

TECHNICAL DATA SHEET 30

Specifications:

Alloy	Working Temperature (°C)	NF EN ISO 17672	AWS A-5.8	DIN 8513	EN ISO 3677
Cu-Zn-Ni	900	-	-	-	-

Characteristics:

506 is basically an alloy of copper and zinc with 6% Nickel, which enhance the mechanical properties as compared to CUPROX. It's recommended for high Strength Joint and for Chromium and Nickel Plating. Bare rods are to be used or coated with our **POLYFLUX**. Braze Welding alloy with good flowing properties, Suitable for gap brazing. Being a high Zn content, it is recommended to keep the heating cycle to a minimum to prevent Zinc vaporisation. .

Applications:

506 is recommended to be used in lock-smiting, workshops and for brazing High stress joints.. This brazing alloy is also recommended for joining: Steels, Cast irons, Moulded steels, Nickel and Nickel alloys Coppers, Bronze, Brass, Nickel silver, Cupro-aluminium, with it solidus temperature is >900°C.

Typical application are found in the tubular construction industry (Metal furniture, Bicycle frames, radiators & towel., warmers) mining tools heating and cooling systems, etc...

Typical Chemical Compositions (%):

Cu	Zn	Ni	Si	Sn	Mn	Al/As	Fe	Bi/Sb/Cd	Max. other impuretés
51.00	balance	6.00	0.20	<0.10	<0.20	<0.01	<0.25	<0.01	<0.20





Typical Physical Properties:

Colour	Solidus (°C)	Liquidus (°C)	Density g/cm ³	Elongation %	Tensile strength (MPa)	Electrical Conductivity (%IACS)	Resistivity (Micro-ohm-cm)
Yellow	890	900	8.50	30%	550	-	-

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, Types and Heat Source Recommendations:

Size (mm)	Type				Type				
	Bare	Coated	Coil	Preforms					
1.50,2.00,2.50,3.00, 4.00, 5.00	√	√	√	X	Bare	√	√	√	√
					Coated	√	X	X	X

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

Liability: This document is intended to assist the user in choosing the product. It is up to the user to verify that the chosen product is suitable for applications for which it is intended. The company FSH Welding Group reserves the right to alter specifications without prior notice of its products. The descriptions, illustrations and specifications are for reference only and cannot be held liable for FSH Welding Group. **Fumes:** Consult information on MSDS, available upon request.

TECHNICAL DATA SHEET 20

Specifications:

Alloy	Working Temperature (°C)	NF EN ISO 17672	AWS A-5.8	DIN 8513	EN ISO 3677
Cu-Zn	900	Cu 471	~RBCu Zn-C	~L-Cu Zn 40	B-Cu60 Zn(Sn)(Si)(Mn) 870/900

Characteristics:

CUPROX is basically an alloy of copper and zinc with small addition of silicon, nickel and manganese intended to increase adhesion and to control Zn vaporization. Bare rods are to be used or coated with our **POLYFLUX**. Braze Welding alloy with good flowing properties, Suitable for gap brazing. Being a high Zn content, it is recommended to keep the heating cycle to a minimum to prevent Zinc vaporisation. .

Applications:

CUPROX, is recommended to be used in lock-smith and workshops. This brazing alloy is also recommended for joining: Steels, Cast irons, Moulded steels, Nickel and Nickel alloys Coppers, Bronze, Brass, Nickel silver, Cupro-aluminium, with it solidus temperature is >900°C. When working with Cast Iron, the work pieces should not be overheated. Typical application are found in the tubular construction industry (Metal furniture, Bicycle frames, radiators & towel., warmers) mining tools heating and cooling systems, etc...

Typical Chemical Compositions (%):

Cu	Zn	Si	Sn	Mn	Ni	Ag	Fe	Al/As	Bi/ Sb /Cd	Pb	Max. impurities
60.00	Balance	0.20	0.40	0.25	<0.02	-	<0.25	<0.01	<0.01	<0.025	<0.20





Typical Physical Properties:

Coating Colour	Solidus (°C)	Liquidus (°C)	Density g/cm ³	Elongation %	Tensile strength (MPa)	Electrical Conductivity (%IACS)	Electrical Resistivity (Micro-ohm-cm)
Customize	870	900	8.40	35%	450	-	-

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. This alloy needs a controlled quench (in excess of 300°C) to avoid the weakening of the brazed joint.

