

## Palladium Supply and Demand

	'000 oz	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	
Supply	South Africa	870	910	820	790	980	1,010	1,040	1,090	1,105	1,150	1,230	1,270	1,260	1,395	1,500	1,600	1,690	1,810	1,820	
	Russia	1,240	1,430	1,550	1,560	1,700	1,440	1,600	1,790	1,770	1,650	1,870	2,150	2,100	2,400	3,300	4,200	5,600	4,800	5,800	
	North America	170	160	160	110	190	190	190	190	370	375	370	420	450	415	410	470	455	545	660	
	Others	60	70	70	80	90	90	90	90	90	70	60	70	70	70	70	70	70	95	95	120
	<b>Total Supply</b>	<b>2,340</b>	<b>2,570</b>	<b>2,600</b>	<b>2,540</b>	<b>2,960</b>	<b>2,730</b>	<b>2,920</b>	<b>3,160</b>	<b>3,315</b>	<b>3,235</b>	<b>3,540</b>	<b>3,910</b>	<b>3,880</b>	<b>4,280</b>	<b>5,280</b>	<b>6,340</b>	<b>7,840</b>	<b>7,250</b>	<b>8,400</b>	
Demand by Application	Autocatalyst: gross recovery	300	270	290	300	340	320	265	270	260	265	315	355	490	705	975	1,800	2,360	3,200	4,890	
	Chemical *					-20	-30	-40	-50	-65	-70	-85	-85	-95	-100	-105	-110	-145	-160	-175	
	Dental	520	480	590	820	900	870	925	955	995	995	1,020	1,165	1,195	1,210	1,265	1,290	1,320	1,350	1,230	
	Electronics	590	800	840	1,110	1,230	1,100	1,320	1,575	1,705	1,655	1,675	1,855	1,830	2,015	2,230	2,620	2,020	2,550	2,075	
	Jewellery	180	210	220	180	210	210	170	165	180	180	195	210	205	210	205	200	215	260	235	
	Investment																				
	Other	440	330	330	290	300	270	115	100	85	130	80	65	60	35	115	110	140	140	115	
<b>Total Demand</b>	<b>2,030</b>	<b>2,090</b>	<b>2,270</b>	<b>2,700</b>	<b>2,960</b>	<b>2,740</b>	<b>2,910</b>	<b>3,185</b>	<b>3,335</b>	<b>3,340</b>	<b>3,415</b>	<b>3,790</b>	<b>3,890</b>	<b>4,265</b>	<b>4,870</b>	<b>6,120</b>	<b>6,150</b>	<b>7,580</b>	<b>8,600</b>		
	Movements in stocks	310	480	330	-160	0	-10	10	-25	-20	-105	125	120	-10	15	410	220	1,690	-330	-200	
Demand by region	Europe	330	300	350	470	520	520	540	550	605	585	590	620	675	680	885	1,340	1,525	1,840	1985	
	Japan	690	820	890	1,220	1,250	1,080	1,230	1,430	1,535	1,515	1,530	1,800	1,780	1,990	2,200	2,445	1,885	2,350	2,215	
	North America	840	820	850	830	990	930	965	1,035	1,020	1,070	1,080	1,095	1,155	1,295	1,430	1,960	2,185	2,675	3,690	
	China**																			110	
	Rest of the World	170	150	180	180	200	210	175	170	175	170	215	275	280	300	355	375	555	715	600	
<b>Total Demand</b>	<b>2,030</b>	<b>2,090</b>	<b>2,270</b>	<b>2,700</b>	<b>2,960</b>	<b>2,740</b>	<b>2,910</b>	<b>3,185</b>	<b>3,335</b>	<b>3,340</b>	<b>3,415</b>	<b>3,790</b>	<b>3,890</b>	<b>4,265</b>	<b>4,870</b>	<b>6,120</b>	<b>6,150</b>	<b>7,580</b>	<b>8,600</b>		

\* Before 1986, Chemical demand is included in our Other estimates.

\*\* Between 1986 and 1998, Chinese demand is included in our Rest of the World estimates.



