

## Ceramic Alloys



### COMPOSITION

|                 | Au   | Pt   | Pd   | Ag   | Ir  | Rh  | Cu  | Zn  | Sn  | In  | Re  | Ta  | Ga  | Type | Colour | C°          | 0.2MPa | RmMPa | %    | Vickers | Termisk | g/cm³ |
|-----------------|------|------|------|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|--------|-------------|--------|-------|------|---------|---------|-------|
| Alfa Ceramic 1  | 73,0 | 2,0  | 18,0 | 1,8  | 0,2 | -   | -   | 1,0 | 4,0 | -   | -   | -   | -   | 4    | ●      | 1170 - 1210 | 470    | 540   | 10,0 | 210     | 15,0    | 16,1  |
| Alfa Ceramic 2  | 2,0  | -    | 79,0 | -    | -   | -   | 6,9 | 1,0 | 1,1 | 4,5 | -   | -   | 5,5 | 4    | ●      | 1170 - 1220 | 562    | 750   | 8,0  | 265     | 14,6    | 10,8  |
| Alfa Ceramic 3  | 50,0 | 0,4  | 25,0 | 19,0 | 0,1 | -   | -   | 1,0 | 1,0 | 3,5 | -   | -   | -   | 4    | ●      | 1145 - 1255 | 539    | 670   | 15,5 | 235     | 14,8    | 14,2  |
| Alfa Ceramic 4  | -    | -    | 57,8 | 30,0 | -   | 0,2 | -   | 2,0 | 6,0 | 4,0 | -   | -   | -   | 4    | ●      | 1175 - 1275 | 674    | 725   | 5,0  | 292     | 15,2    | 11,4  |
| Alfa Ceramic 8  | 75,0 | -    | 18,7 | 2,1  | 0,2 | -   | -   | 1,0 | 3,0 | -   | -   | -   | -   | 4    | ●      | 1130 - 1230 | 450    | 615   | 17,0 | 205     | 14,4    | 16,2  |
| Alfa Ceramic 10 | 88,0 | 4,0  | 6,0  | 1,0  | -   | -   | -   | 0,5 | 0,5 | -   | -   | -   | -   | 4    | ●      | 1150 - 1200 | 290    | 420   | 15,0 | 176     | 14,4    | 17,9  |
| Alfa Ceramic 11 | 75,0 | 3,0  | 11,0 | 8,9  | 0,1 | -   | -   | 1,0 | 1,0 | -   | -   | -   | -   | 4    | ●      | 1180 - 1240 | 335    | 500   | 14,0 | 200     | 14,7    | 16,3  |
| Alfa Ceramic 12 | 70,5 | 4,5  | 19,0 | -    | -   | -   | -   | 2,4 | 3,6 | -   | -   | -   | -   | 4    | ●      | 1200 - 1260 | 540    | 690   | 5,0  | 240     | 14,0    | 16,1  |
| Alfa Ceramic 14 | 75,0 | -    | 19,0 | 1,3  | 0,1 | -   | 0,4 | 0,3 | 2,0 | 1,9 | -   | -   | -   | 4    | ●      | 1100 - 1240 | 420    | 568   | 10,0 | 230     | 14,1    | 16,0  |
| Alfa Ceramic 15 | 75,1 | -    | 19,5 | 1,4  | -   | -   | -   | -   | 2,0 | 2,0 | -   | -   | -   | 4    | ●      | 1130 - 1230 | 441    | 590   | 7,0  | 250     | 14,5    | 16,7  |
| Alfa Ceramic 16 | 77,5 | 9,9  | 8,9  | 1,0  | 0,1 | -   | 0,3 | -   | 0,5 | 1,4 | 0,4 | -   | -   | 4    | ●      | 1160 - 1250 | 386    | 528   | 5,8  | 220     | 14,0    | 18,0  |
| Alfa Ceramic 17 | 86,0 | 11,8 | -    | 0,1  | 0,2 | -   | 1,7 | -   | -   | 0,2 | -   | -   | -   | 4    | ●      | 1050 - 1130 | 385    | 474   | 4,5  | 220     | 14,5    | 19,1  |
| Alfa Ceramic 18 | 85,8 | 11,0 | -    | -    | 0,7 | -   | 0,7 | -   | 1,5 | -   | 0,3 | -   | -   | 4    | ●      | 1050 - 1150 | 390    | 410   | 4,3  | 210     | 14,4    | 18,9  |
| Alfa Ceramic 19 | 86,5 | 10,5 | -    | -    | 1,0 | -   | 1,3 | -   | 0,5 | -   | 0,2 | -   | -   | 4    | ●      | 1040 - 1150 | 495    | 429   | 5,0  | 225     | 14,3    | 18,6  |
| Alfa Ceramic 20 | 84,0 | 7,9  | 5,0  | 0,9  | 0,1 | -   | 0,3 | 0,1 | 0,5 | 1,0 | 0,2 | -   | -   | 4    | ●      | 1100 - 1250 | 490    | 600   | 5,5  | 190     | 14,3    | 18,3  |
| Alfa Ceramic 21 | 84,4 | 8,0  | 5,0  | -    | -   | -   | -   | -   | -   | 2,5 | -   | 0,1 | -   | 4    | ●      | 1100 - 1210 | 413    | 517   | 8,0  | 220     | 14,4    | 18,1  |

### TECHNICAL DATA

|                 | C°    | Melting Range | 0.2MPa  | Proof Stress | RmMPa   | Tensile Strength |
|-----------------|-------|---------------|---------|--------------|---------|------------------|
|                 | %     | Elongation    | Vickers | Hardness     | Termisk | CTE              |
|                 | g/cm³ | Density       |         |              |         |                  |
| Alfa Ceramic 1  | -     | -             | -       | -            | -       | -                |
| Alfa Ceramic 2  | -     | -             | -       | -            | -       | -                |
| Alfa Ceramic 3  | -     | -             | -       | -            | -       | -                |
| Alfa Ceramic 4  | -     | -             | -       | -            | -       | -                |
| Alfa Ceramic 8  | -     | -             | -       | -            | -       | -                |
| Alfa Ceramic 10 | -     | -             | -       | -            | -       | -                |
| Alfa Ceramic 11 | -     | -             | -       | -            | -       | -                |
| Alfa Ceramic 12 | -     | -             | -       | -            | -       | -                |
| Alfa Ceramic 14 | -     | -             | -       | -            | -       | -                |
| Alfa Ceramic 15 | -     | -             | -       | -            | -       | -                |
| Alfa Ceramic 16 | -     | -             | -       | -            | -       | -                |
| Alfa Ceramic 17 | -     | -             | -       | -            | -       | -                |
| Alfa Ceramic 18 | -     | -             | -       | -            | -       | -                |
| Alfa Ceramic 19 | -     | -             | -       | -            | -       | -                |
| Alfa Ceramic 20 | -     | -             | -       | -            | -       | -                |
| Alfa Ceramic 21 | -     | -             | -       | -            | -       | -                |