

**AURIDENT CASTING GOLDS**

**COMPOSITION, PHYSICAL AND MECHANICAL PROPERTIES**

**SOLDERS**

| Alloy | ADA Type | Color  | Class.* | Weight % |      |      |      | Hardness, Brinell / Vickers    | Yield Strength, psi | Ultimate Tensile Strength, psi | Elongation, % | Fusion Temperature, °F / °C | Casting Temperature, °F / °C | Specific Gravity, gm / cm <sup>3</sup> | Recommended Solders |
|-------|----------|--------|---------|----------|------|------|------|--------------------------------|---------------------|--------------------------------|---------------|-----------------------------|------------------------------|--|---------------------|
|       |          |        |         | Au       | Pt   | Pd   | Ag   |                                |                     |                                |               |                             |                              |  |                     |
| AM    | II       | Yellow |         | 77.5     | 1.75 | 0    | 12.2 | 95 Q / 100 Q                   | 22,000 Q            | 40,000 Q                       | 25            | 1750 / 950                  | 1875-1925 / 1025-1050        | 15.8                                   | 650                 |
| RM    | II       | Yellow |         | 65.0     | 0.1  | 1.9  | 24.5 | 95 Q / 100 Q                   | 23,000 Q            | 39,000 Q                       | 24            | 1750 / 950                  | 1875-1925 / 1025-1050        | 14.4                                   | 650                 |
| RH    | III      | Yellow |         | 75.5     | 1.15 | 2.25 | 10.2 | 120 Q / 125 Q                  | 27,000 Q            | 45,000 Q                       | 21            | 1725 / 940                  | 1875-1925 / 1025-1050        | 15.4                                   | 650                 |
| BH    | III      | Yellow |         | 64.0     | 0.1  | 3.0  | 23.4 | 120 Q / 125 Q                  | 25,000 Q            | 49,000 Q                       | 18            | 1725 / 940                  | 1825-1875 / 1000-1025        | 14.3                                   | 615                 |
| WH    | III      | Yellow |         | 60.0     | 0.1  | 3.0  | 18.5 | 145 Q / 150 Q                  | 34,000 Q            | 65,000 Q                       | 15            | 1625 / 885                  | 1825-1875 / 1000-1025        | 14.0                                   | 615                 |
| QH    | III      | Yellow |         | 56.0     | 0.1  | 4.0  | 28.2 | 140 Q / 145 Q                  | 53,000 Q            | 72,000 Q                       | 35            | 1575 / 860                  | 1775-1825 / 970-1000         | 13.6                                   | 585                 |
| EH    | III      | Yellow |         | 52.8     | 0.1  | 4.8  | 31.6 | 140 Q / 145 Q                  | 31,000 Q            | 53,000 Q                       | 12            | 1700 / 925                  | 1850-1900 / 1010-1040        | 13.5                                   | 585                 |
| GH    | III      | Yellow |         | 52.0     | 0.1  | 8.0  | 21.5 | 140 Q / 225 H                  | 62,000 H            | 95,000 H                       | 12            | 1525 / 830                  | 1750-1800 / 950-980          | 13.6                                   | 585                 |
| KH    | III      | Yellow |         | 50.0     | 0.1  | 4.0  | 35.0 | 135 Q / 140 Q                  | 43,000 Q            | 70,000 Q                       | 25            | 1575 / 860                  | 1775-1825 / 970-1000         | 13.2                                   | 585                 |
| MH    | III      | Yellow |         | 46.0     | 0.1  | 6.0  | 40.0 | 125 Q / 130 Q                  | 33,000 Q            | 60,000 Q                       | 25            | 1575 / 860                  | 1775-1825 / 970-1000         | 12.8                                   | 585                 |
| HH    | III      | Yellow |         | 41.7     | 0    | 4.4  | 28.0 | 145 Q / 150 Q                  | 32,500 Q            | 54,000 Q                       | 12            | 1675 / 915                  | 1825-1875 / 1025-1050        | 12.5                                   | 585                 |
| IH    | III      | Yellow |         | 40.0     | 0.1  | 20.0 | 20.5 | 145 Q / 150 Q                  | 50,000 Q            | 90,000 Q                       | 10            | 1700 / 925                  | 1850-1900 / 1010-1040        | 11.9                                   | 585                 |
| LH    | III      | Yellow |         | 20.0     | 0    | 20.0 | 41.0 | 135 Q / 140 Q<br>180 H / 190 H | 33,000 Q            | 62,000 Q                       | 9             | 1575 / 860                  | 1750-1800 / 950-980          | 11.3                                   | 585                 |
| PX    | IV       | Yellow |         | 68.5     | 2.0  | 4.5  | 11.5 | 170 Q / 180 Q<br>225 H / 240 H | 56,000 H            | 105,000 H                      | 17 Q<br>5 H   | 1725 / 940                  | 1850-1900 / 1010-1040        | 15.0                                   | 585                 |
| WX    | III, IV  | Yellow |         | 57.5     | 0.1  | 2.5  | 28.1 | 145 Q / 150 Q<br>230 H / 245 H | 60,000 H            | 115,000 H                      | 19 Q<br>4 H   | 1725 / 940                  | 1800-1850 / 980-1010         | 13.8                                   | 585                 |
| EX    | III, IV  | Yellow |         | 57.0     | 0.1  | 2.5  | 28.6 | 145 Q / 150 Q<br>230 H / 245 H | 60,000 H            | 115,000 H                      | 19 Q<br>4 H   | 1700 / 925                  | 1800-1850 / 980-1010         | 13.8                                   | 585                 |
| JX    | IV       | White  |         | 2.0      | 0    | 27.0 | 55.0 | 140 Q / 145 Q<br>170 H / 180 H | 40,000 H            | 71,000 H                       | 23 Q<br>12 H  | 1725 / 940                  | 1850-1925 / 1010-1050        | 10.5                                   | 585, 1400           |
| YX    | IV       | Yellow |         | 2.0      | 0.1  | 40.0 | 25.0 | 205 Q / 215 Q<br>205 H / 215 H | 48,000 Q            | 55,000 Q                       | 5 Q<br>5 H    | 1975 / 1080                 | 2125-2175 / 1160-1190        | 9.6                                    | 585                 |

