

Solders

Pre-Solders (Porcelain Alloys)

Solder	Au	Pt	Pd	Ag	Cu	Zn	Sn	Others	Color	Melting Range		Flow Temp	
										°F	°C	°F	°C
SMG®-3	90.79	1.5	4.0	3.0	-	-	0.7	Ir	Gold	1922-2120	1050-1160	2084	1140
SMG®-2	85.5	4.0	3.0	5.0	-	0.5	0.5	In, Fe	Gold	1832-2048	1000-1120	2030	1110
Silver Free Pre/WPG	83.8	-	11.45	-	-	4.7	-	Ir	White	1823-2075	995-1135	2048	1120
SMG®-YW	81.95	-	8.0	8.0	-	-	2.0	Re	White	1868-2102	1020-1150	2120	1160
Bio-Pre	79.0	3.0	-	16.6	-	1.3	-	Ir	Gold	1805-1949	985-1065	1904	1040
Degunorm® 880	76.0	2.9	-	10.0	6.0	5.0	-	Ir	Gold	1526-1616	830-880	1616	880
YPG	75.6	2.1	6.35	13.4	-	2.5	-	Ir	Gold	1899-1999	1037-1093	1949	1065
Degudent® G-1	64.0	0.4	-	34.9	-	-	-	In, Rh	Gold	1850-1886	1010-1030	1886	1030
Ceramco® White	51.9	-	12.57	33.9	-	1.1	0.5	Ru	White	2012-2048	1100-1120	2084	1140
Option® Pre	49.9	-	20.0	-	30.0	-	-	Ir	White	1922-1967	1050-1075	1940	1060

Post-Solders (Porcelain Alloys)

Solder	Au	Pt	Pd	Ag	Cu	Zn	Sn	Others	Color	Melting Range		Flow Temp	
										°F	°C	°F	°C
Degulor 2	73.0	1.9	-	10.0	3.0	12.0	-	Re	Gold	1292-1391	700-755	1382	750
Degunorm® 728/.728 Fine	72.5	0.5	-	10.0	3.0	12.0	-	In, Ir	Gold	1238-1346	670-730	1292	700
Balanced Line	70.0	-	-	9.0	16.0	3.0	2.0	-	Gold	1391-1508	755-820	1544	840
.650 Fine	65.0	-	-	16.3	13.1	3.9	1.7	-	Gold	1454-1508	790-820	1472	800
.615 Fine	61.5	-	-	17.5	15.0	4.5	1.5	-	Gold	1391-1508	755-820	1472	800
.585 Fine	58.5	-	-	19.5	15.0	5.0	2.0	-	Gold	1391-1454	755-790	1436	780
Regular White	57.8	-	-	14.7	5.7	15.5	-	Ni	White	1346-1418	730-770	1364	740
Paliney® Medium Fusing	57.0	-	5.0	26.5	-	10.0	1.5	-	White	1355-1598	735-870	1598	870
.490 Fine	49.0	-	-	24.55	19.5	5.65	1.3	-	Gold	1328-1436	720-780	1409	765
Paliney® #4	29.45	3.0	18.0	29.0	20.0	0.5	-	Re	White	1697-1841	925-1005	1814	990

Solders (Crown & Bridge Alloys)

Solder	Au	Pt	Pd	Ag	Cu	Zn	Sn	Others	Color	Melting Range		Flow Temp	
										°F	°C	°F	°C
Degunorm® 728/.728 Fine	72.5	0.5	-	10.0	3.0	12.0	-	In, Ir	Gold	1238-1346	670-730	1292	700
Balanced Line	70.0	-	-	9.0	16.0	3.0	2.0	-	Gold	1391-1508	755-820	1544	840
.650 Fine	65.0	-	-	16.3	13.1	3.9	1.7	-	Gold	1454-1508	790-820	1472	800
.615 Fine	61.5	-	-	17.5	15.0	4.5	1.5	-	Gold	1391-1508	755-820	1472	800
.585 Fine	58.5	-	-	19.5	15.0	5.0	2.0	-	Gold	1391-1454	755-790	1436	780
Paliney® Medium Fusing	57.0	-	5.0	26.5	-	10.0	1.5	-	White	1355-1598	735-870	1598	870
.490 Fine	49.0	-	-	24.55	19.5	5.65	1.3	-	Gold	1328-1436	720-780	1409	765