## Palladium Demand by Application: Regions

	'000 oz	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
Europe**	Autocatalyst: gross recovery								5	5	5	5	5	40	115	260	650	860	1,100	1,370
	Chemical *							60	60	65	65	75	70	75	65	60	65	65	70	65
	Dental	100	110	140	250	290	260	245	240	265	250	260	300	300	265	255	250	255	260	210
	Electronics	110	110	130	150	190	200	180	200	220	210	200	200	210	210	255	325	300	340	270
	Jewellery	130	140	150	140	140	140	35	30	35	35	35	35	35	35	30	30	30	50	50
	Investment																			
	Other	160	90	100	110	130	120	20	15	15	20	15	10	15	-10	25	20	20	25	25
	Totals	500	450	520	650	750	720	540	550	605	585	590	620	675	680	885	1,340	1,525	1,840	1,985
Japan	Autocatalyst: gross recovery	150	140	160	150	140	105	90	90	85	85	90	95	85	90	125	145	180	245	480
	Chemical *						-5	-10	-10	-15	-15	-25	-30	-35	-30	-30	-25	-30	-45	-50
	Dental	220	160	190	290	290	270	280	290	300	310	320	420	450	500	550	580	600	620	590
	Electronics	160	360	390	650	680	600	750	920	1,020	980	990	1,160	1,130	1,280	1,400	1,600	990	1,390	1,060
	Jewellery	40	60	60	50	60	60	70	80	105	110	115	120	120	120	120	115	115	110	105
	Investment																			
	Other	120	100	90	80	80	50	30	35	20	20	15	10	10	10	15	10	10	10	10
	Totals	690	820	890	1,220	1,250	1,080	1,230	1,430	1,535	1,515	1,530	1,800	1,780	1,990	2,200	2,445	1,885	2,350	2,215
North America	Autocatalyst: gross recovery	150	130	130	150	200	215	160	160	155	160	200	220	320	450	525	950	1,230	1,680	2,820
	Chemical *					-20	-25	-30	-40	-50	-55	-60	-55	-60	-70	-75	-85	-110	-105	-115
	Dental	200	210	260	280	330	340	375	390	390	395	400	400	400	400	410	410	410	415	390
	Electronics	320	330	320	290	370	300	330	400	405	410	420	425	405	420	450	545	490	550	460
	Jewellery	10	10	10	10	10	10	10	10	10	5	5	5	0	5	5	5	5	10	10
	Investment																			
	Other	160	140	140	100	100	100	60	45	40	80	40	20	25	25	55	65	90	55	55
	Totals	840	820	860	830	990	940	965	1,035	1,020	1,070	1,080	1,095	1,155	1,295	1,430	1,960	2,185	2,675	3,690
China***	Autocatalyst: gross recovery																			0
	Chemical *																			25
	Dental																			0
	Electronics																			35
	Jewellery																			45
	Investment																			0
	Other																			5
	Totals																			110
Rest of the World**	Autocatalyst: gross recovery							15	15	15	15	20	35	45	50	65	55	90	175	220
	Chemical *							15	15	20	20	40	50	45	40	45	55	85	80	50
	Dental							25	35	40	40	40	45	45	45	50	50	55	55	40
	Electronics							60	55	60	55	65	70	85	105	125	150	240	270	250
	Jewellery							55	45	30	30	40	50	50	50	50	50	65	90	25
	Investment																			
	Other							5	5	10	10	10	25	10	10	20	15	20	50	20
	Totals							175	170	175	170	215	275	280	300	355	375	555	715	600

\* Before 1986, Chemical demand is included in our Other estimates.  
 \*\* Before 1986, estimates for the Rest of the World region are included in our European figures.  
 \*\*\* Before 1998, estimates for China are included in the Rest of the World figures



