

Refined Product against  
Intensity of Use and Recycling

### PLATINUM in koz

	2020	2021	2022	2023	2024*
<b>REGIONAL SUPPLY</b>					
South Africa	3.260	4.715	3.975	3.995	3.890
Zimbabwe	480	470	490	520	515
Russia	700	640	655	670	610
Canada	195	130	150	170	165
USA	135	130	95	100	95
Other	175	125	125	130	120
<b>Refined production</b>	<b>4.950</b>	<b>6.210</b>	<b>5.490</b>	<b>5.580</b>	<b>5.400</b>
<i>Growth</i>	-19,0%	25,5%	-11,6%	1,6%	-3,2%
<b>DEMAND &amp; RECYCLING</b>					
<b>Autocatalysts</b>					
Gross autocatalyst demand	2.285	2.630	2.785	3.315	3.280
Non-road demand	155	170	175	175	180
Recycling	1.310	1.425	1.280	1.080	1.100
<b>Net autocatalyst demand</b>	<b>1.130</b>	<b>1.380</b>	<b>1.680</b>	<b>2.410</b>	<b>2.360</b>
<i>Growth</i>	-17,7%	22,3%	21,6%	43,5%	-2,0%
<b>Jewellery</b>					
Gross jewellery demand	1.560	1.780	1.435	1.310	1.280
Recycling	410	400	250	245	280
<b>Net jewellery demand</b>	<b>1.150</b>	<b>1.380</b>	<b>1.180</b>	<b>1.060</b>	<b>1.000</b>
<i>Growth</i>	-28,0%	20,3%	-14,4%	-10,2%	-5,8%
<b>Hydrogen</b>					
Gross hydrogen demand	10	15	20	60	60
Recycling	0	0	0	0	0
<b>Net hydrogen demand</b>	<b>10</b>	<b>15</b>	<b>20</b>	<b>60</b>	<b>60</b>
<i>Growth</i>	-70,1%	9,6%	44,4%	217,9%	1,0%
<b>Industrial</b>					
Gross industrial demand	2.000	2.180	2.205	2.335	2.400
Recycling	30	45	40	40	45
<b>Net industrial demand</b>	<b>1.970</b>	<b>2.135</b>	<b>2.170</b>	<b>2.295</b>	<b>2.355</b>
<i>Growth</i>	-1,0%	8,4%	1,6%	5,9%	2,5%
<b>TOTAL</b>					
<b>Gross demand</b>	<b>6.015</b>	<b>6.780</b>	<b>6.620</b>	<b>7.200</b>	<b>7.200</b>
<i>Growth</i>	-14,4%	12,7%	-2,3%	8,7%	0,1%
<b>Recycling</b>	<b>1.755</b>	<b>1.865</b>	<b>1.570</b>	<b>1.365</b>	<b>1.425</b>
<i>Growth</i>	-13,4%	6,5%	-15,9%	-12,9%	4,2%
<b>Net demand</b>	<b>4.260</b>	<b>4.910</b>	<b>5.050</b>	<b>5.830</b>	<b>5.780</b>
<i>Growth</i>	-14,8%	15,3%	2,8%	15,4%	-0,9%
<b>MARKET BALANCE</b>	<b>690</b>	<b>1.300</b>	<b>440</b>	<b>-250</b>	<b>-380</b>

\*estimate  
Market balances are shown without investment activities.

Further use is permitted if SFA Oxford is quoted as the source of this table.

