DAIKOWM CuSn

GMAW

COPPER ALLOYS
Cu

DESCRIPTION

Tin bronze alloy solid wire

Oxygen-free copper alloy with alloyed elements such as silicon, tin and manganese suitable for copper alloys welding. The alloyed elements improve the weldability without reducing the electrical conductivity. Phosphorus and silicon have a deoxidizer action. Suitable for joining OF-copper and copper materials subject to high strain. Easily workable. In case of high thickness, it is recommended to preheat to 300 °C.

SPECIFICATIONS

EN ISO 24373	S Cu 1898 (CuSn1)	**AWS A5.7**	ERCu
DIN 1733	SG-CuSn	**Shielding**	I1, I3
Positions	PA, PB, PC, PD, PE, PF, PG	**Current**	DC+
Packaging Type	Drums, B300, D200 and D100 spools.		

ASME QUALIFICATIONS

F-No (QW432)	31
A-No (QW442)	-

HARDNESS

60HB

CHEM. COMP. %	DEFAULT
Al	0.001
Sn	0.9
P	0.01
Si	0.01
Zn	0.01

MECHANICAL PROPERTIES	MIN. PER STANDARD	PRODUCT
Tensile strength R_m MPa	170	190
Yield strength $R_{p0.2}$ MPa	-	70
Elongation A (L_0=5d_0) %	0	33
Impact Charpy ISO-V	-	-
Impact Charpy ISO-V	-	-

WELDING PARAMETERS	1.0 mm	1.2 mm
Ampere	130A - 200A	185A - 245A
Voltage	24V - 28V	26V - 30V
Packaging	Ø 0,8÷1,6mm	Ø 0,8÷1,6mm
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APPLICATION

This wire produces a deposit of deoxidized pure copper, ensuring maximum thermal and electrical conductivity. The main applications include plates for chemical plants and molds, distillers, radiators, rods and wires for electrical components, as well as tubes for heat exchangers. A preheating phase is necessary, except for very thin materials with thicknesses less than 3 mm. The required preheating varies: around 100 °C for a thickness of 6 mm, up to 400-500 °C for materials with a thickness of 15 mm.

ALLOY TYPE

Deoxidized pure copper.

MICROSTRUCTURE

Single phase (fcc).

MATERIALS

Oxygen free copper.