

## Common bronze bearing alloys

UNS Number	SAE No. (Former SAE No.)	Properties, Applications
<b>Copper Tin Alloys (Tin Bronzes)</b>		
C90300	CA903 (620)	Good general purpose bearings with favorable combination of strength, machinability, castability, pressure tightness, corrosion resistance. Tin bronzes operate better with grease lubrication than other bearing bronzes. Widely used in water pump fittings, valve bodies and general plumbing hardware.
C90500	CA905 (62)	
C90700	CA907 (65)	
<b>Copper-Tin-Lead Alloys (Leaded Tin Bronzes)</b>		
C92200	CA922 (622)	Moderate-to-high strength alloys. Lead content provides good machinability but is insufficient to act as "internal lubricant" should normal lubricant be unreliable. Bearings also require good shaft alignment and shaft hardness between 300–400 HB.
C92300	CA923	
C92700	CA927 (63)	
<b>Copper-Tin-Lead Alloys (High-Leaded Tin Bronzes)</b>		
C93200	CA932 (660)	Good bearing properties, excellent casting and machining characteristics. Higher in strength than copper-lead alloys, although they have somewhat lower strength and fatigue resistance than unleaded tin bronzes. C93200 is often considered the "standard" bearing bronze. C93800 is used for general service at moderate loads and high speeds; C94300 is used at lighter loads and high speeds. These alloys conform well to irregularities in the journal. Applications include light duty machinery, home appliances, farm machinery, pumps and thrust washers.
C93400	—	
C93500	CA935 (66)	
C93600	—	
C93700	CA937 (64)	
C93800	CA938 (67)	
C94100	—	
C94300	CA943	
<b>Manganese Bronze and Leaded Manganese Bronze Alloys (High Strength and Leaded High Strength Yellow Brasses)</b>		
C86300	CA863 (430B)	Alloys exhibit good corrosion resistance; however, they require reliable lubrication and hardened, well-aligned shafts. C83600 is twice as strong as C86400 and is used in applications characterized by high loads and slow speeds. C86400 is better suited to light duty applications.
C86400	—	
<b>Copper-Aluminum Alloys (Aluminum Bronzes)</b>		
C95300	CA953 (688)	High strength, very corrosion and wear resistant. Widely used in heavy duty applications or where shock loading is a factor. Useful to temperatures higher than 500 F (260 C). Not suitable for high speeds or applications where lubrication is intermittent or unreliable. Alloys C95300, C95400 and C95500 can be heat treated to improve their mechanical properties, as required, for severe applications.
C95400	C954	
C95500	C955	
C95520	—	
C95800	C958	
<b>Copper-Lead Alloys (Leaded Coppers)</b>		
C98200	49	Alloys have fair strength, fair wear resistance and low pounding resistance, but have very favorable antifriction properties and good conformability. They operate well under intermittent, unreliable or dirty lubrication, and can operate under water or with water lubrication. Used at light-to-moderate loads and high speeds, as in rod bushings and main bearings for refrigeration compressors, and as hydraulic pump bushings. Usually require reinforcement.
C98400	—	
C98600	480	
C98800	481	
C98820	484	
C98840	485	