

## Palladium Supply and Demand

'000 oz	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
<b>Supply</b>										
South Africa	2,480	2,605	2,775	2,765	2,430	2,370	2,640	2,560	2,320	2,350
Russia										
Primary	4,800	3,135	3,220	3,050	2,700	2,675	2,720	2,705	2,630	2,600
Stock Sales	0	1,485	700	1,490	960	960	1,000	775	260	100
North America	1,035	910	985	990	910	755	590	900	895	930
Zimbabwe	0	125	135	135	140	180	220	265	265	310
Others	265	145	135	150	170	160	185	155	160	140
<b>Total Supply</b>	<b>8,580</b>	<b>8,405</b>	<b>7,950</b>	<b>8,580</b>	<b>7,310</b>	<b>7,100</b>	<b>7,355</b>	<b>7,360</b>	<b>6,530</b>	<b>6,430</b>
<b>Demand by Application</b>										
Autocatalyst	3,790	3,865	4,015	4,545	4,465	4,050	5,580	6,155	6,705	6,970
Chemical *	310	415	440	375	350	325	370	440	530	530
Dental	850	815	620	630	625	635	595	540	530	510
Electrical	920	1,275	1,495	1,550	1,370	1,370	1,410	1,375	1,190	1,055
Investment	200	220	50	260	420	625	1,095	-565	470	75
Jewellery	930	1,490	1,140	950	985	775	595	505	445	390
Other	90	265	85	85	75	70	90	110	100	100
<b>Total Gross Demand</b>	<b>7,090</b>	<b>8,345</b>	<b>7,845</b>	<b>8,395</b>	<b>8,290</b>	<b>7,850</b>	<b>9,735</b>	<b>8,560</b>	<b>9,970</b>	<b>9,630</b>
<b>Recycling</b>										
Autocatalyst	-530	-625	-805	-1,015	-1,140	-965	-1,310	-1,695	-1,670	-1,860
Electrical	0	-305	-290	-315	-345	-395	-440	-480	-430	-420
Jewellery	0	-60	-135	-235	-130	-70	-100	-210	-190	-180
<b>Total Recycling</b>	<b>-530</b>	<b>-990</b>	<b>-1,230</b>	<b>-1,565</b>	<b>-1,615</b>	<b>-1,430</b>	<b>-1,850</b>	<b>-2,385</b>	<b>-2,290</b>	<b>-2,460</b>
<b>Total Net Demand</b>	<b>6,560</b>	<b>7,355</b>	<b>6,615</b>	<b>6,830</b>	<b>6,675</b>	<b>6,420</b>	<b>7,885</b>	<b>6,175</b>	<b>7,680</b>	<b>7,170</b>
<b>Movements in stocks</b>	<b>2,020</b>	<b>1,050</b>	<b>1,335</b>	<b>1,750</b>	<b>635</b>	<b>680</b>	<b>-530</b>	<b>1,185</b>	<b>-1,150</b>	<b>-740</b>

\* Before 2005 sales from Russian state stocks are incorporated in total Russian supply

\*\* Before 2005 "Zimbabwe" supply is incorporated in "Other"

\*\*\* Before 2005 jewellery and electrical demand is net of recycling.