Laser Wires

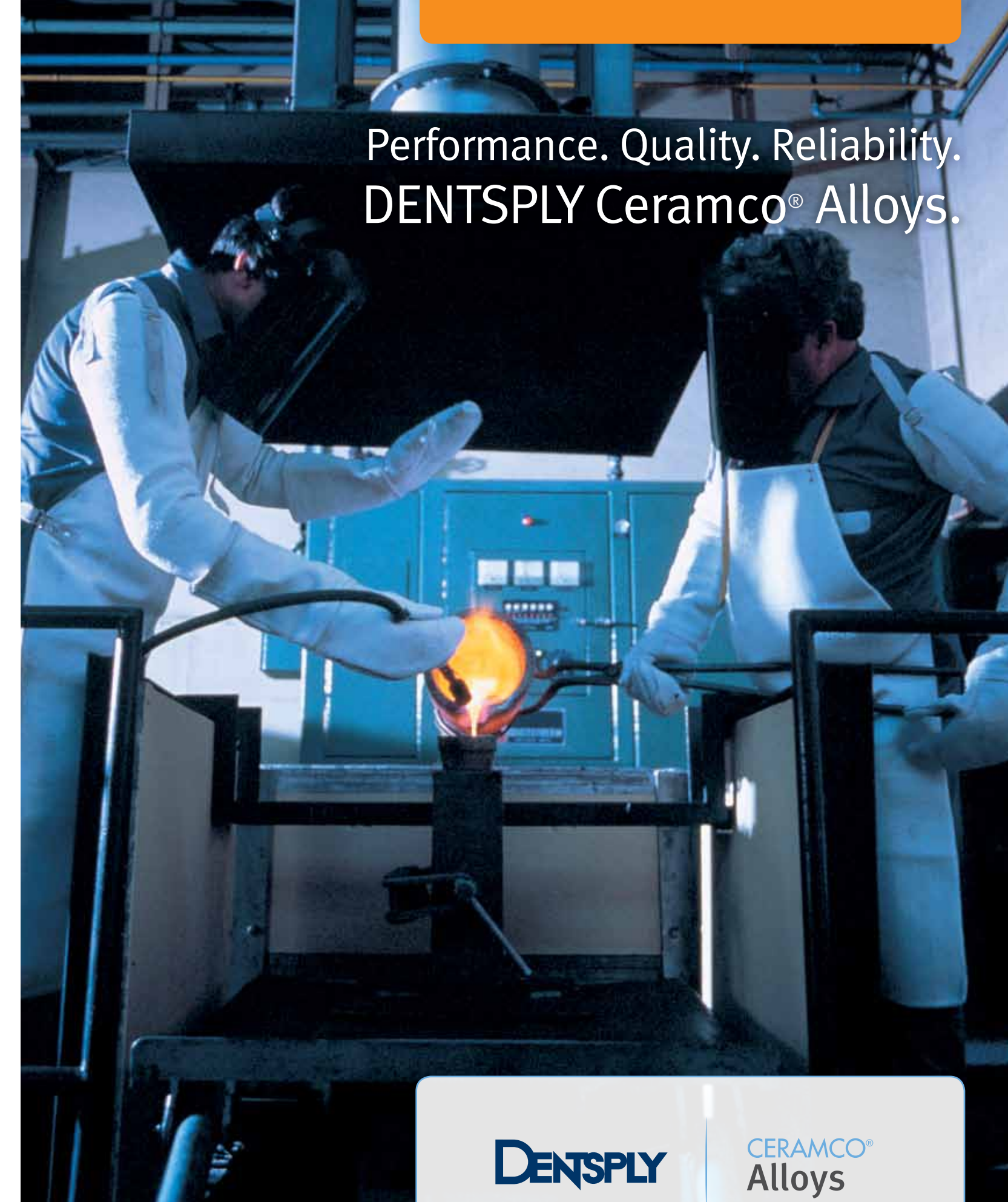
Laser Wire	Au	Pt	Pd	Ag	Cu	Zn	Sn	Others	Color	Melting Range	
										°F	°C
Degunorm®	73.8	9.0	-	9.2	4.4	2.0	-	In, Ir	Gold	1652-1814	900-990
Degutan®	80.2	4.0	13.5	-	-	-	2.1	Ir	White	2183-2336	1195-1280

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DENTSPLY International, Inc. is a multinational health care corporation with operations around the globe and a rich history of product excellence. For over a century, DENTSPLY International has been committed to providing the dental community with innovative, high-quality, cost-effective dental products, services and equipment. From humble beginnings in 1899, the company has grown to become the largest professional dental products manufacturer in the world.

DENTSPLY Ceramco® is one of the world's premier brands for crown and bridge restorative products and materials. Ceramco®, Ney® and Degudent® alloys are renowned for their time-tested quality and proven performance. By delivering materials for dependable restorations, DENTSPLY helps dental laboratories to Lab SmarterSM.