Standard Size , Types & Heat Source Recommendations:

Size (mm)	Type				Type				
	Bare	Coated	Coil	Preforms					
1.50,2.00,2.50,3.00, 4.00, 5.00,	✓	✓	✓	✓	Bare	✓	✓	✓	✓
					Coated	✓	X	X	X

Customised size other than above standard dimensions are solicited case to case basis

Liability: This document is intended to assist the user in choosing the product. It is up to the user to verify that the chosen product is suitable for applications for which it is intended. The company FSH Welding Group reserves the right to alter specifications without prior notice of its products. The descriptions, illustrations and specifications are for reference only and cannot be held liable for FSH Welding Group. **Fumes:** Consult information on MSDS, available upon request.

TECHNICAL DATA SHEET 35

Specifications:

Alloy	Working Temperature (°C)	NF EN ISO 17672	AWS A-5.8	DIN 8513	EN ISO 3677
Cu-Zn-Ni	910	Cu 773	RBCu Zn-D	L-CuNi10 Zn42	B-Cu48ZnNi(Si) 890/920

Characteristics:

NICROX 49C1 is basically a braze welding alloy 10% Ni, which increase Mechanical strength as compared to 506 alloy. of copper and zinc with small addition of silicon, nickel and manganese intended to increase adhesion and to control Zn vaporization. Bare rods are to be used or coated with our **Poly Flux**. Being a high Zn content, it is recommended to keep the heating cycle to a minimum to prevent Zinc vaporisation. .

Applications:

NICROX 49C1, is recommended for brazing High stress joints, Primarily used for joining of Steel to Steel or Carbide to Steel. This brazing alloy is also recommended for joining: Steels, Moulded steels, Nickel and Nickel alloys Coppers, Bronze, Brass, Nickel silver, Cupro-aluminium, with it solidus temperature is >900°C.

Typical Chemical Compositions (%):

Cu	Zn	Ni	Si	Mn	Sn	Ag	Fe	Al/As	Bi/ Sb /Cd	Pb	Max. impurities
48.00	Balance	10.0	0.20	<0.10	<0.10	-	<0.25	<0.01	<0.01	<0.025	<0.20





Typical Physical Properties:

Coating Colour	Solidus (°C)	Liquidus (°C)	Density g/cm³	Elongation %	Tensile strength (MPa)	Electrical Conductivity (%IACS)	Electrical Resistivity (Micro-ohm-cm)
Customize	890	920	8.70	25	750	-	-

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. This alloy needs a controlled quench (in excess of 300°C) to avoid the weakening of the brazed joint.

Standard Size , Types & Heat Source Recommendations:

Size (mm)	Type				Type				
	Bare	Coated	Coil	Preforms					
1.50,2.00,2.50,3.00, 4.00, 5.00	√	√	√	X	Bare	√	√	√	√
					Coated	√	X	X	X

Customised size other than above standard dimensions are solicited case to case basis

Liability: This document is intended to assist the user in choosing the product. It is up to the user to verify that the chosen product is suitable for applications for which it is intended. The company FSH Welding Group reserves the right to alter specifications without prior notice of its products. The descriptions, illustrations and specifications are for reference only and cannot be held liable for FSH Welding Group. **Fumes:** Consult information on MSDS, available upon request.

TECHNICAL DATA SHEET 25

Specifications:

Alloy	Working Temperature (°C)	NF EN ISO 17672	AWS A-5.8	DIN 8513	EN ISO 3677
Cu-Zn-Ag	890	-	-	-	-

Characteristics:

SUPER-CUPROX is basically an alloy of copper and zinc with small addition of silicon, nickel and manganese intended to increase adhesion and to control Zn vaporization. As compare to Cuprox, there is addition of 1%Ag. This addition lowers its melting temperature while producing superior fluidity for good capillary action enabling strong joint. Bare rods are to be used or coated with our **POLYFLUX**. Braze Welding alloy with good flowing properties, Suitable for gap brazing. Being a high Zn content, it is recommended to keep the heating cycle to a minimum to prevent Zinc vaporisation.

