6,730	208,000	915	31,400	129	5,680	--	--	1,570	12,900	1,320	99,800
January–September	57,900	1,880,000	8,870	309,000	755	26,300	25	136	12,900	89,400	10,900	697,000

-- Zero.

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

²Unwrought and other forms.

³Less than ½ unit.

⁴Includes countries and (or) localities with total exports of platinum-group metals of less than 1 kilogram.

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	Platinum ²		Platinum waste and scrap		Palladium ²		Iridium, osmium and ruthenium ^{2,3}		Rhodium ²	
	Quantity	Value (thousands)	Quantity	Value (thousands)	Quantity	Value (thousands)	Quantity	Value (thousands)	Quantity	Value (thousands)
2017:										
January–December	16,700	\$494,000	195,000 ⁴	\$679,000 ⁴	52,300	\$888,000	939	\$11,700	844	\$30,700
2018:										
July	805	23,200	1,450	41,800	5,460	115,000	69	2,050	181	6,980
August	2,790	68,900	5,950	103,000	5,560	102,000	307	4,640	418	14,900
September: ⁵										
Australia	7	147	--	--	4	114	16	163	--	--
Belgium	--	--	339	9,920	--	--	--	--	--	--
Canada	6	204	1	38	295	8,120	--	--	(6)	10
China	89	2,760	--	--	255	7,180	5	144	21	1,420
Costa Rica	25	355	--	--	47	199	--	--	--	--
France	3	118	--	--	22	221	1	29	--	--
Germany	367	12,700	312	6,220	1,770	27,800	15	175	9	699
Hong Kong	5	139	--	--	85	1,660	--	--	20	1,520
India	23	528	--	--	--	--	10	101	(6)	5
Ireland	25	650	--	--	3	25	--	--	--	--
Israel	1	16	--	--	295	2,710	(6)	13	--	--
Italy	(6)	11	--	--	7	228	--	--	6	545
Japan	447	12,200	74	1,900	40	1,280	309	2,920	57	4,380
Korea, Republic of	1	29	--	--	42	490	--	--	(6)	7
Mexico	14	495	--	--	4	62	--	--	--	--
Peru	3	110	--	--	1	15	--	--	--	--
Switzerland	471	18,300	783	9,510	428	2,350	1	8	--	--
Taiwan	6	170	--	--	250	5,880	45	203	--	--
Thailand	3	66	--	--	42	328	--	--	--	--
United Kingdom	434	11,500	14	411	33	852	1	3	4	294
Other	10	294	--	--	10	225	--	--	1	79
Total	1,940	60,700	1,520	28,000	3,640	59,700	403	3,760	118	8,950
January–September	13,800	416,000	24,500	495,000	44,600	896,000	2,070	35,600	2,820	103,000

-- Zero.

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

²Unwrought and other forms.

³Gross weight.

⁴All or part of these data have been referred to the U.S. Census Bureau for verification.

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.