



DAIKOWM CuSn9



COPPER ALLOYS
CuSn

DESCRIPTION

Tin bronze alloy solid wire

This wire rod is intended for build-up welding on cast iron, particularly suitable for welding deep drawing sheets like body sheets. Its good flow characteristics allow it to be used for closing large welding gaps, especially highly recommended for furnace brazing. Suitable for example bronze with 10-12% Sn, copper-zinc alloys, copper tin zinc-lead alloys and cast alloys. Weld surfacing on cast iron. Preheating of the base material is usually not required. Pulsed argon arc welding is recommended for multilayer hard facing on steel.

SPECIFICATIONS

ISO 24373	S CuSn10MnSi (Cu 5211)	DIN 1733	-
Certifications	-	Shielding	I1, I3
Positions	PA, PB, PC, PD, PE, PF, PG	Current	DC+
Packaging Type	Drums, B300, D200 and D100 spools.		

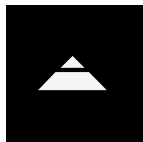
		FERRITE	PREN	HARDNESS	
		-	-	115HB	
CHEM. COMP. %	DEFAULT	MECHANICAL PROPERTIES		MIN	VARIANT
Mn	0.25	Tensile strength R _m MPa		-	290
Al	0.001	Yield strength R _{p0.2} MPa		-	130
Sn	9.5	Elongation A (L ₀ =5d ₀) %		-	14
P	0.01	Impact Charpy ISO-V		-	-
Si	0.25	Impact Charpy ISO-V		-	-
Fe	0.01	WELDING PARAMETERS		1 mm	1.2 mm
Zn	0.01	Ampere		130A - 200A	185A - 245A
Pb	0.01	Voltage		24V - 28V	26V - 30V
		Packaging		Ø 0,8÷1,6mm	Ø 0,8÷1,6mm
		Packaging Type		Drums, B300, D200 and D100 spools.	Drums, B300, D200 and D100 spools.

V 01/2024



The information in this datasheet is the result of detailed research and is considered accurate as of the publication date. However, we cannot guarantee its complete accuracy, and it is subject to change without notice. Actual results may vary due to many factors like welding procedures, material composition, temperature conditions, bevel configuration, and specific manufacturing techniques. We accept no liability for any errors or omissions in this datasheet. For the most current information, please visit www.daikowelding.com.





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APPLICATION

Used for welding various copper-based alloys to themselves, CMn steels, or cast irons, and for repairing and joining castings, this consumable is also suitable for weld surfacing to provide a bearing surface and/or corrosion-resistant overlay on steel components, shafts, etc. Avoiding stainless steels is recommended due to chromium pick-up causing embrittlement. The tin bronze weld metal can be sluggish due to its wide melting range. Preheating to approximately 200°C can enhance fluidity when dealing with thick sections. To prevent hot cracking, it's advisable to maintain the interpass temperature below 200°C. This consumable is also applicable for welding copper materials if the presence of tin in the weld metal is acceptable, such as in copper and tin bronzes, particularly for joining copper-zinc alloys and steels. For multi-layer welding on steel, pulsed arc welding is advised, and it is also suitable for oven soldering.

ALLOY TYPE

Tin bronze alloy wire for welding similar tin bronze (phosphor bronze) alloys.

MICROSTRUCTURE

A multi phase copper base structure with complex eutectoids.

MATERIALS

Tin bronze up to 10%Sn+0.5%P. Cu + 20-25%Sn. Cu + 40%Zn, manganese bronze.

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