Applications:

SUPER-CUPROX, is recommended for brazing High stress joints, primarily used for joining of Steel to Steel or Carbide to Steel. This brazing alloy is also recommended for joining: Steels, Cast irons, Moulded steels, Nickel and Nickel alloys Coppers, Bronze, Brass, Nickel silver, Cupro-aluminium, with it solidus temperature is >900°C.

Typical Chemical Compositions (%):

Cu	Zn	Si	Sn	Mn	Ni	Ag	Fe	Al/As	Bi/ Sb /Cd	Pb	Max. impurities
58.00	Balance	0.20	0.40	0.25	<0.20	1.00	<0.25	<0.01	<0.01	<0.025	<0.20





Typical Physical Properties:

Coating Colour	Solidus (°C)	Liquidus (°C)	Density g/cm ³	Elongation %	Tensile strength (MPa)	Electrical Conductivity (%IACS)	Electrical Resistivity (Micro-ohm-cm)
Customize	850	870	8.50	30%	480	-	-

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. This alloy needs a controlled quench (in excess of 300°C) to avoid the weakening of the brazed joint.

Standard Size, Types & Heat Source Recommendations:

Size (mm)	Type				Type				
	Bare	Coated	Coil	Preforms					
1.50,2.00,2.50,3.00, 4.00, 5.00,	√	√	√	√	Bare	√	√	X	√
					Coated	√	X	X	√

Customised size other than above standard dimensions are solicited case to case basis

Liability: This document is intended to assist the user in choosing the product. It is up to the user to verify that the chosen product is suitable for applications for which it is intended. The company FSH Welding Group reserves the right to alter specifications without prior notice of its products. The descriptions, illustrations and specifications are for reference only and cannot be held liable for FSH Welding Group. **Fumes:** Consult information on MSDS, available upon request.

TECHNICAL DATA SHEET 40

Specifications:

Alloy	Working Temperature (°C)	NF EN ISO 17672	AWS A-5.8	DIN 8513	EN ISO 3677
Cu-Zn-Ni-Ag	890	-	-	-	-

Characteristics:

SUPER-NICROX is high quality braze welding alloy with 1% Silver as compared to NICROX 49C1. The addition of Silver lowers the melting temperature while producing good capillary action and gives strong joint. Bare rods are to be used or coated with our **POLYFLUX**. Braze Welding alloy with good flowing properties. Being a high Zn content, it is recommended to keep the heating cycle to a minimum to prevent Zinc vaporisation.

Applications:

SUPER-NICROX, is recommended for brazing High stress joints, primarily used for joining of Steel to Steel or Carbide to Steel. This brazing alloy is also recommended for joining: Steels, Moulded steels, Nickel and Nickel alloys Coppers, Bronze, Brass, Nickel silver, Cupro-aluminium, with its solidus temperature is >900°C.

Typical Chemical Compositions (%):

Cu	Zn	Ni	Si	Mn	Sn	Ag	Fe	Al /As	Bi/ Sb /Cd	Pb	Max. impurities
48.00	Balance	9.00	<0.4	<0.2	<0.40	1.00	<0.25	<0.01	<0.01	<0.025	<0.20





Typical Physical Properties:

Coating Colour	Solidus (°C)	Liquidus (°C)	Density g/cm³	Elongation %	Tensile strength (MPa)	Electrical Conductivity (%IACS)	Electrical Resistivity (Micro-ohm-cm)
Yellow	870	900	8.70	25%	750	-	-

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. This alloy needs a controlled quench (in excess of 300°C) to avoid the weakening of the brazed joint.

Standard Size, Types & Heat Source Recommendations:

Size (mm)	Type				Type	 OXY/ACETYLENE	 INDUCTION	 AÉRO-PROPANE	 FOUR/OVEN
	Bare	Coated	Coil	Preforms					
1.50,2.00,2.50,3.00, 4.00, 5.00	√	√	√	X	Bare	√	√	X	√
					Coated	√	X	X	√

Customised size other than above standard dimensions are solicited case to case basis

Liability: This document is intended to assist the user in choosing the product. It is up to the user to verify that the chosen product is suitable for applications for which it is intended. The company FSH Welding Group reserves the right to alter specifications without prior notice of its products. The descriptions, illustrations and specifications are for reference only and cannot be held liable for FSH Welding Group. **Fumes:** Consult information on MSDS, available upon request.