## Palladium Demand by Application: Regions

'000 oz	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
<b>Europe **</b>										
Autocatalyst: gross	1,105	975	890	920	1,005	995	1,330	1,485	1,450	1,495
Chemical *	70	155	175	95	100	85	105	80	85	90
Dental	80	75	75	70	65	65	80	80	75	75
Electrical	115	195	210	280	190	195	195	190	185	165
Investment	0	0	0	280	370	525	-5	-35	165	30
Jewellery	35	35	40	40	45	50	65	60	65	65
Other	25	20	25	20	20	20	30	25	25	25
<b>Totals</b>	<b>1,430</b>	<b>1,455</b>	<b>1,415</b>	<b>1,705</b>	<b>1,795</b>	<b>1,935</b>	<b>1,800</b>	<b>1,885</b>	<b>2,050</b>	<b>1,945</b>
<b>Japan</b>										
Autocatalyst: gross	635	660	795	820	885	590	820	680	790	765
Chemical	25	25	25	25	20	20	20	20	15	20
Dental	520	475	270	275	275	295	250	220	220	205
Electrical	235	325	330	325	320	270	295	300	310	225
Investment	0	0	0	0	0	0	10	5	0	-5
Jewellery	155	155	145	125	115	80	75	70	70	70
Other	10	10	10	10	10	10	10	10	10	10
<b>Totals</b>	<b>1,580</b>	<b>1,650</b>	<b>1,575</b>	<b>1,580</b>	<b>1,625</b>	<b>1,265</b>	<b>1,480</b>	<b>1,305</b>	<b>1,415</b>	<b>1,290</b>
<b>North America</b>										
Autocatalyst: gross	1,445	1,430	1,415	1,695	1,290	1,020	1,355	1,545	1,815	1,820
Chemical	85	85	80	75	55	50	65	80	85	80
Dental	235	250	260	265	270	260	250	225	220	215
Electrical	185	245	240	195	170	170	160	145	140	135
Investment	0	220	50	-20	50	95	1,090	-535	305	50
Jewellery	10	20	40	55	60	60	65	45	45	45
Other	230	215	30	30	20	15	25	45	35	35
<b>Totals</b>	<b>2,190</b>	<b>2,465</b>	<b>2,115</b>	<b>2,295</b>	<b>1,915</b>	<b>1,670</b>	<b>3,010</b>	<b>1,550</b>	<b>2,645</b>	<b>2,380</b>
<b>China</b>										
Autocatalyst: gross	105	170	220	325	390	685	1,005	1,155	1,330	1,505
Chemical	50	55	65	80	55	75	65	145	215	190
Dental	5	5	5	5	0	0	0	0	0	0
Electrical	275	285	330	340	255	335	360	270	175	165
Investment	0	0	0	0	0	0	0	0	0	0
Jewellery	700	1,250	890	705	740	560	360	305	240	185
Other	10	5	10	10	10	10	10	10	10	10
<b>Totals</b>	<b>1,145</b>	<b>1,770</b>	<b>1,520</b>	<b>1,465</b>	<b>1,450</b>	<b>1,665</b>	<b>1,800</b>	<b>1,885</b>	<b>1,970</b>	<b>2,055</b>
<b>Rest of the World</b>										
Autocatalyst: gross	500	630	695	785	895	760	1,070	1,290	1,320	1,385
Chemical	80	95	95	100	120	95	115	115	130	150
Dental	10	10	10	15	15	15	15	15	15	15
Electrical	110	225	385	410	435	400	400	470	380	365
Investment	0	0	0	0	0	5	0	0	0	0
Jewellery	30	30	25	25	25	25	30	25	25	25
Other	15	15	10	15	15	15	15	20	20	20
<b>Totals</b>	<b>745</b>	<b>1,005</b>	<b>1,220</b>	<b>1,350</b>	<b>1,505</b>	<b>1,315</b>	<b>1,645</b>	<b>1,935</b>	<b>1,890</b>	<b>1,960</b>
<b>Total Gross Demand</b>	<b>7,090</b>	<b>8,345</b>	<b>7,845</b>	<b>8,395</b>	<b>8,290</b>	<b>7,850</b>	<b>9,735</b>	<b>8,560</b>	<b>9,970</b>	<b>9,630</b>

\* Before 2005 sales from Russian state stocks are incorporated in total Russian supply

\*\* Before 2005 "Zimbabwe" supply is incorporated in "Other"

\*\*\* Before 2005 jewellery and electrical demand is net of recycling.

