

TECHNICAL DATA SHEET 95

Specifications:

Alloy	Working Temperature (°C)	NF EN ISO 17672	AWS A-5.8	DIN 8513
Cu-P-Sn	700	CuP 385	B CuP-9	-

Characteristics:

PHOSBRAZ 675Sn Alloy with high Phosphorus and Tin content which is recommended for copper brazing. Tin (Sn) lower the melting point, increase fluidity and enhance good wetting properties. Also offers good corrosion resistance and is non-toxic. Due to its low melting alloy requires a rapid heating cycle to ensure that the elements do not separate through liquation. Excellent fluidity and low melting arrange. Manuel alloy, but it can also be used on work shop for automatic, Oven, flame and Induction brazing. Alloy is also recommended for narrow gap due to its good capillary action.

Applications:

PHOSBRAZ 675Sn joining copper to copper it is act as self-fluxing alloy and does not required additional flux. It can be used on cuprous alloys (bronze, brass) with Phosbraz flux, electrical industry, Plumbing trade. This alloy with flux coating it is recommend for brazing Copper with brass. This brazing alloy is not recommended to be used for the media having sulphur. Also it is not allowed to use for joining steels (Fe) or materials containing Iron (Fe), Nickel (Ni), Cobalt (Co) as it will form brittle phase in the joint. In Air conditioning and refrigeration application, **PHOSBRAZ 675Sn** can be used for the service temperature between +150°C (without loss in strength) upto -20°C. This alloy can be used for flame...Maximum short service joint operating temperature 200°C.

Typical Chemical Compositions (%):

Cu	P	Sn	Al	Bi	Cd	Pb	Zn	Zn + Cd	Max. impurities
Reminder	6.75	7.00	<0.01	<0.030	<0.01	<0.025	<0.050	<0.05	<0.15





Typical Physical Properties:

Colour	Solidus (°C)	Liquidus (°C)	Density g/cm³	Elongation %	Tensile strength (MPa)	Electrical Conductivity (%IACS)	Electrical Resistivity (Micro-ohm-cm)
Metallic	650	700	8.0	2%	350	-	-

Properties of Brazed Joint:

The properties of a brazed joint dependent upon numerous factors including base metal properties, joint design, metallurgical interactions between the base metal and the filler metal.

Standard Size and Types & Heating Source Recommendation:

Size (mm)	Type				 OXY/ACETYLENE	 INDUCTION	 AÉRO-PROPANE	 FOUR/OVEN
	Bare	Coated	Coil	Preforms				
1.50 ,2.00,2.50,3.00	✓	-	✓	-	✓	✓	✓	✓

Preform sizes and other type other than above standard dimensions are solicited case to case basis

TECHNICAL DATA SHEET 80

Specifications:

Alloy	Working Temperature (°C)	NF EN ISO 17672	AWS A-5.8	DIN 8513
Cu-P	720	CuP 182	-	L-Cu P8

Characteristics:

PHOSBRAZ E80 Alloy with excellent fluidity, specially made for strong brazing of fitting, pipes and Fit up, with narrow joint gaps. Its higher Phosphorus content makes it more fluid. Alloy with self-fluxing properties. The corrosion resistance this alloy is comparable to that of copper excepts when the joint is exposed to sulphuric containing gas or at elevated temperatures as in a cooking range. Under these conditions, it is expected that, this alloy will undergo progressive deterioration as other copper phosphorus alloy with Silver or without silver.

Applications:

PHOSBRAZ E80 joining copper to copper it act as self-fluxing alloy and does not required additional flux. It can be used on cuprous alloys (bronze, brass) with Phosbraz flux, electrical industry, Plumbing trade. This brazing alloy is not recommended to be used for the media having sulphur. Also it is not allowed to use for joining steels (Fe) or materials containing Iron(Fe), Nickel (Ni), Cobalt (Co) as it will form brittle phase in the joint. In Air conditioning and refrigeration application, **PHOSBRAZ E80** can be used for the service temperature between +150°C (without loss in strength) upto -20°C. This alloy can be used for flame...Maximum short service joint operating temperature 200°C.

Typical Chemical Compositions (%):

Cu	P	Al	Bi	Cd	Pb	Zn	Zn + Cd	Max. impurities
Reminder	7.80	<0.01	<0.030	<0.01	<0.025	0.050	<0.05	<0.25



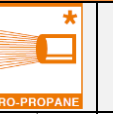

Typical Physical Properties:

Colour	Solidus (°C)	Liquidus (°C)	Density g/cm ³	Elongation %	Tensile strength (MPa)	Electrical Conductivity (%IACS)	Electrical Resistivity (Micro-ohm-cm)
Copper	710	750	8.0	3%	450	6.1	28.30

Properties of Brazed Joint:

The properties of a brazed joint dependent upon numerous factors including base metal properties, joint design, metallurgical interactions between the base metal and the filler metal.