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DENTSPLY

CERAMCO®
Alloys

DENTSPLY Ceramco® Dental Alloys

With trusted brands for porcelain and crown and bridge alloys, including Ceramco®, Ney® and Degudent®, as well as tiered cost options, there are choices to match all case requirements and budgets.

Proven Performance

DENTSPLY Ceramco dental alloys have a proven track record for providing value, selection and performance and can be used for fabricating single-unit crowns, inlays, onlays, multi-unit bridges or implants. A palate of colors, from rich yellow to platinum white, and range of thermal expansion rates enable our dental alloys to be paired with any choice of porcelain.

Trusted Quality

High quality restorations depend on the selection of quality materials and their proper processing. DENTSPLY Ceramco quality is ensured by a century of experience and the fact that all alloys are produced under an ISO Registered Quality System. Fine grain alloy microstructures are combined with properties and handling characteristics that have been carefully designed for the lab's ease-of-use, success and profitability.

Reliable Restorations

DENTSPLY Ceramco alloys are designed to give the practitioner and technician the opportunity to create the best restoration for each patient, while meeting the latest technical standards, such as biocompatibility, esthetics and corrosion-resistance.

A Way to Lab SmarterSM

Whether porcelain or crown and bridge alloys, DENTSPLY Ceramco offers a selection of high quality precious and non-precious metals that perform while delivering reliable results. That's Lab Smarter.

IdentAlloy® Certification

A free value-added service to lab customers includes IdentAlloy Certificates for accurate documentation. Materials carrying IdentAlloy certification offer labs, dentists, patients and others many proven benefits:

- Visible means to assure the dentist of intent and integrity.
- Documentation in lab and dentist records in the event of questions, repairs or disputed claims.
- Documentation in patient records in the event of insurance questions.
- Assurance of proper alloy selection and use.
- Availability of material information in patient records for reference by dentists who may require it for a future treatment.

Refining

DENTSPLY applies a gold standard to scrap refining and couples it with a 98% rate of settlement on gold, platinum and palladium. And with one of the most advanced assay techniques in the industry, the settlement is guaranteed to be accurate, on time, and easy to understand.



