

# Mineral Industry Surveys

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## PLATINUM-GROUP METALS IN SEPTEMBER 2012

Engelhard's average September prices for platinum, palladium, and rhodium increased by 12%, 9%, and 4%, respectively, compared with average August prices. The average monthly iridium and ruthenium prices decreased slightly. Platinum prices generally increased from the beginning to the end of the month, with a spike in price midmonth. Palladium and rhodium prices also spiked midmonth in response to supply fears owing to the continued workers' strikes in the South African platinum mining sector as well as the suspension of operations at some mines to prevent violence and intimidation against mine workers. The platinum and palladium prices reached \$1,700 per troy ounce and \$706 per troy ounce, respectively, which were their highest points in 6 months before decreasing toward monthend. Platinum prices remained below those for gold and higher than those for rhodium.

Lonmin plc (London, United Kingdom) reached a wage settlement with workers' unions, ending 6 weeks of violent strikes and production disruptions at its mining operations in South Africa. Lonmin's full-year sales guidance for the year ending September 30, 2012, decreased to 21,300 kilograms (kg) from 21,800 kg of platinum as a result of the strike (Johnson Matthey plc, 2012c; Lonmin plc, 2012). Unrest in the platinum mining sector spread to Anglo American Platinum Ltd.'s (Johannesburg, South Africa) (Amplats) Rustenburg Mines, where Amplats suspended operations to protect workers' safety. Workers failed to report for work when the mines were reopened, and the strike continued beyond monthend. Lost production as a result of the strike was about 620 kg of platinum (Johnson Matthey plc, 2012a).

At the end of the month, the largest trial of fuel cells for residential use in the European Union (EU) began. A total of

about 1,000 homes in 12 member states were equipped with fuel cells to provide heat and power, with the goal to learn about the practicalities of installing and operating a fleet of fuel cells for residential use. Plans were in place to monitor the macroeconomics and carbon dioxide emission savings as well as barriers to the widespread use of residential fuel cells. The residential sector was estimated to account for 27% of EU's total energy consumption. Such fuel cells could potentially help to increase EU's security of energy supply. Fuel cells produce electricity by combining oxygen with a fuel such as hydrogen over a catalyst such as platinum and produce only carbon dioxide and water as emissions (Johnson Matthey plc, 2012b).

### References Cited

- Johnson Matthey plc, 2012a, Amplats starts disciplinary action against striking miners: London, United Kingdom, Johnson Matthey plc news release, September 27. (Accessed September 24, 2012, at <http://www.platinum.matthey.com/news-archive/amplats-starts-disciplinary-action-against-striking-miners/801458492.html>.)
- Johnson Matthey plc, 2012b, European residential fuel cell heat and power trials begin: London, United Kingdom, Johnson Matthey plc news release, October 2. (Accessed October 2, 2012, at <http://www.platinum.matthey.com/news-archive/european-residential-fuel-cell-heat-and-power-trials-begin/801461575.html>.)
- Johnson Matthey plc, 2012c, Lonmin cuts guidance on Marikana unrest: London, United Kingdom, Johnson Matthey plc news release, September 17. (Accessed September 24, 2012, at <http://www.platinum.matthey.com/news-archive/lonmin-cuts-guidance-on-marikana-unrest/801450544.html>.)
- Lonmin plc, 2012, Lonmin wage agreement: London, United Kingdom, Lonmin plc news release, September 20, 3 p. (Accessed September 25, 2012, at [https://www.lonmin.com/downloads/media\\_centre/news/press/2012/20120921\\_Wage\\_Agreement.pdf](https://www.lonmin.com/downloads/media_centre/news/press/2012/20120921_Wage_Agreement.pdf).)

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

(Dollars per troy ounce)

	Platinum	Palladium	Rhodium	Iridium	Ruthenium
2011:					
Low/date	1,356.00 Dec. 29	553.00 Oct. 5	1,400.00 Dec. <sup>2</sup>	780.00 Jan. 3 and 4	110.00 Dec. <sup>2</sup>
High/date	1,892.00 Aug. 22 and 23	851.00 Feb. 18	2,500.00 Jan. 31 and Feb. <sup>2</sup>	1,085.00 Sep.–Dec. <sup>2</sup>	180.00 Jan.–Aug. <sup>2</sup>
Average	1,724.51	738.51	2,024.35	1,035.87	165.85
2012:					
August:					
Low/date	1,393.00/2 and 3	577.00/3	1,100.00 <sup>2</sup>	1,050.00 <sup>2</sup>	110.00 <sup>2</sup>
High/date	1,543.00/23 and 27	650.00/27	1,165.00 <sup>2</sup>	1,070.00 <sup>2</sup>	115.00 <sup>2</sup>
Average	1,455.35	607.04	1,117.83	1,059.57	112.39
September:					
Low/date	1,556.00/4	625.00/26	1,075.00 <sup>2</sup>	1,050.00 <sup>2</sup>	110.00 <sup>2</sup>
High/date	1,700.00/14	706.00/14	1,385.00/18	1,050.00 <sup>2</sup>	110.00 <sup>2</sup>
Average	1,629.89	664.00	1,161.05	1,050.00	110.00
January–September:					
Low/date	1,393.00 Aug. 2 and 3	570.00 July 23 and 25	1,075.00 Sep. <sup>2</sup>	1,050.00 Aug.–Sep. <sup>2</sup>	110.00 Jan. and Aug.–Sep. <sup>2</sup>
High/date	1,731.00 Feb. 29	727.00 Feb. 29	1,540.00 Feb. 14 and 15	1,085.00 Jan.–Feb. <sup>2</sup>	130.00 Feb.–Mar. <sup>2</sup>
Average	1,540.12	646.50	1,319.28	1,071.64	116.41

