G-TECH CuSn7

SMAW

COPPER ALLOYS
CuSn

DESCRIPTION

Electrode with special basic coating

It's particularly suitable for welding and recharging of phosphorous bronze or similar, brass and for recharging cast iron and carbon steel. It is used for the construction of pump blades, turbines, parts subject to wear, such as sliding guides, sliders, seats of valves, for repairing foundry and plating defects on tough steel to sea water. The higher tin content increases strength and wear resistance and increases the solidification temperature range during deposition of the weld metal (lower preheating to about 200°C is required).

SPECIFICATIONS

ISO	-	**AWS A5.6**	ECuSn-C
DIN 1733	CuSn7	**Werkstoff Number**	-
Certifications	-	**Shielding**	-
Positions	PA, PB, PC, PD, PF	**Current**	DC+

ASME QUALIFICATIONS

F-No (QW432)	33
A-No (QW442)	-

FERRITE

-

PREN

-

HARDNESS

90HB

CHEM. COMP. %

	DEFAULT
Mn	0.1
Sn	8
P	0.2

MECHANICAL PROPERTIES

	MIN	VARIANT
Tensile strength R_m MPa	280	340
Yield strength $R_{p0.2}$ MPa	-	140
Elongation A (L_0=5d_0) %	20	40
Impact Charpy ISO-V	-	-
Impact Charpy ISO-V	-	-

WELDING PARAMETERS

	2.5 mm	3.2 mm	4 mm
Ampere	55A - 60A	80A - 90A	100A - 120A
Voltage	-	-	-
Packaging	pcs/kg	pcs/kg	pcs/kg
Packaging Type	Carton box	Carton box	Carton box

CuSn

DESCRIPTION

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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