### PALLADIUM in koz

Refined Product against  
Intensity of Use and Recycling

	2020	2021	2022	2023	2024*
<b>REGIONAL SUPPLY</b>					
South Africa	1.845	2.755	2.240	2.280	2.260
Zimbabwe	405	395	410	430	440
Russia	2.810	2.585	2.790	2.690	2.450
Canada	480	400	420	455	425
USA	470	440	325	330	320
Other	385	265	270	270	265
<b>Refined production</b>	<b>6.395</b>	<b>6.845</b>	<b>6.450</b>	<b>6.460</b>	<b>6.160</b>
<i>Growth</i>	-10,9%	7,0%	-5,8%	0,1%	-4,6%
<b>DEMAND &amp; RECYCLING</b>					
<b>Autocatalysts</b>					
Gross autocatalyst demand	7.510	7.785	7.665	7.840	7.755
Non-road demand	40	45	45	45	45
Recycling	2.395	2.840	2.670	2.215	2.290
<b>Net autocatalyst demand</b>	<b>5.150</b>	<b>4.990</b>	<b>5.040</b>	<b>5.670</b>	<b>5.510</b>
<i>Growth</i>	-14,5%	-3,1%	1,0%	12,5%	-2,8%
<b>Jewellery</b>					
Gross jewellery demand	195	155	140	130	125
Recycling	50	40	35	30	35
<b>Net jewellery demand</b>	<b>145</b>	<b>115</b>	<b>105</b>	<b>100</b>	<b>90</b>
<i>Growth</i>	-6,5%	-20,0%	-9,1%	-3,8%	-12,3%
<b>Hydrogen</b>					
Gross hydrogen demand	20	45	60	65	70
Recycling	0	0	0	0	0
<b>Net hydrogen demand</b>	<b>20</b>	<b>45</b>	<b>60</b>	<b>65</b>	<b>70</b>
<i>Growth</i>		125,1%	28,8%	9,3%	9,7%
<b>Industrial</b>					
Gross industrial demand	1.640	1.500	1.485	1.375	1.375
Recycling	335	415	365	350	345
<b>Net industrial demand</b>	<b>1.305</b>	<b>1.080</b>	<b>1.120</b>	<b>1.025</b>	<b>1.030</b>
<i>Growth</i>	-3,3%	-17,2%	3,3%	-8,3%	0,5%
<b>TOTAL</b>					
<b>Gross demand</b>	<b>9.400</b>	<b>9.525</b>	<b>9.390</b>	<b>9.455</b>	<b>9.370</b>
<i>Growth</i>	-10,6%	1,3%	-1,4%	0,7%	-0,9%
<b>Recycling</b>	<b>2.780</b>	<b>3.295</b>	<b>3.070</b>	<b>2.595</b>	<b>2.670</b>
<i>Growth</i>	-7,0%	18,5%	-6,7%	-15,6%	3,0%
<b>Net demand</b>	<b>6.620</b>	<b>6.230</b>	<b>6.320</b>	<b>6.860</b>	<b>6.700</b>
<i>Growth</i>	-12,1%	-5,9%	1,4%	8,6%	-2,3%
<b>MARKET BALANCE</b>	<b>-225</b>	<b>615</b>	<b>130</b>	<b>-405</b>	<b>-540</b>

\*estimate  
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### RHODIUM in koz

Refined Product against  
Intensity of Use and Recycling

	2020	2021	2022	2023	2024*
<b>REGIONAL SUPPLY</b>					
South Africa	475	670	595	585	555
Zimbabwe	45	40	45	45	45
Russia	80	75	75	75	70
Canada	20	20	15	15	15
USA	5	5	0	5	0
Other	10	5	5	5	5
<b>Refined production</b>	<b>630</b>	<b>815</b>	<b>735</b>	<b>725</b>	<b>695</b>
<i>Growth</i>	-20,6%	29,6%	-9,9%	-1,0%	-4,4%
<b>DEMAND &amp; RECYCLING</b>					
<b>Autocatalysts</b>					
Gross autocatalyst demand	935	925	910	945	920
Recycling	325	360	325	275	275
<b>Net autocatalyst demand</b>	<b>610</b>	<b>570</b>	<b>585</b>	<b>670</b>	<b>645</b>
<i>Growth</i>	-9,3%	-6,7%	3,1%	14,7%	-3,9%
<b>Industrial</b>					
Gross industrial demand	135	75	-5	50	110
Recycling	0	5	5	0	5
<b>Net industrial demand</b>	<b>130</b>	<b>75</b>	<b>-5</b>	<b>50</b>	<b>105</b>
<i>Growth</i>	-19,6%	-44,3%	-109,9%	-771,2%	119,3%
<b>TOTAL</b>					
<b>Gross demand</b>	<b>1.070</b>	<b>1.005</b>	<b>905</b>	<b>995</b>	<b>1.030</b>
<i>Growth</i>	-10,1%	-6,1%	-9,6%	9,9%	3,5%
<b>Recycling</b>	<b>330</b>	<b>360</b>	<b>330</b>	<b>275</b>	<b>280</b>
<i>Growth</i>	-7,0%	10,4%	-9,0%	-15,8%	0,9%
<b>Net demand</b>	<b>740</b>	<b>640</b>	<b>580</b>	<b>720</b>	<b>750</b>
<i>Growth</i>	-11,4%	-13,4%	-9,8%	24,6%	4,4%
<b>MARKET BALANCE</b>	<b>-110</b>	<b>175</b>	<b>155</b>	<b>5</b>	<b>-55</b>

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