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

<sup>2</sup>Occurred multiple days in month(s) listed.

Source: Platts Metals Week.

TABLE 2  
U.S. IMPORTS FOR CONSUMPTION OF PLATINUM METAL, BY COUNTRY<sup>1</sup>

(Kilograms metal content, unless otherwise specified)

Period and country	Platinum grain and nuggets		Platinum sponge		Other unwrought platinum		Platinum, other		Platinum waste and scrap		Platinum coins	
	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
		(thousands)		(thousands)		(thousands)		(thousands)		(thousands)		(thousands)
2011	1,230	\$65,700	35,800	\$1,910,000	7,160	\$211,000	4,660	\$206,000	78,900	\$832,000	1,200	\$66,300
2012:												
June	265	12,700	3,650	174,000	380	13,300	512	21,100	30,300	68,800	95	4,760
July	92	4,510	2,590	121,000	395 <sup>†</sup>	14,600	297	11,800	8,100	106,000	100	4,750
August:												
Australia	--	--	--	--	--	--	--	--	49	1,740	9	439
Belgium	--	--	134	6,130	--	--	94	4,280	--	--	--	--
Brazil	--	--	--	--	--	--	--	--	34	1,070	--	--
Canada	2	76	31	1,450	--	--	28	1,340	50	1,430	27	1,380
China	--	--	--	--	--	--	--	--	63	1,330	--	--
Colombia	--	--	--	--	140	5,450	12	438	30	989	--	--
Czech Republic	--	--	--	--	--	--	4	204	--	--	--	--
France	--	--	48	2,240	--	--	--	--	258	2,330	--	--
Germany	1	12	31	1,530	129	3,500	117	4,310	633	19,700	--	--
Israel	--	--	--	--	--	--	--	--	9	295	--	--
Italy	--	--	--	--	--	--	--	--	62	2,020	--	--
Japan	--	--	--	--	3	121	4	102	292	9,940	--	--
Korea, Republic of	--	--	--	--	--	--	(2)	10	4	195	--	--
Malaysia	--	--	--	--	--	--	--	--	36	1,270	--	--
Mexico	--	--	--	--	--	--	--	--	82	2,900	--	--
Norway	--	--	94	4,220	--	--	--	--	--	--	--	--
Peru	--	--	--	--	--	--	--	--	4	118	--	--
Philippines	--	--	--	--	--	--	--	--	18	519	--	--
Russia	--	--	--	--	9	432	--	--	--	--	--	--
Singapore	--	--	--	--	--	--	--	--	104	4,190	--	--
South Africa	--	--	1,120	50,900	--	--	--	--	--	--	--	--
Switzerland	--	--	(2)	35	--	--	1	15	--	--	--	--
Thailand	--	--	--	--	--	--	--	--	743	1,610	--	--
United Kingdom	47	2,100	715	32,200	1	40	32	1,450	1,700	7,570	--	--
Uruguay	--	--	--	--	--	--	--	--	21	961	--	--
Other	--	--	--	--	--	--	(2)	3	7	216	--	--
Total	49	2,190	2,170	98,700	282	9,540	292	12,200	4,200	60,400	36	1,820
January–August	909	43,700	22,900	1,110,000	2,690	110,000	3,010	121,000	71,900	624,000	612	31,000

<sup>†</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>Less than ½ unit.

Source: U.S. Census Bureau.

