

## SIFCO Process<sup>®</sup> Deposit Characteristics

| Solution                        | Code      | Metal (g/l) | Plating Rate (in./hr) | HV  | Rc | Deposit Structure | Ductility    | Taber Wear (mg/1000 cycles) | % Purity of Deposit |
|---------------------------------|-----------|-------------|-----------------------|-----|----|-------------------|--------------|-----------------------------|---------------------|
| AeroNikl 250 (Sulfamate Nickel) | 7280/5725 | 100         | 0.035                 | 190 |    | Dense             | Excellent    | 52                          | 99.9                |
| AeroNikl 400 (Sulfamate Nickel) | 7281/5726 | 99          | 0.035                 | 470 | 47 | Dense             | Fair         | 42                          | 99.5                |
| AeroNikl 575 (Sulfamate Nickel) | 7282/5727 | 97          | 0.035                 | 575 | 52 | Dense             | Fair         | 33                          | 99                  |
| Cadmium                         | 2020/5050 | 147         | 0.086                 | 18  |    | Dense             | Good         | n/a                         | >99                 |
| Cadmium No Bake                 | 2023      | 100         | 0.057                 | 27  |    | Microporous       | Fair         | n/a                         | >99                 |
| Cadmium LHE                     | 5070      | 100         | 0.086                 | 27  |    | Microporous       | Fair         | n/a                         |                     |
| Chromium (Dense Trivalent)      | 2030      | 30          | 0.005                 | 584 | 54 | Microcracked      | Not Coherent | 16                          | >99                 |
| Cobalt (Heavy Build)            | 2043      | 80          | 0.035                 | 400 | 40 | Dense             | Fair         | 158                         | >99                 |
| Cobalt                          | 5200      | 80          | 0.032                 | 400 | 40 | Dense             | Fair         | tbd                         |                     |
| Copper (Acid, Heavy Build)      | 2050/5250 | 60          | 0.023                 | 120 |    | Dense             | Excellent    | 205                         | 99.8                |
| Copper (High-Speed, Acid)       | 2055      | 145         | 0.096                 | 223 |    | Dense             | Fair         | tbd                         | >99                 |
| Copper (High-Speed, Alkaline)   | 2056      | 80          | 0.034                 | 188 |    | Dense             | Fair         | tbd                         | >99                 |
| Copper (High Speed Acid)        | 5260      | 100         | 0.062                 | 106 |    | Dense             | Fair         | tbd                         |                     |
| Copper (Heavy Build, Alkaline)  | 5280      | 80          | 0.046                 | 150 |    | Dense             | Fair         | tbd                         |                     |
| Copper XHB                      | 5305      | 50          | 0.052                 | 188 |    | Dense             | Fair         | tbd                         |                     |
| Iron                            | 2062/5502 | 50          | 0.033                 | 479 | 47 | Stress Cracks     | Very Poor    | tbd                         | >99                 |
| Nickel (Acid)                   | 2080/5600 | 110         | 0.024                 |     |    | Dense             | Very Poor    | 85                          | >99                 |
| Nickel (High Speed)             | 2085      | 50          | 0.047                 | 585 | 54 | Microporous       | Very Poor    | 65                          | >99                 |
| Nickel (Ductile)                | 2086      | 40          | 0.02                  | 280 | 27 | Dense             | Fair         | 89                          | 99                  |
| Nickel (Ductile)                | 2088      | 55          | 0.029                 | 280 | 27 | Dense             | Fair         | tbd                         | >99                 |
| Nickel (Acid, High Build)       | 5640      | 56          | 0.024                 | 320 | 32 | Dense             | Very Poor    | tbd                         |                     |
| Nickel (High Speed)             | 5644      | 50          | 0.047                 | 585 | 54 | Microporous       | Very Poor    | tbd                         |                     |
| Nickel XHB                      | 5646      | 50          | 0.047                 | 585 | 54 | Microcracked      | Very Poor    | tbd                         |                     |
| Tin (Alkaline)                  | 2090      | 80          | 0.007                 | 7   |    | Dense             | Excellent    | n/a                         | 99.5                |
| Tin (Alkaline)                  | 2092      | 80          | 0.007                 | 8   |    | Dense             | Excellent    | n/a                         | 99.6                |