## Palladium Supply and Demand

Tonnes	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
<b>Supply</b>										
South Africa	77.1	81.0	86.3	86.0	75.6	73.7	82.1	79.6	72.2	73.1
Russia										
Primary	149.3	97.5	100.2	94.9	84.0	83.2	84.6	84.1	81.8	80.9
Stock Sales	-	46.2	21.7	46.3	29.9	29.9	31.1	24.1	8.1	3.1
North America	32.2	28.3	30.6	30.8	28.3	23.5	18.4	28.0	27.8	28.9
Zimbabwe	-	3.9	4.2	4.2	4.4	5.6	6.8	8.2	8.2	9.6
Others	8.2	4.5	4.2	4.7	5.3	5.0	5.8	4.8	5.0	4.4
<b>Total Supply</b>	<b>266.9</b>	<b>261.4</b>	<b>247.2</b>	<b>266.9</b>	<b>227.4</b>	<b>220.8</b>	<b>228.8</b>	<b>228.9</b>	<b>203.1</b>	<b>200.0</b>
<b>Demand by Application</b>										
Autocatalyst	117.9	120.2	125.8	141.4	138.9	126.0	173.6	191.4	208.5	216.8
Chemical *	9.6	12.9	13.7	11.7	10.9	10.1	11.5	13.7	16.5	16.5
Dental	26.4	25.3	19.3	19.6	19.4	19.8	18.5	16.8	16.5	15.9
Electrical	28.6	39.7	46.6	48.2	42.6	42.6	43.9	42.8	37.0	32.8
Investment	6.2	6.8	1.5	8.1	13.1	19.4	34.1	-17.6	14.6	2.3
Jewellery	28.9	46.3	35.4	29.5	30.6	24.1	18.5	15.7	13.9	12.1
Other	2.8	8.2	2.6	2.6	2.3	2.2	2.8	3.4	3.1	3.1
<b>Total Gross Demand</b>	<b>220.5</b>	<b>259.4</b>	<b>244.9</b>	<b>261.1</b>	<b>257.8</b>	<b>244.2</b>	<b>302.8</b>	<b>266.2</b>	<b>310.1</b>	<b>299.5</b>
<b>Recycling</b>										
Autocatalyst	-16.5	-19.4	-25.0	-31.6	-35.5	-30.0	-40.7	-52.7	-51.9	-57.9
Electrical	-	-9.4	-9.0	-9.8	-10.7	-12.3	-13.7	-14.9	-13.4	-13.1
Jewellery	-	-1.9	-4.2	-7.3	-4.0	-2.2	-3.1	-6.5	-5.9	-5.6
<b>Total Recycling</b>	<b>-16.5</b>	<b>-30.7</b>	<b>-38.2</b>	<b>-48.7</b>	<b>-50.2</b>	<b>-44.5</b>	<b>-57.5</b>	<b>-74.2</b>	<b>-71.2</b>	<b>-76.5</b>
<b>Total Net Demand</b>	<b>204.0</b>	<b>228.7</b>	<b>206.7</b>	<b>212.4</b>	<b>207.6</b>	<b>199.7</b>	<b>245.3</b>	<b>192.1</b>	<b>238.9</b>	<b>223.0</b>
<b>Movements in stocks</b>	<b>62.8</b>	<b>32.7</b>	<b>40.5</b>	<b>54.4</b>	<b>19.8</b>	<b>21.2</b>	<b>-16.5</b>	<b>36.9</b>	<b>-35.8</b>	<b>-23.0</b>

*Totals may not add due to rounding*

*\* Before 2005 sales from Russian state stocks are incorporated in total Russian supply*