Standard Size and Types & Heating Source Recommendation:

Size (mm)	Type				 OXYACETYLENE	 INDUCTION	 AÉRO-PROPANE	 FOUR/OVEN
	Bare	Coated	Coil	Preforms				
1.50,2.00,2.50,3.00	✓	-	-	-	✓	✓	✓	X

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TECHNICAL DATA SHEET 85

Specifications:

Alloy	Working Temperature (°C)	DIN EN ISO 17672	AWS A-5.8	DIN 8513
Cu-P	720	CuP 182	-	L-Cu P8

Characteristics:

PHOSBRAZ E80+ Alloy with a excellent fluidity, specially made for strong brazing of fitting, pipes and Fit up, with narrow joint gaps. Its highest Phosphorus content makes it relatively high fluid. Alloy with self-fluxing properties. The corrosion resistance this alloy is comparable to that of copper excepts when the joint is exposed to sulphuric containing gas or at elevated temperatures as in a cooking range. Under these conditions, it is expected that, this alloy will undergo progressive deterioration as other copper phosphorus alloy with Silver or without silver.

Applications:

PHOSBRAZ E80+ joining copper to copper it is act as self-fluxing alloy and does not required additional flux. It can be used on cuprous alloys (bronze, brass) with Phosbraz flux, electrical industry, Plumbing trade. This brazing alloy is not recommended to be used for the media having sulphur. Also it is not allowed to use for joining steels (Fe) or materials containing Iron(Fe), Nickel (Ni), Cobalt (Co) as it will form brittle phase in the joint. In Air conditioning and refrigeration application, **PHOSBRAZ E80+** can be used for the service temperature between +150°C (without loss in strength) upto -20°C. This alloy can be used for flame...Maximum short service joint operating temperature 200°C.

Typical Chemical Compositions (%):

Cu	P	Al	Bi	Cd	Pb	Zn	Zn + Cd	Max. impurities
Reminder	8.00	<0.01	<0.030	<0.01	<0.025	<0.050	<0.05	<0.25





Typical Physical Properties:

Colour	Solidus (°C)	Liquidus (°C)	Density g/cm³	Elongation %	Tensile strength (MPa)	Electrical Conductivity (%IACS)	Electrical Resistivity (Micro-ohm-cm)
Copper	710	738	8.0	2%	450	6.0	28.75

Properties of Brazed Joint:

The properties of a brazed joint dependent upon numerous factors including base metal properties, joint design, metallurgical interactions between the base metal and the filler metal.

Standard Size and Types & Heating Source Recommendation:

Size (mm)	Type				 OXY/ACETYLENE	 INDUCTION	 AÉRO-PROPANE	 FOUR/OVEN
	Bare	Coated	Coil	Preforms				
1.50, 2.00, 2.50, 3.00	√	-	-	-	√	√	√	X

Preform sizes and other type other than above standard dimensions are solicited case to case basis

TECHNICAL DATA SHEET 55

Specifications:

Alloy	Working Temperature (°C)	NF EN ISO 17672	AWS A-5.8	DIN 8513
Cu-P	760	CuP 179	-	L-Cu P6

Characteristics:

PHOSBRAZ M60 is an Alloy with a controlled fluidity, specially made for strong brazing of fitting, pipes and Fit up, with large joint gaps. Its low phosphorus content makes it relatively sluggish. Alloy with self-fluxing properties. The corrosion resistance this alloy is comparable to that of copper excepts when the joint is exposed to sulphur containing gas or at elevated temperatures as in a cooking range. Under these conditions, it is expected that, this alloy will undergo progressive deterioration as other copper phosphorus alloy with Silver or without silver.

Applications:

PHOSBRAZ M60 joining copper to copper it is act as self-fluxing alloy and does not required additional flux. It can be used on cuprous alloys (bronze, brass) with PHOSBRAZ flux. Electrical industry, Plumbing trade. This brazing alloy is not recommended to be used for the media having sulphur. Also it is not allowed to use for joining steels (Fe) or materials containing Iron (Fe), Nickel (Ni), Cobalt (Co) as it will form brittle phase in the joint. In Air conditioning and refrigeration application, **PHOSBRAZ M60** can be used for the service temperature between +150°C (without loss in strength) upto -20°C. This alloy can be used for flame...Maximum short service joint operating temperature 200°C.