## Palladium Supply and Demand

	Tonnes ***	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	
Supply	South Africa	27.1	28.3	25.5	24.6	30.5	31.4	32.3	33.9	34.4	35.8	38.3	39.5	39.2	43.4	46.7	49.8	52.6	56.3	56.6	
	Russia	38.6	44.5	48.2	48.5	52.9	44.8	49.8	55.7	55.1	51.3	58.2	66.9	65.3	74.6	102.6	130.6	174.2	149.3	180.4	
	North America	5.3	5.0	5.0	3.4	5.9	5.9	5.9	5.9	11.5	11.7	11.5	13.1	14.0	12.9	12.8	14.6	14.2	17.0	20.5	
	Others	1.9	2.2	2.2	2.5	2.8	2.8	2.8	2.8	2.8	2.2	1.9	2.2	2.2	2.2	2.2	2.2	3.0	3.0	3.7	
	<b>Total Supply</b>	<b>72.8</b>	<b>79.9</b>	<b>80.9</b>	<b>79.0</b>	<b>92.1</b>	<b>84.9</b>	<b>90.8</b>	<b>98.3</b>	<b>103.1</b>	<b>103.1</b>	<b>100.6</b>	<b>110.1</b>	<b>121.6</b>	<b>120.7</b>	<b>133.1</b>	<b>164.2</b>	<b>197.2</b>	<b>243.9</b>	<b>225.5</b>	<b>261.3</b>
Demand by Application	Autocatalyst: gross recovery	9.3	8.4	9.0	9.3	10.6	10.0	8.2	8.4	8.1	8.2	9.8	11.0	15.2	21.9	30.3	56.0	73.4	99.5	152.1	
	Chemical *					-0.6	-0.9	-1.2	-1.6	-2.0	-2.2	-2.6	-2.6	-3.0	-3.1	-3.3	-3.4	-4.5	-5.0	-5.4	
	Dental	16.2	14.9	18.4	25.5	28.0	27.1	28.8	29.7	30.9	30.9	31.7	36.2	37.2	37.6	39.3	40.1	41.1	42.0	38.3	
	Electronics	18.4	24.9	26.1	34.5	38.3	34.2	41.1	49.0	53.0	51.5	52.1	57.7	56.9	62.7	69.4	81.5	62.8	79.3	64.5	
	Jewellery	5.6	6.5	6.8	5.6	6.5	6.5	5.3	5.1	5.6	5.6	6.1	6.5	6.4	6.5	6.4	6.2	6.7	8.1	7.3	
	Investment																				
	Other	13.7	10.3	10.3	9.0	9.3	8.4	3.6	3.1	2.6	4.0	2.5	2.0	1.9	1.1	3.6	3.4	4.4	4.4	3.6	
<b>Total Demand</b>	<b>63.1</b>	<b>65.0</b>	<b>70.6</b>	<b>84.0</b>	<b>92.1</b>	<b>85.2</b>	<b>90.5</b>	<b>99.1</b>	<b>103.7</b>	<b>103.7</b>	<b>103.9</b>	<b>106.2</b>	<b>117.9</b>	<b>121.0</b>	<b>132.7</b>	<b>151.5</b>	<b>190.4</b>	<b>191.3</b>	<b>235.8</b>	<b>267.5</b>	
Demand by region	Movements in stocks	9.6	14.9	10.3	-5.0	0.0	-0.3	0.3	-0.8	-0.6	-3.3	3.9	3.7	-0.3	0.5	12.8	6.8	52.6	-10.3	-6.2	
	Europe	10.3	9.3	10.9	14.6	16.2	16.2	16.8	17.1	18.8	18.2	18.4	19.3	21.0	21.2	27.5	41.7	47.4	57.2	61.7	
	Japan	21.5	25.5	27.7	37.9	38.9	33.6	38.3	44.5	47.7	47.1	47.6	56.0	55.4	61.9	68.4	76.0	58.6	73.1	68.9	
	North America	26.1	25.5	26.4	25.8	30.8	28.9	30.0	32.2	31.7	33.3	33.6	34.1	35.9	40.3	44.5	61.0	68.0	83.2	114.8	
	China**																			3.5	
	Rest of the World	5.3	4.7	5.6	5.6	6.2	6.5	5.4	5.3	5.4	5.3	6.7	8.6	8.7	9.3	11.0	11.7	17.3	22.2	18.6	
<b>Total Demand</b>	<b>63.1</b>	<b>65.0</b>	<b>70.6</b>	<b>84.0</b>	<b>92.1</b>	<b>85.2</b>	<b>90.5</b>	<b>99.1</b>	<b>103.7</b>	<b>103.9</b>	<b>106.2</b>	<b>117.9</b>	<b>121.0</b>	<b>132.7</b>	<b>151.5</b>	<b>190.4</b>	<b>191.3</b>	<b>235.8</b>	<b>267.5</b>		

\* Before 1986, Chemical demand is included in our Other estimates.

\*\* Between 1986 and 1998, Chinese demand is included in our Rest of the World estimates.