*\*\* Before 2005 "Zimbabwe" supply is incorporated in "Other"*

*\*\*\* Before 2005 jewellery and electrical demand is net of recycling.*



## Palladium Demand by Application: Regions

Tonnes	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
<b>Europe **</b>										
Autocatalyst: gross	34.4	30.3	27.7	28.6	31.3	30.9	41.4	46.2	45.1	46.5
Chemical *	2.2	4.8	5.4	3.0	3.1	2.6	3.3	2.5	2.6	2.8
Dental	2.5	2.3	2.3	2.2	2.0	2.0	2.5	2.5	2.3	2.3
Electrical	3.6	6.1	6.5	8.7	5.9	6.1	6.1	5.9	5.8	5.1
Investment	0.0	0.0	0.0	8.7	11.5	16.3	-0.2	-1.1	5.1	0.9
Jewellery	1.1	1.1	1.2	1.2	1.4	1.6	2.0	1.9	2.0	2.0
Other	0.8	0.6	0.8	0.6	0.6	0.6	0.9	0.8	0.8	0.8
<b>Totals</b>	<b>41.1</b>	<b>45.2</b>	<b>43.9</b>	<b>53.0</b>	<b>55.8</b>	<b>60.2</b>	<b>56.0</b>	<b>58.6</b>	<b>63.8</b>	<b>60.5</b>
<b>Japan</b>										
Autocatalyst: gross	19.8	20.5	24.7	25.5	27.5	18.4	25.5	21.2	24.6	23.8
Chemical	0.8	0.8	0.8	0.8	0.6	0.6	0.6	0.6	0.5	0.6
Dental	16.2	14.8	8.4	8.6	8.6	9.2	7.8	6.8	6.8	6.4
Electrical	7.3	10.1	10.3	10.1	10.0	8.4	9.2	9.3	9.6	7.0
Investment	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.2	0.0	-0.2
Jewellery	4.8	4.8	4.5	3.9	3.6	2.5	2.3	2.2	2.2	2.2
Other	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
<b>Totals</b>	<b>47.9</b>	<b>51.3</b>	<b>49.0</b>	<b>49.1</b>	<b>50.5</b>	<b>39.3</b>	<b>46.0</b>	<b>40.6</b>	<b>44.0</b>	<b>40.1</b>
<b>North America</b>										
Autocatalyst: gross	44.9	44.5	44.9	52.7	40.1	31.7	42.1	48.1	56.4	56.6
Chemical	2.6	2.6	2.5	2.3	1.7	1.6	2.0	2.5	2.6	2.5
Dental	7.3	7.7	8.1	8.2	8.4	8.1	7.8	7.0	6.8	6.7
Electrical	5.8	7.6	7.5	6.1	5.3	5.3	5.0	4.5	4.4	4.2
Investment	6.2	6.8	1.5	-0.6	1.6	3.0	33.9	-16.6	9.5	1.6
Jewellery	0.3	0.6	1.2	1.7	1.9	1.9	2.0	1.4	1.4	1.4
Other	0.9	6.7	0.9	0.9	0.6	0.5	0.8	1.4	1.1	1.1
<b>Totals</b>	<b>57.4</b>	<b>76.5</b>	<b>66.6</b>	<b>71.4</b>	<b>59.6</b>	<b>51.9</b>	<b>93.6</b>	<b>48.2</b>	<b>82.3</b>	<b>74.0</b>
<b>China</b>										
Autocatalyst: gross	3.3	5.3	6.9	10.1	12.1	21.3	31.3	35.9	41.4	46.8
Chemical	1.6	1.7	2.0	2.5	1.7	2.3	2.0	4.5	6.7	5.9
Dental	0.2	0.2	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0
Electrical	8.6	8.9	10.3	10.6	7.9	10.4	11.2	8.4	5.4	5.1
Investment	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Jewellery	21.8	38.9	27.7	21.9	23.0	17.4	11.2	9.5	7.5	5.8
Other	0.3	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
<b>Totals</b>	<b>35.8</b>	<b>55.2</b>	<b>47.4</b>	<b>45.6</b>	<b>45.1</b>	<b>51.8</b>	<b>56.0</b>	<b>58.6</b>	<b>61.3</b>	<b>63.9</b>
<b>Rest of the World</b>										
Autocatalyst: gross	15.5	19.6	21.6	24.4	27.8	23.6	33.3	40.1	41.1	43.1
Chemical	2.4	3.0	3.0	3.1	3.7	3.0	3.6	3.6	4.0	4.7
Dental	0.3	0.3	0.3	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Electrical	3.4	7.0	12.0	12.8	13.5	12.4	12.4	14.6	11.8	11.4
Investment	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0
Jewellery	0.9	0.9	0.8	0.8	0.8	0.8	0.9	0.8	0.8	0.8
Other	0.5	0.4	0.3	0.5	0.5	0.5	0.5	0.6	0.6	0.6
<b>Totals</b>	<b>21.9</b>	<b>31.2</b>	<b>38.0</b>	<b>42.0</b>	<b>46.8</b>	<b>40.9</b>	<b>51.2</b>	<b>60.2</b>	<b>58.8</b>	<b>61.0</b>
<b>Total Gross Demand</b>	<b>220.5</b>	<b>259.4</b>	<b>244.9</b>	<b>261.1</b>	<b>257.8</b>	<b>244.2</b>	<b>302.8</b>	<b>266.2</b>	<b>310.1</b>	<b>299.5</b>

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