TABLE 3  
U.S. IMPORTS FOR CONSUMPTION OF PLATINUM-GROUP METALS, BY COUNTRY<sup>1</sup>

(Kilograms metal content, unless otherwise specified)

Period and country	Unwrought palladium		Palladium, other		Iridium <sup>2</sup>		Osmium <sup>2</sup>		Ruthenium <sup>2</sup>		Rhodium <sup>2</sup>	
	Quantity	Value (thousands)	Quantity	Value (thousands)	Quantity	Value (thousands)	Quantity	Value (thousands)	Quantity	Value (thousands)	Quantity	Value (thousands)
2011	87,000	\$1,890,000	11,900	\$268,000	2,790	\$59,000	48	\$261	13,300	\$69,700	13,100	\$844,000
2012:												
June	4,680	93,300	829 <sup>r</sup>	18,200	18	545	20	100	463	1,730	1,310	55,100
July	10,600	194,000	758	13,900	63	2,120	35	203	943	3,420	597	24,200
August:												
Belgium	405	7,520	190	3,260	--	--	--	--	--	--	49	1,980
Brazil	210	3,930	--	--	--	--	--	--	--	--	--	--
Canada	--	--	134	3,240	--	--	--	--	--	--	--	--
Germany	61	1,270	31	594	17	196	--	--	75	331	60	2,220
Italy	--	--	6	128	--	--	--	--	--	--	--	--
Japan	112	1,720	15	107	--	--	--	--	38	114	3	116
Korea, Republic of	41	939	--	--	--	--	--	--	--	--	--	--
Norway	404	7,540	--	--	--	--	--	--	--	--	5	178
Russia	553	10,500	398	8,050	1	9	--	--	--	--	58	2,010
South Africa	2,650	49,100	195	3,690	33	1,120	--	--	502	1,670	875	33,300
Switzerland	--	--	10	247	--	--	--	--	--	--	--	--
United Kingdom	233	4,390	280	5,230	119	4,110	--	--	20	74	14	629
Other	--	--	5	34	--	--	--	--	--	--	--	--
Total	4,670	86,900	1,270	24,600	170	5,440	--	--	635	2,190	1,070	40,400
January–August	45,500	931,000	7,760	164,000	917	29,900	55	303	7,760	27,500	8,420	370,000

<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>Unwrought and other forms.

Source: U.S. Census Bureau.

TABLE 4  
U.S. EXPORTS OF PLATINUM-GROUP METALS, BY COUNTRY<sup>1</sup>

(Kilograms metal content, unless otherwise specified)

Period and country	Platinum <sup>2</sup>		Platinum waste and scrap		Palladium <sup>2</sup>		Iridium, osmium, and ruthenium <sup>2,3</sup>		Rhodium <sup>2</sup>	
	Quantity	Value (thousands)	Quantity	Value (thousands)	Quantity	Value (thousands)	Quantity	Value (thousands)	Quantity	Value (thousands)
2011	11,300	\$552,000	118,000	\$1,440,000	32,000	\$416,000	1,150	\$18,000	1,370	\$71,700
2012:										
June	795	32,800	3,140	79,000	2,780	43,900	102	1,480	22	1,250
July	1,100	40,200	1,400	33,100	2,270	36,100	90	1,800	20	948
August:										
Australia	4	135	--	--	28	427	--	--	--	--
Austria	1	45	--	--	3	31	--	--	--	--
Belgium	(4)	5	4	520	5	30	--	--	--	--
Brazil	--	--	--	--	2	38	--	--	2	81
Canada	9	424	2	49	406	7,890	--	--	(4)	7
China	7	174	27	1,390	119	2,500	--	--	13	810
Colombia	--	--	--	--	6	127	--	--	--	--
Costa Rica	1	41	--	--	2	11	1	18	--	--
Denmark	--	--	--	--	15	214	--	--	--	--
France	6	233	--	--	22	176	--	--	--	--
Germany	70	3,300	736	8,390	634	8,130	(4)	13	--	--
Hong Kong	4	296	--	--	48	874	22	110	318	11,000
India	33	1,490	--	--	126	287	--	--	--	--
Ireland	12	437	--	--	8	113	1	6	--	--
Israel	3	116	--	--	272	1,270	--	--	1	98
Italy	(4)	15	63	1,640	4	135	--	--	--	--
Japan	72	2,160	146	3,830	180	3,100	100	520	--	--
Korea, Republic of	3	165	--	--	628	11,800	184	963	--	--
Malaysia	(4)	4	--	--	1	5	--	--	--	--
Mexico	29	995	--	--	27	268	--	--	(4)	10
New Zealand	(4)	3	--	--	5	122	--	--	--	--
Romania	(4)	4	--	--	1	13	--	--	--	--
Singapore	1	34	--	--	1	22	16	383	--	--
South Africa	--	--	38	1,130	2	24	--	--	--	--
Sweden	2	48	--	--	2	7	--	--	--	--
Switzerland	(4)	6	691	15,400	6	47	--	--	--	--
Taiwan	--	--	--	--	84	1,290	5	126	--	--
Thailand	(4)	109	--	--	14	245	--	--	(4)	7
United Arab Emirates	6	250	--	--	1	4	--	--	--	--
United Kingdom	120	5,260	690	21,100	119	2,840	2	11	--	--
Other	3	111	--	--	41	201	2	10	--	--
Total	387	15,900	2,400	53,400	2,810	42,200	332	2,160	334	12,100
January–August	5,810	249,000	27,100	511,000	24,000	333,000	1,250	12,800	747	32,100

-- 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>Less than ½ unit.

Source: U.S. Census Bureau.