

Palladium Supply and Demand

'000 oz	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Supply										
South Africa	1,860	2,010	2,160	2,320	2,480	2,605	2,775	2,765	2,430	2,370
Russia										
Primary	5,200	4,340	1,930	2,950	4,800	3,135	3,220	3,050	2,700	2,675
Stock Sales	-	-	-	-	-	1,485	700	1,490	960	960
North America	635	850	990	935	1,035	910	985	990	910	755
Zimbabwe	0	0	0	0	0	125	135	135	140	180
Others	105	120	170	245	265	145	135	150	170	160
Total Supply	7,800	7,320	5,250	6,450	8,580	8,405	7,950	8,580	7,310	7,100
Demand by Application										
Autocatalyst	5,640	5,090	3,050	3,450	3,790	3,865	4,015	4,545	4,465	4,050
Chemical	255	250	255	265	310	415	440	375	350	325
Dental	820	725	785	825	850	815	620	630	625	615
Electrical	2,160	670	760	900	920	1,275	1,495	1,550	1,370	1,270
Investment	0	0	0	30	200	220	50	260	420	625
Jewellery	255	240	270	260	930	1,490	1,140	950	985	815
Other	60	65	90	110	90	265	85	85	75	70
Total Gross Demand	9,190	7,040	5,210	5,840	7,090	8,345	7,845	8,395	8,290	7,770
Recycling										
Autocatalyst	-230	-280	-370	-410	-530	-625	-805	-1,015	-1,140	-965
Electrical	-	-	-	-	-	-305	-290	-315	-345	-395
Jewellery	-	-	-	-	-	-60	-135	-235	-130	-70
Total Recycling	-230	-280	-370	-410	-530	-990	-1,230	-1,565	-1,615	-1,430
Total Net Demand	8,960	6,760	4,840	5,430	6,560	7,355	6,615	6,830	6,675	6,340
Movements in stocks	-1,160	560	410	1,020	2,020	1,050	1,335	1,750	635	760

* 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.

Gross Palladium Demand by Application: Regions

'000 oz	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Europe										
Autocatalyst	1,900	1,730	1,370	2,003	1,105	975	890	920	1,005	995
Chemical	95	65	70	65	70	155	175	95	100	85
Dental	100	50	55	70	80	75	75	70	65	65
Electrical*	265	35	85	85	115	195	210	280	190	175
Investment	0	0	0	0	0	0	0	280	370	525
Jewellery*	45	35	35	35	35	35	40	40	45	50
Other	20	20	15	20	25	20	25	20	20	20
Totals	2,425	1,935	1,630	2,278	1,430	1,455	1,415	1,705	1,795	1,915
Japan										
Autocatalyst	510	505	520	550	635	660	795	820	885	590
Chemical	20	20	20	25	25	25	25	25	20	20
Dental	470	475	505	515	520	475	270	275	275	275
Electrical*	990	260	140	225	235	325	330	325	320	305
Investment	0	0	0	0	0	0	0	0	0	0
Jewellery*	150	140	165	160	155	155	145	125	115	120
Other	15	10	10	5	10	10	10	10	10	10
Totals	2,155	1,410	1,360	1,480	1,580	1,650	1,575	1,580	1,625	1,320
North America										
Autocatalyst	2,805	2,375	640	1,205	1,445	1,430	1,415	1,695	1,290	1,020
Chemical	65	75	75	70	85	85	80	75	55	50
Dental	230	190	215	225	235	250	260	265	270	260
Electrical*	485	250	210	215	185	245	240	195	170	155
Investment	0	0	0	0	0	220	50	-20	50	95
Jewellery*	10	10	10	10	10	20	40	55	60	60
Other	5	15	45	95	230	215	30	30	20	15
Totals	3,600	2,915	1,195	1,820	2,190	2,465	2,115	2,295	1,915	1,655
China										
Autocatalyst	15	40	55	90	105	170	220	325	390	685
Chemical	30	30	40	40	50	55	65	80	55	75
Dental	0	0	0	5	5	5	5	5	0	0
Electrical*	175	100	75	240	275	285	330	340	255	235
Investment	0	0	0	0	0	0	0	0	0	0
Jewellery*	20	25	30	25	700	1,250	890	705	740	560
Other	5	5	5	5	10	5	10	10	10	10
Totals	245	200	205	405	1,145	1,770	1,520	1,465	1,450	1,565
Rest of the World										
Autocatalyst	410	440	465	385	500	630	695	785	895	760
Chemical	45	60	50	65	80	95	95	100	120	95
Dental	20	10	10	10	10	10	10	15	15	15
Electrical*	245	25	250	135	110	225	385	410	435	400
Investment	0	0	0	0	0	0	0	0	0	5
Jewellery*	30	30	30	30	30	30	25	25	25	25
Other	15	15	15	15	15	15	10	15	15	15
Totals	765	580	820	640	745	1,005	1,220	1,350	1,505	1,315
Total Gross Demand	9,190	7,040	5,210	6,623	7,090	8,345	7,845	8,395	8,290	7,770

