

BRAZETEC BRAZING ALLOYS AND
SANDWICH ALLOYS FOR THE
BRAZING OF TUNGSTEN CARBIDES

/ BrazeTec Brazing Alloys for the Brazing of Tungsten Carbides

The mentioned brazing alloys are suitable for the brazing of tungsten carbides and hard to wet materials such as wolfram, molyb-

denum tantalum, and chrome. The strength achieved is dependent upon the base material.

Name	Composition by Weight-%						Melting Range acc. to DSC	Melting Range acc. to ISO 17672	Brazing Temp. min.	Shear Strength ¹⁾ min.	Density	ISO 17672	Notes on Application	Available Forms
	Ag	Cu	Zn	Mn	Ni	Misc.	in °C	in °C	in °C	in MPa on K10	in g/cm ³			
BrazeTec 6488	64	26	-	2	2	6 In	730 – 780	-	770	150	9.6	-	TiN-coatable	• • • •
BrazeTec 5081	50	20	28	-	2	-	670 – 730	660 – 715	700	230	9.2	Ag 450	-	• • • •
BrazeTec 4900	49	16	23	7.5	4.5	-	680 – 705	680 – 705	690	250	8.9	Ag 449	-	• • • •
BrazeTec 4900 A	49	27.5	20.5	2.5	0.5	-	670 – 720	-	710	240	8.9	-	-	• • • •
BrazeTec 2700	27	38	20	9.5	5.5	-	690 – 850	680 – 850	800	250	8.7	Ag 427	-	• • • •
BrazeTec 21/80	-	86	-	12	2	-	970 – 1,005	-	990	200	8.8	-	Zn-free alloys suitable for furnace brazing	• • • •
BrazeTec 21/68	-	87	-	10	-	3 Co	980 – 1,020	-	1,020	200	8.8	-	-	• • • •

¹⁾ Measured according to BrazeTec standard, compound 1.2210 & K10

/ BrazeTec Sandwich Alloys for the Brazing of Tungsten Carbides

BrazeTec has developed a sandwich alloy brazing system that can compensate for internal stresses caused by the different thermal expansion coefficients during cooling. We recommend the sand-

wich brazing alloy BrazeTec 49/Cu^{plus} for applications that require an especially high degree of shear strength. The strength to be achieved is dependent upon the strength of the base material.

Name	Composition ¹⁾ by Weight-%						Melting Range acc. to DSC	Melting Range acc. to ISO 17672	Brazing Temp. min.	Shear Strength ²⁾ min.	Density	Notes on Application	Available Forms
	Ag	Cu	Zn	Mn	Ni	In	in °C	in °C	in °C	in MPa on K10			
BrazeTec 49/Cu	49	27.5	20.5	2.5	0.5	-	670 – 720	-	710	150	9.0	intermediate copper layer	• •
BrazeTec 49/Cu ^{plus}	49	27.5	20.5	2.5	0.5	-	670 – 720	-	710	180	9.0	modified intermediate layer	• •
BrazeTec 49/NiN	49	27.5	20.5	2.5	0.5	-	670 – 720	-	710	150	9.0	nickel net sandwich brazing alloy	• •
BrazeTec 49/CuNiFe	49	27.5	20.5	2.5	0.5	-	670 – 690	-	690	150	9.0	intermediate CuNiFe layer	• •
BrazeTec 64/Cu	64	26	-	2	2	6	730 – 780	-	770	150	9.6	suitable for TiNcoating, intermediate copper layer	• •
BrazeTec Cu/NiN	-	100	-	-	-	-	1,085	1,085	1,100	200	8.9	nickel net sandwich brazing alloy	• •

¹⁾ The data on the composition of sandwich brazing alloys refer only to the brazing layer. ²⁾ Measured according to BrazeTec standard, compound 1.2210 & K10

 Wire
  Rods
  Strip
  Preforms
  Flux coated brazing rods

/ BrazeTec BlueBraze

Less silver: up to 21 percent less in weight!

By substantially reducing the silver content in our new BrazeTec BlueBraze brazing alloys, you achieve permanent cost reduction up to 20%¹. You become less dependent on silver price fluctuation in the market of precious metals and thus get more planning stability when calculating the cost of your materials.

Same processing properties:

Construction, processes and processing remain unchanged. During the development of BrazeTec BlueBraze, apart from reducing silver content, the top priority was retaining the important properties of materials of standard brazing alloys. The functionality of BrazeTec BlueBraze has been confirmed in extensive tests and experiments. For you as customer, this means that neither constructions nor processes must be changed ...

Name	Composition by Weight-%						Melting Range acc. to DSC approx.	Brazing temp. approx.	Shear strength ¹⁾	ISO 17672	AWS 5.8
	Ag	Cu	Zn	Mn	Ni	In	in °C	in °C	in MPA		
BrazeTec BlueBraze 2810	28	39	20	10	1	2	680-760	710	>250	-	-
BrazeTec BlueBraze 28/Cu	28	39	20	10	1	2	680-760	710	>150	-	-
BrazeTec BlueBraze 28/Cu ^{plus}	28	39	20	10	1	2	680-760	710	>180	-	-

¹⁾ depends on the product, the amount and the silver price ¹⁾ Measured according to BrazeTec standard, compound 1.2210 & K10

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