Porcelain Alloys

Alloy	Au	Pt	Pd	Ag	Cu	Other	Color	IdentAlloy Class.*	Implant Use	Laser Wire	CTE 500°C	CTE 600°C	Vickers Hardness HV	Yield Strength (0.2% offset)		Elongation %	Density		Melting Range		Casting Temperature		Burnout Temperature		Pre-Solder	Post-Solder	
														psi	MPa		dwt/in ³	g/cm ³	°F	°C	°F	°C	°F	°C			
Golden Gate System																											
Degunorm®	73.8	9.0	–	9.2	4.4	Zn, In, Ir	Yellow	HN	Yes	Degunorm®	16.7	16.8	230	72,500	500	6	176	16.7	1650-1815	900-990	2010	1100	1300	700	Degunorm® 880	Degunorm® 728	
Degudent® LS	73.1	1.5	5.8	16.0	–	Zn, Sn, Ir	Yellow	HN	Yes	Degunorm®	16.1	16.6	235	81,200	560	5	165	15.7	1805-1950	985-1065	2190	1200	1300	700	Degunorm® 880	Degunorm® 728	
Sonoma®	–	–	36.9	56.0	–	Zn, Sn, Ir	White	HN			16.5	16.8	180	47,900	330	10	115	10.9	1922-2066	1050-1130	2280	1250	1300	700	Degunorm® 880	.728 Fine	
Premium Yellow High Noble																											
Bioney®	90.0	7.3	–	1.0	–	Fe, Zn, In, Re	Yellow	HN			14.8	15.1	180	69,600	480	9	199	18.9	1890-2000	1030-1095	2175	1190	1300	700	Bio-Pre	.650 Fine	
Degudent® G	86.0	10.4	–	–	–	Rh, In, Ta	Yellow	HN		Degutan®	14.5	14.7	195	68,000	470	9	194	18.4	1915-2085	1045-1140	2370	1300	1470	800	Degudent® G-1	Degulor 2	
BiOcclus® 4	85.8	11.0	–	–	–	In, Rh, Zn, Ta	Yellow	HN		Degutan®	14.2	14.5	160	76,900	530	8	200	19.0	1900-2085	1040-1140	2370	1300	1470	800	Degudent® G-1	Degulor 2	
Image 2	84.5	6.9	5.0	1.0	–	In, Fe, Zn, Re	Yellow	HN	Yes		14.5	14.8	230	97,300	671	7	190	18.0	1994-2183	1090-1195	2354	1290	1300	700	YPG	.650/.615 Fine	
Degudent® H	84.4	8.0	5.0	–	–	In, Ta	Yellow	HN	Yes	Degutan®	14.2	14.4	220	87,000	600	3	191	18.1	2010-2210	1100-1210	2550	1400	1560	850	YPG	Degulor 2	
Super Bioney®	82.4	14.9	–	–	–	Zn, Fe, Re	Yellow	HN			14.2	14.5	220	87,000	600	6	198	18.8	1904-2048	1040-1120	2210	1210	1300	700	Bio-Pre	.650/.615 Fine	
Premium White High Noble																											
SMG®-3	81.0	6.0	11.0	–	–	Sn, Fe, Re	White	HN	Yes		13.9	14.2	240	101,500	700	5	183	17.4	2120-2318	1160-1270	2430	1335	1300	700	SMG®-3/Ceramco® White	.650/.615 Fine	
Degudent® U	77.3	9.8	8.9	1.2	0.3	In, Sn, Re, Fe, Ir	White	HN	Yes	Degutan®	13.8	14.0	240	84,100	580	3	190	18.0	2100-2300	1150-1260	2550	1400	1560	850	YPG	Degulor 2	
High Noble																											
SMG®-CF	67.4	–	22.0	4.9	–	In, Ga, Ru	White	HN			14.2	14.5	220	82,000	565	7	164	15.6	2183-2309	1195-1265	2530	1390	1470	800	SMG®-3	.650/.615 Fine	
UltraCrown® SF	65.0	–	26.0	–	–	In, Sn, Ga, Ru	White	HN	Yes		14.2	14.5	254	84,000	580	8	156	14.8	2084-2313	1140-1267	2530	1390	1470	800	SMG®-3	.650/.615 Fine	
Deva® Plus	55.1	–	34.5	–	–	In, Ga, Ir	White	HN	Yes	Degutan®	13.7	14.0	260	89,900	620	11	156	14.8	2175-2325	1190-1275	2550	1400	1650	900	YPG/WPG	Regular White	
Eclipse	52.0	–	37.5	–	–	Zn, Sn, In, Re	White	HN	Yes	Degutan®	13.8	14.1	254	83,400	575	23	145	13.8	2120-2309	1160-1265	2498	1370	1300	700	SMG®-3/Ceramco® White	.650/.615 Fine	
Aspire™	52.0	–	25.6	17.2	–	Zn, In, Sn, Re	White	HN	Yes		14.4	14.7	210	52,000	360	11	150	14.2	2138-2282	1170-1250	2500	1370	1470	800	SMG®-3	.650 Fine	
Deva® 4	51.1	–	38.5	–	–	In, Ga, Ir	White	HN	Yes	Degutan®	13.5	13.8	235	79,000	545	18	153	14.5	2255-2400	1235-1315	2600	1425	1650	900	Ceramco® White/WPG	Regular White/Degulor 2	
Ceramco® White	50.3	–	30.2	14.4	–	Sn, In, Ru	White	HN		Degutan®	14.4	14.7	220	61,600	425	10	153	14.5	2300-2345	1260-1285	2550	1400	1560	850	Ceramco® White/YPG	Regular White	
Encore	48.0	–	40.0	–	–	Zn, Sn, In, Re	White	HN			14.1	14.4	250	85,900	592	20	141	13.4	2113-2330	1156-1275	2525	1385	1300	700	SMG®-3/Ceramco® White	.650/.615 Fine	
Special White	45.0	–	39.8	6.5	–	In, Sn, Ga, Ru	White	HN	Yes	Degutan®	14.1	14.4	260	89,900	620	10	152	14.4	2120-2300	1160-1260	2460	1350	1560	850	YPG/WPG	Regular White/Degulor 2	
Veritas	40.0	–	45.0	4.9	–	Sn, Zn, In, Re	White	HN			14.1	14.4	232	61,600	425	40	137	13.0	2210-2390	1210-1310	2525	1385	1300	700	WPG/Ceramco® White	.650/.615 Fine	
High Palladium Noble																											
Ceramco® Press Pd	2.0	–	79.0	–	–	Sn, Co, Ga, Ru	White	N			14.0	14.2	240	82,000	565	20	115	10.9	2071-2332	1133-1278	2500	1370	1500	815	Silver Free Pre	.615/ Regular White	
Ovation®	3.0	–	69.8	9.7	–	Sn, Zn, In, Ga, Ru, B	White	N	Yes		14.0	14.3	255	92,800	640	16	113	10.7	2111-2345	1155-1285	2530	1385	1400	760	SMG®-YW	.650/.615 Fine	
Ultima Gold	2.0	–	77.1	–	8.3	Zn, Ga, In, Ru	White	N			14.2	14.5	245	80,000	550	28	113	10.7	2120-2335	1160-1280	2453	1345	1300	700	Option® Pre/Ceramco® White	Degulor 2/.615 Fine	
Option®	2.0	–	78.85	–	10.0	Ga, Ir, B	White	N	Yes		14.3	14.6	425	130,500	900	23	112	10.6	2012-2174	1100-1190	2354	1290	1300	700	Option® Pre/YPG	Degulor 2/.615 Fine	
Ultima Lite®	–	–	78.4	–	8.0	Zn, Ga, In, Ru	White	N		Degutan®	14.2	14.5	300	82,000	565	15	113	10.7	2147-2291	1175-1255	2453	1345	1300	700	Option® Pre/Ceramco® White	Degulor 2/.615 Fine	
Palladium Silver Noble																											
Pors-on™ Lite	–	–	61.4	26.0	–	Sn, In, Zn, Ru	White	N			14.5	14.7	250	85,600	590	16	119	11.3	2140-2335	1170-1280	2600	1425	1650	900	YPG	Degulor 2	
Degubond® 60	–	–	60.4	28.0	–	In, Sn, Ga, Ru	White	N	Yes		14.7	15.0	260	95,700	660	12	118	11.2	2235-2335	1225-1280	2600	1425	1560	850	Ceramco® White	Regular White	
Lunar®	–	–	60.0	29.5	–	Sn, In, Ga, Zn, Ir	White	N			14.7	15.0	244	64,000	440	35	116	11.0	2156-2354	1180-1290	2500	1370	1500	815	SMG®-YW	.650/.615 Fine	
Pors-on™ Plus	15.5	–	47.5	27.5	–	Sn, In, Zn, Ru	White	N		Degutan®	14.6	14.9	250	87,800	605	15	126	12.0	2140-2290	1170-1255	2550	1400	1650	900	YPG/Degudent® G-1	Regular White/Degulor 2	
Degustar® GA-2	2.0	–	51.9	36.0	–	Sn, In, Zn, Ru	White	N	Yes	Degutan®	14.8	15.1	250	81,200	560	10	118	11.3	2100-2245	1150-1230	2550	1400	1560	850	YPG	Regular White	
Applause®	–	–	54.85	35.0	–	Sn, Zn, Ir	White	N			15.1	15.4	240	85,200	590	11	114	10.8	2156-2300	1180-1260	2453	1345	1300	700	SMG®-YW/Ceramco® White	.650/.615 Fine	
Acclaim® Lite	–	–	49.9	39.9	–	In, Ga, Ru, Re	White	N		Degutan®	15.1	15.4	300	92,100	635	10	113	10.7	2102-2309	1150-1265	2440	1340	1300	700	WPG	.650/.615 Fine	
Base Metal																											
	Ni	Cr	W	Mo	Fe																						
Duceranium U	59.0	21.5	5.0	4.5	3.5	Nb, Cu, Si, Co, Mn, C	White	PB			14.1	14.5	200	48,600	335	17	89	8.5	2417-2425	1320-1330	2700	1480	1650	900	Ceramco® White	None	