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

Palladium Supply and Demand

Tonnes	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Supply										
South Africa	57.9	62.5	67.2	72.2	77.1	81.0	86.3	86.0	75.6	73.7
Russia										
Primary	161.7	135.0	60.0	91.8	149.3	97.5	100.2	94.9	84.0	83.2
Stock Sales*	-	-	-	-	-	46.2	21.7	46.3	29.9	29.9
North America	19.8	26.4	30.8	29.1	32.2	28.3	30.6	30.8	28.3	23.4
Zimbabwe	-	-	-	-	-	3.9	4.2	4.2	4.4	5.6
Others	3.3	3.7	5.3	7.6	8.2	4.5	4.2	4.7	5.2	5.0
Total Supply	242.6	227.7	163.3	200.6	266.9	261.4	247.2	266.9	227.4	220.8
Demand by Application										
Autocatalyst	175.4	158.3	94.9	107.3	117.9	120.2	125.8	141.3	138.9	126.0
Chemical	7.9	7.8	7.9	8.2	9.6	12.9	13.7	11.7	10.9	10.1
Dental	25.5	22.6	24.4	25.7	26.4	25.3	19.3	19.7	19.4	19.1
Electrical***	67.2	20.8	23.6	28.0	28.6	39.7	46.6	48.3	42.6	39.5
Investment	0	0	0	0.9	6.2	6.8	1.5	8.1	13.1	19.5
Jewellery***	7.9	7.5	8.4	8.1	28.9	46.3	35.4	29.5	30.6	25.3
Other	1.9	2.0	2.8	3.4	2.8	8.2	2.6	2.4	2.3	2.2
Total Gross Demand	285.8	219.0	162.0	181.6	220.5	259.4	244.9	261.0	257.8	241.7
Recycling										
Autocatalyst	-7.2	-8.7	-11.5	-12.8	-16.5	-19.4	-25.0	-31.5	-35.5	-30.0
Electrical	-	-	-	-	-	-9.4	-9.0	-9.7	-10.7	-12.3
Jewellery	-	-	-	-	-	-1.9	-4.2	-7.2	-4.0	-2.2
Total Recycling	-7.2	-8.7	-11.5	-12.8	-16.5	-30.7	-38.2	-48.4	-50.2	-44.5
Total Net Demand	278.7	210.3	150.5	168.9	204.0	228.7	206.7	212.6	207.6	197.2
Movements in stocks	-36.1	17.4	12.8	31.7	62.8	32.7	40.5	54.3	19.8	23.6