\*\*\* Totals may not add due to rounding



## Palladium Demand by Application: Regions

		Tonnes ****	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	
Europe **	Autocatalyst: gross recovery									0.2	0.2	0.2	0.2	0.2	1.2	3.6	8.1	20.2	26.7	34.2	42.6	
	Chemical *								1.9	1.9	2.0	2.0	2.3	2.2	2.3	2.0	1.9	2.0	2.0	2.2	2.0	
	Dental		3.1	3.4	4.4	7.8	9.0	8.1	7.6	7.5	8.2	7.8	8.1	9.3	9.3	8.2	7.9	7.8	7.9	8.1	8.1	6.5
	Electronics		3.4	3.4	4.0	4.7	5.9	6.2	5.6	6.2	6.8	6.5	6.2	6.2	6.5	6.5	7.9	10.1	9.3	10.6	8.4	8.4
	Jewellery		4.0	4.4	4.7	4.4	4.4	4.4	1.1	0.9	1.1	1.1	1.1	1.1	1.1	1.1	1.1	0.9	0.9	0.9	1.6	1.6
	Other		5.0	2.8	3.1	3.4	4.0	3.7	0.6	0.4	0.5	0.6	0.5	0.3	0.5	-0.3	0.8	0.6	0.6	0.6	0.8	0.8
	Totals		15.6	14	16.2	20.2	23.3	22.4	16.8	17.1	18.8	18.2	18.4	19.3	21	21.2	27.5	41.7	47.4	57.3	61.7	61.7
Japan	Autocatalyst: gross recovery		4.7	4.4	5.0	4.7	4.4	3.3	2.8	2.8	2.6	2.6	2.8	3.0	2.6	2.8	3.9	4.5	5.6	7.6	14.9	
	Chemical *							-0.2	-0.3	-0.3	-0.5	-0.5	-0.8	-0.9	-1.1	-0.9	-0.9	-0.8	-0.9	-1.4	-1.6	
	Dental		6.8	5.0	5.9	9.0	9.0	8.4	8.7	9.0	9.3	9.6	10.0	13.1	14.0	15.6	17.1	18.0	18.7	19.3	18.4	18.4
	Electronics		5.0	11.2	12.1	20.2	21.2	18.7	23.3	28.6	31.7	30.5	30.8	36.1	35.1	39.8	43.5	49.8	30.8	43.2	33.0	33.0
	Jewellery		1.2	1.9	1.9	1.6	1.9	1.9	2.2	2.5	3.3	3.4	3.6	3.7	3.7	3.7	3.7	3.7	3.6	3.6	3.4	3.3
	Investment																					
	Other		3.7	3.1	2.8	2.5	2.5	1.6	1.0	1.1	0.7	0.7	0.5	0.3	0.3	0.3	0.5	0.3	0.3	0.3	0.3	0.3
Totals		21.5	25.5	27.7	37.9	38.9	33.6	38.3	44.5	47.7	47.1	47.6	56	55.4	61.9	68.4	76	58.6	73	68.9	68.9	
North America	Autocatalyst: gross recovery		4.7	4.0	4.0	4.7	6.2	6.7	5.0	5.0	4.8	5.0	6.2	6.8	10.0	14.0	16.3	29.5	38.3	52.3	87.7	
	Chemical *					-0.6	-0.8	-0.9	-1.2	-1.6	-1.7	-1.9	-1.7	-1.9	-2.2	-2.3	-2.6	-3.4	-3.3	-3.6	-3.6	
	Dental		6.2	6.5	8.1	8.7	10.3	10.6	11.7	12.1	12.1	12.3	12.4	12.4	12.4	12.4	12.8	12.8	12.8	12.9	12.1	12.1
	Electronics		10.0	10.3	10.0	9.0	11.5	9.3	10.3	12.4	12.6	12.8	13.1	13.2	12.6	13.1	14.0	17.0	15.2	17.1	14.3	14.3
	Jewellery		0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.0	0.2	0.2	0.2	0.2	0.3	0.3	0.3
	Investment																					
	Other		5.0	4.4	4.4	3.1	3.1	3.1	1.8	1.4	1.2	2.5	1.2	0.6	0.8	0.8	1.7	2.0	2.8	1.7	1.7	1.7
Totals		26.1	25.5	26.7	25.8	30.8	29.2	30	32.2	31.7	33.3	33.6	34.1	35.9	40.3	44.5	61	68	83.2	114.8	114.8	
China ***	Autocatalyst: gross recovery								0.5	0.5	0.5	0.5	0.6	1.1	1.4	1.6	2.0	1.7	2.8	5.4	6.8	
	Chemical *								0.5	0.5	0.6	0.6	1.2	1.6	1.4	1.2	1.4	1.7	2.6	2.5	1.6	
	Dental								0.8	1.1	1.2	1.2	1.2	1.4	1.4	1.4	1.6	1.6	1.7	1.7	1.2	1.4
	Electronics								1.9	1.7	1.9	1.7	2.0	2.2	2.6	3.3	3.9	4.7	7.5	8.4	7.8	7.8
	Jewellery								1.7	1.4	0.9	0.9	1.2	1.6	1.6	1.6	1.6	1.6	2.0	2.8	0.8	0.8
	Other								0.1	0.1	0.3	0.3	0.3	0.8	0.3	0.3	0.6	0.5	0.6	1.6	0.6	0.6
Totals								5.4	5.3	5.4	5.3	6.7	8.6	8.7	9.3	11	11.7	17.3	22.2	18.6	18.6	

\*\*\*\* Before 1986, Chemical demand is included in our Other estimates.

\*\* Before 1986, estimates for the Rest of the World region are included in our European figures.

\*\*\* Between 1986 and 1998, Chinese demand is included in our Rest of the World estimates.

\*\*\*\* Totals may not add due to rounding