Crown and Bridge Alloys

Alloy	Au	Pt	Pd	Ag	Cu	Other	Type	Color	IdentAlloy Class.*	Implant Use	Laser Weldable™	Vickers Hardness HV	Yield Strength (0.2% offset)		Elongation %	Density		Melting Range		Casting Temperature		Burnout Temperature		Solder	
													psi	MPa		dwt/in ³	g/cm ³	°F	°C	°F	°C	°F	°C		
Premium High Noble																									
Ney-Oro® PF-CB	80.0	1.0	–	9.0	9.0	Zn, Ir	III	Yellow	HN			126	39,900	275	45	171	16.2	1625-1715	885-935	1875	1025	1200	650	.650/.728 Fine	
Ney-Oro® A-1	77.5	–	2.0	12.5	7.3	Zn	II	Yellow	HN			125	33,400	230	48	169	16.0	1702-1774	928-968	1940	1060	1200	650	Balanced Line/.650 Fine	
Ney-Oro® B-2	74.0	–	4.0	11.5	9.5	Zn	III	Yellow	HN			185	46,600	321	39	159	15.1	1679-1771	916-966	1940	1060	1200	650	Balanced Line/.650 Fine	
Degunorm®	73.8	9.0	–	9.2	4.4	Zn, In, Ir	V	Yellow	HN	Yes	Yes	230	72,500	500	6										