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.*

Gross Palladium Demand by Application: Regions

Tonnes	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Europe										
Autocatalyst	59.1	53.8	42.6	37.9	34.4	30.3	27.7	28.6	31.3	31.0
Chemical	3.0	2.0	2.2	2.0	2.2	4.8	5.4	3.0	3.1	2.6
Dental	3.1	1.6	1.7	2.2	2.5	2.3	2.3	2.2	2.0	2.0
Electrical*	8.2	1.1	2.6	2.6	3.6	6.1	6.5	8.7	5.9	5.5
Investment	0	0	0	0	0	0	0	8.7	11.5	16.3
Jewellery*	1.4	1.1	1.1	1.1	1.1	1.1	1.2	1.2	1.4	1.6
Other	0.6	0.6	0.5	0.6	0.8	0.6	0.8	0.6	0.6	0.6
Totals	75.0	59.3	49.3	44.3	41.1	45.2	43.9	53.0	55.8	59.6
Japan										
Autocatalyst	15.9	15.7	16.2	17.1	19.8	20.5	24.7	25.5	27.5	18.4
Chemical	0.6	0.6	0.6	0.8	0.8	0.8	0.8	0.8	0.6	0.6
Dental	14.6	14.8	15.7	16.0	16.2	14.8	8.4	8.6	8.6	8.6
Electrical*	30.8	8.1	4.4	7.0	7.3	10.1	10.3	10.1	10.0	9.5
Investment	0	0	0	0	0	0	0	0	0	0
Jewellery*	4.7	4.4	5.1	5.0	4.8	4.8	4.5	3.9	3.5	3.7
Other	0.5	0.3	0.3	0.2	0.3	0.3	0.3	0.3	0.3	0.3
Totals	65.5	42.6	41.1	44.8	47.9	51.3	49.0	49.2	50.5	41.1
North America										
Autocatalyst	87.2	73.9	19.9	37.5	44.9	44.5	44.9	52.7	40.1	31.7
Chemical	2.0	2.3	2.3	2.2	2.6	2.6	2.5	2.3	1.7	1.6
Dental	7.2	5.9	6.7	7.0	7.3	7.7	8.1	8.2	8.4	8.0
Electrical*	15.1	7.8	6.5	6.7	5.8	7.6	7.5	6.1	5.3	4.8
Investment	0	0	0	0.9	6.2	6.8	1.5	-0.6	1.6	3.0
Jewellery*	0.3	0.3	0.3	0.3	0.3	0.6	1.2	1.7	1.9	1.9
Other	0.2	0.5	1.4	2.0	0.9	6.7	0.9	0.9	0.6	0.5
Totals	107.2	84.4	29.1	48.2	57.4	76.5	66.6	71.3	59.6	51.5
China										
Autocatalyst	0.4	1.2	1.7	2.8	3.3	5.3	6.9	10.1	12.1	21.3
Chemical	0.9	0.9	1.2	1.3	1.6	1.7	2.0	2.5	1.8	2.3
Dental	0	0	0	0.2	0.2	0.2	0.2	0.2	0	0
Electrical*	5.5	3.1	2.3	7.4	8.6	8.9	10.3	10.6	7.9	7.3
Investment	0	0	0	0	0	0	0	0	0	0
Jewellery*	0.6	0.8	0.9	0.8	21.8	38.9	27.7	21.9	23.0	17.4
Other	0.2	0.2	0.2	0.2	0.3	0.2	0.3	0.3	0.3	0.3
Totals	7.6	6.2	6.3	12.7	35.8	55.2	47.4	45.6	45.1	48.6
Rest of the World										
Autocatalyst	12.8	13.7	14.5	12.0	15.5	19.6	21.6	24.4	27.9	23.6
Chemical	1.4	1.9	1.6	2.0	2.4	3.0	3.0	3.1	3.7	3.0
Dental	0.6	0.3	0.3	0.3	0.3	0.3	0.3	0.5	0.4	0.5
Electrical*	7.6	0.8	7.8	4.1	3.4	7.0	12.0	12.8	13.5	12.4
Investment	0	0	0	0	0	0	0	0	0	0.2
Jewellery*	1.0	0.9	1.0	0.9	0.9	0.9	0.8	0.8	0.8	0.7
Other	0.4	0.4	0.4	0.5	0.5	0.4	0.3	0.3	0.5	0.5
Totals	23.5	17.7	24.8	18.9	21.9	31.2	38.0	41.9	46.8	40.9
Total Gross Demand	285.8	219.0	162.0	181.6	220.5	259.4	244.9	261.0	257.8	241.7

Totals may not add due to rounding

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