| Type                  | Melting Range, °F / °C |
|-----------------------|------------------------|
| 585                   | 1355-1440 / 735-785    |
| 615                   | 1385-1475 / 750-800    |
| 650                   | 1420-1490 / 770-810    |
| 1400                  | 1335-1400 / 725-760    |
| YC-97                 | 1825-1930 / 995-1055   |
| Yellow Ceramic        | 1975-2010 / 1080-1100  |
| White Ceramic         | 2095-2160 / 1145-1180  |
| Porcelain Silver Free | 1960-1985 / 1071-1085  |

All solders are furnished as 1/8" inch wide, one dwt. strips.

**PLATINUM FOIL**

Available in .001" and .0005" thicknesses

**PALLADIUM FOIL**

Available in .001" thickness

**SCRAP REFINING**

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**AURIDENT CERAMIC ALLOYS**

**COMPOSITION, PHYSICAL AND MECHANICAL PROPERTIES**

**\* CLASSIFICATIONS**

| Alloy       | Color  | Class.* | Weight % |     |      |      | Hardness, Brinell / Vickers | Yield Strength, psi | Ultimate Tensile Strength, psi | Elongation, % | Fusion Temperature, °F / °C | Casting Temperature, °F / °C | Specific Gravity, gm / cm <sup>3</sup> | Thermal Expansion Coefficient, x 10 <sup>-6</sup> / °C (20° - 600°C) | Recommended Solders |
|-------------|--------|---------|----------|-----|------|------|-----------------------------|---------------------|--------------------------------|---------------|-----------------------------|------------------------------|--|--|---------------------|
|             |        |         | Au       | Pt  | Pd   | Ag   |                             |                     |                                |               |                             |                              |  |  |                     |
| Auribond 97 | Yellow |         | 97.7     | 2.0 | 0    | 0    | 37 / 40                     | 5,000               | 21,000                         | 50            | 1900 / 1038                 | 2150-2200 / 1175-1200        | 19.2                                   | 15.5   | YC-97               |
| Auribond 90 | Yellow |         | 90.0     | 5.8 | 1.6  | 1.2  | 115 / 120                   | 27,000              | 40,000                         | 20            | 1930 / 1055                 | 2275-2400 / 1246-1315        | 18.9                                   | 14.9   | YCS                 |
| Elite       | Yellow |         | 88.5     | 8.3 | 0.7  | 1.0  | 170 / 180                   | 45,000              | 65,000                         | 12            | 2140 / 1170                 | 2400-2500 / 1315-1370        | 19.6                                   | 14.4   | YCS                 |
| Elite II    | Yellow |         | 88.0     | 9.5 | 0    | 0.75 | 160 / 170                   | 51,000              | 67,000                         | 12            | 2020 / 1105                 | 2350-2425 / 1290-1330        | 19.4                                   | 14.4   | YCS                 |
| Auribond-GP | Yellow |         | 86.5     | 5.4 | 4.55 | 2.65 | 195 / 205                   | 59,000              | 72,000                         | 6             | 2150 / 1175                 | 2450-2500 / 1340-1370        | 18.4                                   | 14.8   | YCS                 |
| Windsor     | Yellow |         | 75.0     | 0.1 | 12.0 | 10.1 | 185 / 195                   | 70,000              | 85,000                         | 12            | 2130 / 1165                 | 2375-2425 / 1300-1329        | 16.2                                   | 14.8   | YCS                 |
