Bronze

Tin and Red Bronze

Alloys, international standards*, and examples of use



Production method: Continuously cast Gc, centrifugally cast Gz.

Alloy	ČSN/STN	EN	DIN	UNS	BS	Properties	Application:
CuSn5Zn5Pb5	423135	CC491K	G-CuSn5ZnPb/2.1096/ Rg5	C83600	LG2	Excellent resistance to atmospheric corrosion, seawa- ter, heating and machinery oils, gasoline, and natural gas. Welding is not recommended. Excellent soldera- bility with soft solders.	Sliding bearings and guide bushings.
CuSn7Zn4Pb7	423137	СС493К	G-CuSn7ZnPb/2.1090/ Rg7	C93200		Excellent resistance to atmospheric corrosion, seawa- ter, heating and machinery oils, gasoline, and natural gas. Welding is not recommended. Excellent soldera- bility with soft solders.	Sliding bearings and guide bushings.
CuSn7Zn- 3NiPS		CC471K				Lead-free alternative to the CuSn7Zn4Pb7 Rg7 alloy. The material has similar properties, good corrosion resistance, and excellent machinability	Lead-free alternative to the CuSn7Zn4Pb7 Rg7 alloy. The material has the same properties. They are primarily used for sliding bearings and bearing bushings.
CuSn12	423123	CC483K	G-CuSn12/2.1052/ SnBz12	C90800	PB2	It is characterized by exceptional corrosion resistance in the atmosphere, water, and neutral saline solutions, except for ammonium salt and cyanide solutions. Good run-in properties and good weldability.	Suitable for components with good strength, subject to friction at low speeds up to 5 m/s or highly dynamically loaded at temperatures up to 150°C, for highly loaded gear rims, screw nuts, pump seats, impellers, and high-pressure fittings up to 30 atm.
CuSn12S		CC472K				Lead-free alternative to CuSn12 with comparable properties.	Similar to CuSn12/CC483K.
CuSn12Ni2		СС484К	G-CuSn12Ni/2.1060	C91700	CT2	Excellent corrosion resistance in the atmosphere, wa- ter, and neutral saline solutions, except for ammonium salts and cyanides.	Suitable for castings exposed to friction at speeds below 5 m/s, exposed to heavy dynamic loads, for temperatures between 120-150°C, gear and screw wheel rims, pressure nuts, and sliding bearings.
CuSn10Zn2	423138		G-CuSnOZn/2.1086/Rg10	C90500	G1, BS1400	Rugged, strong, tough, wear-resistant; good machin- ability and resistance to seawater corrosion.	Bushings for medium pressures and lower sliding speeds, auxiliary connecting rod bushings, worm wheels, marine pumps, and valves.
CuSn11Pb2		CC482K	G-CuSn12Pb/2.1061	C92500		Resistant to seawater and corrosion. Good wear resis- tance. Excellent machinability.	Sliding rails, bearings

Alloy	ČSN/STN	EN	DIN	UNS	BS	Properties	Application:
CuSn10	423119	CC480K	G-CuSn10/2.1050/ SnBz10	C90700	CT1	Characterized by very good resistance to corrosion in the atmosphere, water, and neutral saline solutions, except for ammonium salt and cyanide solutions.	Machinery components are subject to friction under high pressure, heat-stressed parts. Pump impellers, pressure nuts.
CuSn10P					B101	Resistant to wear and high mechanical stress, corro- sion-resistant, and withstands high temperatures.	Chemical fittings, corrosion-exposed bearings, and high- speed components subjected to heavy loads.

* The listed standards are equivalent but may not be identical and may vary.