Typical Chemical Compositions (%):

Cu	P	Al	Bi	Cd	Pb	Zn	Zn + Cd	Max. impurities
Reminder	6.00	<0.01	<0.030	<0.01	<0.025	<0.050	<0.050	<0.25





Typical Physical Properties:

Colour	Solidus (°C)	Liquidus (°C)	Density g/cm ³	Elongation %	Tensile strength (MPa)	Electrical Conductivity (%IACS)	Electrical Resistivity (Micro-ohm-cm)
Copper	710	860	8.10	6%	500	7.20	24.1

Properties of Brazed Joint:

The properties of a brazed joint dependent upon numerous factors including base metal properties, joint design, metallurgical interactions between the base metal and the filler metal.

Standard Size and Types & Heating Source Recommendation:

Size (mm)	Type				 OXY/ACETYLENE	 INDUCTION	 AÉRO-PROPANE	 FOUR/OVEN
	Bare	Coated	Coil	Preforms				
1.50,2.00,2.50,3.00	√	-	-	-	√	√	X	X

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TECHNICAL DATA SHEET 65

Specifications:

Alloy	Working Temperature (°C)	NF EN ISO 17672	AWS A-5.8	DIN 8513
Cu-P	730	CuP 180	B Cu-P2	L-Cu P7

Characteristics:

PHOSBRAZ M70 Alloy with higher fluidity, specially made for strong brazing of fitting, pipes and Fit up, with average joint gaps. Its higher Phosphorus content makes it more fluid. Alloy with self-fluxing properties. The corrosion resistance this alloy is comparable to that of copper excepts when the joint is exposed to sulphuric containing gas or at elevated temperatures as in a cooking range. Under these conditions, it is expected that, this alloy will undergo progressive deterioration as other copper phosphorus alloy with Silver or without silver.

Applications:

PHOSBRAZ M70 joining copper to copper it is act as self-fluxing alloy and does not required additional flux. It can be used on cuprous alloys (bronze, brass) with Phosbraz flux, electrical industry, Plumbing trade. This brazing alloy is not recommended to be used for the media having sulphur. Also it is not allowed to use for joining steels (Fe) or materials containing Iron(Fe), Nickel (Ni), Cobalt (Co) as it will form brittle phase in the joint. In Air conditioning and refrigeration application, **PHOSBRAZ M70** can be used for the service temperature between +150°C (without loss in strength) upto -20°C. This alloy can be used for flame...Maximum short service joint operating temperature 200°C.

Typical Chemical Compositions (%):

Cu	P	Al	Bi	Cd	Pb	Zn	Zn + Cd	Max. impurities
Reminder	7.00	<0.01	<0.030	<0.01	<0.025	<0.050	<0.05	<0.25





Typical Physical Properties:

Colour	Solidus (°C)	Liquidus (°C)	Density g/cm³	Elongation %	Tensile strength (MPa)	Electrical Conductivity (%IACS)	Electrical Resistivity (Micro-ohm-cm)
Copper	710	805	8.0	4%	450	7.48	23.05

Properties of Brazed Joint:

The properties of a brazed joint dependent upon numerous factors including base metal properties, joint design, metallurgical interactions between the base metal and the filler metal.

Standard Size and Types & Heating Source Recommendation:

Size (mm)	Type				 OXY/ACETYLENE	 INDUCTION	 AÉRO-PROPANE	 FOUR/OVEN
	Bare	Coated	Coil	Preforms				
1.50 ,2.00,2.50,3.00	✓	-	-	-	✓	✓	X	X

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TECHNICAL DATA SHEET 75

Specifications:

Alloy	Working Temperature (°C)	NF EN ISO 17672	AWS A-5.8	DIN 8513
Cu-P	730	CuP 181	B Cu-P2	L-Cu P7

Characteristics:

PHOSBRAZ M73 Alloy with a higher fluidity, specially made for strong brazing of fitting, pipes and Fit up, with average joint gaps. It's Phosphorus alloy with self-fluxing properties. The corrosion resistance this alloy is comparable to that of copper excepts when the joint is exposed to sulphur containing gas or at elevated temperatures as in a cooking range. Under these conditions, it is expected that, this alloy will undergo progressive deterioration as other copper phosphorus alloy with Silver or without silver.

Applications:

PHOSBRAZ M73 joining copper to copper it is act as self-fluxing alloy and does not required additional flux. It can be used on cuprous alloys (bronze, brass) with Phosbraz flux, electrical industry and Plumbing trade. This brazing alloy is not recommended to be used for the media having sulphur. Also it is not allowed to use for joining steels (Fe) or materials containing Iron(Fe), Nickel (Ni), Cobalt (Co) as it will form brittle phase in the joint. In Air conditioning and refrigeration application, **PHOSBRAZ M73** can be used for the service temperature between +150°C (without loss in strength) upto -20°C. This alloy can be used for flame...Maximum short service joint operating temperature 200°C.