| Summit      | Yellow |         | 74.2     | 4.1 | 7.3  | 11.0 | 170 / 180                   | 55,000              | 80,000                         | 12            | 2060 / 1130                 | 2375-2425 / 1300-1330        | 16.3                                   | 15.1   | YCS                 |
| Auritex-66  | White  |         | 66.0     | 1.1 | 24.0 | 0    | 225 / 240                   | 75,000              | 95,000                         | 15            | 2070 / 1135                 | 2375-2425 / 1300-1330        | 15.3                                   | 14.3   | WCS, PSF            |
| Auritex-WP  | White  |         | 62.2     | 0.1 | 23.4 | 8.2  | 175 / 185                   | 53,000              | 81,000                         | 8             | 2320 / 1270                 | 2550-2600 / 1400-1425        | 15.0                                   | 14.4   | WCS, PSF            |
| Auritex-XP  | White  |         | 51.8     | 0.1 | 38.0 | 0    | 195 / 205                   | 72,000              | 106,000                        | 13            | 2320 / 1270                 | 2550-2600 / 1400-1425        | 14.6                                   | 14.0   | WCS, PSF            |
| Auritex-EP  | White  |         | 50.0     | 3.5 | 26.0 | 15.5 | 185 / 195                   | 49,000              | 70,000                         | 6             | 2340 / 1280                 | 2550-2600 / 1400-1425        | 14.5                                   | 14.4   | WCS, PSF            |
| Auritex-HP  | White  |         | 45.0     | 0.1 | 40.0 | 5.0  | 190 / 200                   | 78,000              | 110,000                        | 18            | 2175 / 1190                 | 2450-2500 / 1345-1370        | 14.3                                   | 14.2   | WCS, PSF            |
| Auritex-40  | White  |         | 40.0     | 0.1 | 40.0 | 10   | 220 / 230                   | 78,000              | 110,000                        | 16            | 2175 / 1190                 | 2450-2500 / 1345-1370        | 13.2                                   | 14.2   | WCS, PSF            |
| Vision      | White  |         | 2.0      | 0.1 | 80.0 | 0    | 250 / 265                   | 143,000             | 160,000                        | 10            | 2150 / 1175                 | 2450-2500 / 1340-1370        | 11.1                                   | 14.0   | WCS, YCS, PSF       |
| Marathon    | White  |         | 2.0      | 0   | 76.8 | 0    | 320 / 340                   | 103,000             | 160,000                        | 18            | 2060 / 1125                 | 2450-2500 / 1340-1370        | 10.7                                   | 13.9   | WCS, PSF            |
| Auritex-ZP  | White  |         | 0        | 0   | 60.0 | 29.0 | 175 / 185                   | 65,000              | 95,000                         | 20            | 2250 / 1230                 | 2450-2550 / 1340-1400        | 11.1                                   | 14.8   | WCS, PSF            |
| Triumph     | White  |         | 0        | 0   | 53.5 | 37.5 | 230 / 245                   | 86,000              | 112,000                        | 17            | 2175 / 1190                 | 2400-2500 / 1315-1370        | 11.0                                   | 14.8   | WCS, 1400 (post)    |
| Vanguard    | White  |         | 0        | 0   | 51.2 | 48.0 | 75 / 80                     | 37,000              | 47,000                         | 9             | 2350 / 1285                 | 2550-2600 / 1400-1425        | 11.5                                   | 15.0   | WCS                 |

**IDENTALLOY® Council Classifications**

60% or more noble metal content; 40% or more gold.

25% or more noble metal content.

Less than 25% noble metal content