

# BRAZETEC High Purity Vacuum Brazing Materials



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BRAZETEC high purity vacuum brazing materials are applied in a variety of applications like vacuum interrupters, surge arresters, and X-ray tubes. For these applications the alloys have to fulfill the high requirements of low gas content and low content of elements which have a high vapor pressure.

Besides the wetting behavior of the brazing alloy on the base materials used, the joining quality depends also on a design suitable for brazing as well as on an appropriate brazing process. Typically, the recommended brazing temperature is above the liquidus temperature of the brazing material. Please do not hesitate to contact us for further information.

### Alloy properties

|                | Melting Range<br>acc. to DSC | Density              | Coefficient<br>of thermal<br>Expansion | Thermal<br>Conductivity* | Electrical<br>Conductivity* | Young's<br>Modulus* |
|----------------|------------------------------|----------------------|----------------------------------------|--------------------------|-----------------------------|---------------------|
|                | [°C]                         | [g/cm <sup>3</sup> ] | [x 10 <sup>-6</sup> 1/K]               | [W/(m*K)]                | [m/(Ω*mm <sup>2</sup> )]    | [GPa]               |
| AgCu28         | 780                          | 10.0                 | 17.8                                   | 352                      | 46.1                        | 100                 |
| AgCu28Ni0.7    | 780 - 800                    | 9.8                  | 19.2                                   |                          |                             |                     |
| AgCu28Ge2Co0.3 | 770 - 790                    | 9.9                  | 19.6                                   |                          |                             |                     |
| AgCu26.6Pd5    | 800 - 820                    | 9.8                  | 22.0                                   | 215                      | 26.0                        | 120                 |
| AgCu31.5Pd10   | 820 - 840                    | 9.8                  | 17.5                                   | 150                      | 19.0                        | 140                 |
| AgCu20Pd15     | 845 - 870                    | 10.2                 | 22.0                                   | 100                      | 15.0                        | 140                 |
| AgCu21Pd25     | 900 - 950                    | 9.8                  | 17.5                                   | 80                       | 8.0                         | 140                 |
| CuAg40Ga10     | 725 - 830                    | 9.3                  | 19.6                                   |                          |                             |                     |
| AgCu27In13     | 610 - 710                    | 9.8                  | 19.8                                   |                          | 10.0                        | 85                  |
| AgCu42Ni2      | 780 - 810                    | 9.5                  | 18.7                                   |                          |                             |                     |
| AlSi11.7       | 593                          | 2.7                  | 23.6                                   |                          |                             |                     |

\*Literature values

\*Further alloy compositions on request