Typical Chemical Compositions (%):

Cu	P	Al	Bi	Cd	Pb	Zn	Zn + Cd	Max. impurities
Reminder	7.30	<0.01	<0.030	<0.01	<0.025	0.050	<0.05	<0.25





Typical Physical Properties:

Colour	Solidus (°C)	Liquidus (°C)	Density g/cm ³	Elongation %	Tensile strength (MPa)	Electrical Conductivity (%IACS)	Electrical Resistivity (Micro-ohm-cm)
Copper	710	785	8.0	4%	450	7.52	22.90

Properties of Brazed Joint:

The properties of a brazed joint dependent upon numerous factors including base metal properties, joint design, metallurgical interactions between the base metal and the filler metal.

Standard Size and Types & Heating Source Recommendation:

Size (mm)	Type				 OXY-ACETYLENE	 INDUCTION	 AÉRO-PROPANE	 FOUR/OVEN
	Bare	Coated	Coil	Preforms				
1.50, 2.00, 2.50, 3.00	√	-	-	-	√	√	√	X

Preform sizes and other type other than above standard dimensions are solicited case to case basis

TECHNICAL DATA SHEET 55

Specifications:

Alloy	Working Temperature (°C)	NF EN ISO 17672	AWS A-5.8	DIN 8513
Cu-P	730	CuP 180	-	L-Cu P6

Characteristics:

PHOSBRAZ P66 Alloy with a medium fluidity, specially made for strong brazing of fitting, pipes and Fit up, with large joint gaps. Its low phosphorus content makes it relatively sluggish. Alloy with self-fluxing properties. The corrosion resistance this alloy is comparable to that of copper excepts when the joint is exposed to sulphur containing gas or at elevated temperatures as in a cooking range. Under these conditions, it is expected that, this alloy will undergo progressive deterioration as other copper phosphorus alloy with Silver or without silver.

Applications:

PHOSBRAZ P66 joining copper to copper it is act as self-fluxing alloy and does not required additional flux. It can be used on cuprous alloys (bronze, brass) with Phosbraz flux, electrical industry, Plumbing trade. This brazing alloy is not recommended to be used for the media having sulphur. Also it is not allowed to use for joining steels (Fe) or materials containing Iron (Fe), Nickel (Ni), Cobalt (Co) as it will form brittle phase in the joint. In Air conditioning and refrigeration application, **PHOSBRAZ P66** can be used for the service temperature between +150°C (without loss in strength) upto -20°C. This alloy can be used for flame...Maximum short service joint operating temperature 200°C.

Typical Chemical Compositions (%):

Cu	P	Al	Bi	Cd	Pb	Zn	Zn + Cd	Max. impurities
Reminder	6.60	<0.01	<0.030	<0.01	<0.025	0.050	<0.05	<0.25





Typical Physical Properties:

Colour	Solidus (°C)	Liquidus (°C)	Density g/cm ³	Elongation %	Tensile strength (MPa)	Electrical Conductivity (%IACS)	Electrical Resistivity (Micro-ohm-cm)
Copper	710	825	8.10	4%	500	7.35	23.61

Properties of Brazed Joint:

The properties of a brazed joint dependent upon numerous factors including base metal properties, joint design, metallurgical interactions between the base metal and the filler metal.

Standard Size and Types & Heating Source Recommendation:

Size (mm)	Type				 OXY/ACETYLENE	 INDUCTION	 AERO-PROPANE	 FOUR/OVEN
	Bare	Coated	Wire	Preforms				
1.50, 2.00, 2.50, 3.00	✓	-	-	-	✓	✓	X	X

Preform sizes and other type other than above standard dimensions are solicited case to case basis

TECHNICAL DATA SHEET 60

Specifications:

Alloy	Working Temperature (°C)	NF EN ISO 17672	AWS A-5.8	DIN 8513
Cu-P	730	CuP 180	-	L-Cu P7

Characteristics:

PHOSBRAZ P68 Alloy with a controlled fluidity, specially made for strong brazing of fitting, pipes and Fit up, with large joint gaps. Its low phosphorus content makes it relatively sluggish. Alloy with self-fluxing properties. The corrosion resistance this alloy is comparable to that of copper excepts when the joint is exposed to sulphur containing gas or at elevated temperatures as in a cooking range. Under these conditions, it is expected that, this alloy will undergo progressive deterioration as other copper phosphorus alloy with Silver or without silver.