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|----------------------------------|-----------|-------------|-----------------------|-----|----|-------------------|--------------|-----------------------------|---------------------|
| Tin (High Speed)                 | 2093      | 80          | 0.042                 | 7   |    | Dense             | Excellent    | n/a                         | 99.9                |
| Tin (Acid)                       | 5900      | 130         | 0.2                   | 7   |    | Dense             | Excellent    | n/a                         |                     |
| Tin (Alkaline B)                 | 5951      | 80          | 0.06                  | 7   |    | Dense             | Excellent    | n/a                         |                     |
| Zinc (Alkaline)                  | 2100/5980 | 100         | 0.027                 | 41  |    | Microporous       | Fair         | n/a                         | >99                 |
| Zinc (Heavy Build)               | 2103      | 80          | 0.064                 | 47  |    | Dense             | Excellent    | n/a                         | >99                 |
| Babbitt - Navy Grade 2           | 4011      | 80          | 0.017                 | 20  |    | Dense             | Fair         | n/a                         |                     |
| Babbitt                          | 5925      | 80          | 0.02                  | 20  |    | Dense             | Fair         | n/a                         |                     |
| Cobalt-Tungsten                  | 5230      | 80          | 0.032                 | 480 | 47 | Microcracked      | Poor         | tbd                         |                     |
| Nickel-Phosphorous               | 5709      | 60          | 0.008                 | 510 | 48 | Dense             | Very Poor    | tbd                         |                     |
| Nickel Tungsten "D"              | 5710      | 46          | 0.025                 | 595 | 55 | Dense             | Very Poor    | tbd                         |                     |
| Nickel-Cobalt (Semi-Bright)      | 5720      | 38          | 0.027                 | 483 | 47 | Dense             | Very Poor    | tbd                         |                     |
| Zinc-Nickel LHE                  | 4018/5970 | 84          | 0.043                 | 132 |    | Microporous       | Fair         | n/a                         |                     |
| Zinc-Nickel                      | 4021      | 84          | 0.043                 | 132 |    | Microporous       | Fair         | n/a                         |                     |
| Gold Alkaline                    | 3020      | 100         | 0.025                 | 127 |    | Dense             | Fair         | n/a                         | 99.8                |
| Gold Neutral                     | 3021      | 98          | 0.025                 | 120 |    | Dense             | Fair         | n/a                         | >99                 |
| Gold Acid                        | 3022      | 90          | 0.025                 | 123 |    | Dense             | Fair         | n/a                         | 97                  |
| Gold Alkaline                    | 3023      | 25          | 0.004                 | 120 |    | Dense             | Fair         | n/a                         | 99.8                |
| Gold Alkaline                    | 3024      | 50          | 0.017                 | 124 |    | Dense             | Fair         | n/a                         | 99.8                |
| Gold                             | 5350      | 100         | 0.031                 | 118 |    | Dense             | Fair         | n/a                         |                     |
| Gold N.C. (Non-Cyanide)          | 5355      | 31          | 0.004                 | 80  |    | Dense             | Fair         | n/a                         |                     |
| Gold                             | 5360      | 25          | 0.004                 | 118 |    | Dense             | Fair         | n/a                         |                     |
| Gold Hard Alloy                  | 5370      | 100         | 0.031                 | 160 |    | Dense             | Fair         | n/a                         |                     |
| Gold Production                  | 5391      | 50          | 0.015                 | 118 |    | Dense             | Fair         | n/a                         |                     |
| Indium                           | 3030      | 60          | 0.022                 | 2   |    | Dense             | Excellent    | n/a                         | >99                 |
| Palladium                        | 3040/5730 | 30          | 0.015                 | 318 | 32 | Microcracked      | Not Coherent | n/a                         | >99                 |
| Platinum                         | 3052/5750 | 30          | 0.004                 | 471 | 47 | Dense             | Fair         | n/a                         | >99                 |
| Rhodium                          | 5800      | 20          | 0.004                 | 613 | 56 | Stress Cracks     | Very Poor    | n/a                         |                     |
| Rhodium (Low Stress)             | 5810      | 50          | 0.005                 | 613 | 56 | Stress Cracks     | Very Poor    | n/a                         |                     |
| Silver (Hard, Heavy Build)       | 3083      | 100         | 0.04                  | 122 |    | Dense             | Poor         | n/a                         | 99.7                |
| Silver (Non-Cyanide)             | 3084/5870 | 100         | 0.025                 | 115 |    | Dense             | Poor         | n/a                         | 99.6                |
| Silver (Heavy Build)             | 5860      | 61          | 0.125                 | 87  |    | Dense             | Poor         | n/a                         |                     |
| Silver (Production, Non-Cyanide) | 5871      | 50          | 0.025                 | 115 |    | Dense             | Poor         | n/a                         |                     |