Applications:

PHOSBRAZ P68 joining copper to copper it is act as self-fluxing alloy and does not required additional flux. It can be used on cuprous alloys (bronze, brass) with Phosbraz flux, electrical industry and Plumbing trade. This brazing alloy is not recommended to be used for the media having sulphur. Also it is not allowed to use for joining steels (Fe) or materials containing Iron (Fe), Nickel (Ni), Cobalt (Co) as it will form brittle phase in the joint. In Air conditioning and refrigeration application, **PHOSBRAZ P68** can be used for the service temperature between +150°C (without loss in strength) upto -20°C. This alloy can be used for flame...Maximum short service joint operating temperature 200°C.

Typical Chemical Compositions (%):

Cu	P	Al	Bi	Cd	Pb	Zn	Zn + Cd	Max. impurities
Reminder	6.80	<0.01	<0.030	<0.01	<0.025	0.050	<0.05	<0.25



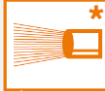

Typical Physical Properties:

Colour	Solidus (°C)	Liquidus (°C)	Density g/cm³	Elongation %	Tensile strength (MPa)	Electrical Conductivity (%IACS)	Electrical Resistivity (Micro-ohm-cm)
Copper	710	815	8.0	4%	450	7.40	23.29

Properties of Brazed Joint:

The properties of a brazed joint dependent upon numerous factors including base metal properties, joint design, metallurgical interactions between the base metal and the filler metal.

Standard Size and Types & Heating Source Recommendation:

Size (mm)	Type				 OXY/ACETYLENE	 INDUCTION	 AÉRO-PROPANE	 FOUR/OVEN
	Bare	Coated	Coil	Preforms				
1.50, 2.00, 2.50, 3.00	✓	-	-	-	✓	✓	X	X

Preform sizes and other type other than above standard dimensions are solicited case to case basis

TECHNICAL DATA SHEET 50

Specifications:

Alloy	Working Temperature (°C)	NF EN ISO 17672	AWS A-5.8	DIN 8513
Cu-P	760	CuP 179		L-Cu P6

Characteristics:

PHOSBRAZ V6 is alloy with controlled fluidity brazing alloy. P act as de-oxidation, hence do not required additional flux for brazing Copper to Copper. This alloy with a great flow has been specially created with a perfect metal degassing, which gives a maximum comfort in use. The corrosion resistance of this alloy is comparable to that of copper excepts, when the joint is exposed to sulphur containing gas or at elevated temperatures as in a cooking range. Under these conditions, it is expected that, this alloy will undergo progressive deterioration as other copper phosphorus alloy with Silver or without Silver.

Applications:

PHOSBRAZ V6 is recommended for capillary brazing of tubes and connections, water heaters, refrigeration systems. Mainly used by plumbers and heating engineers. It can also be used on cuprous alloys (bronze, brass) with Phosbraz flux. Brazing application with Electrical industry, Refrigeration & Air-condition industry, Plumbing trade. This brazing alloy is not recommended to be used for the media having sulphur. Also it is not allowed to use for joining steels (Fe) or materials containing Iron (Fe), Nickel (Ni), Cobalt (Co) as it will form brittle phase in the joint. In Air conditioning and refrigeration application, **PHOSBRAZ V6** can be used for the service temperature between +150°C (without loss in strength) to -20°C. This alloy can be used for flame. Maximum short service joint operating temperature 200°C.

Typical Chemical Compositions (%):

Cu	P	Al	Bi	Cd	Pb	Zn	Zn + Cd	Max. impurities
Reminder	6.30	<0.01	<0.030	<0.01	<0.025	<0.050	<0.05	<0.25





Typical Physical Properties:

Colour	Solidus (°C)	Liquidus (°C)	Density g/cm ³	Elongation %	Tensile strength (MPa)	Electrical Conductivity (%IACS)	Electrical Resistivity (Micro-ohm-cm)
Copper	710	845	8.10	5%	550	7.20	23.95

Properties of Brazed Joint:

The properties of a brazed joint dependent upon numerous factors including base metal properties, joint design, metallurgical interactions between the base metal and the filler metal.

Standard Size and Types & Heating Source Recommendation:

Size (mm)	Type				 OXYACETYLENE	 INDUCTION	 AÉRO-PROPANE	 FOUR/OVEN
	Bare	Coated	Coil	Preforms				
1.50, 2.00, 2.50, 3.00	✓	-	-	-	✓	✓	X	X

Preform sizes and other type other than above standard dimensions are solicited case to case basis

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