

# Lead-free and low-lead alloys

Copper and copper alloys are essential materials for plumbing, with a continued growing trend to reduce lead in plumbing systems. Lead-free replacement alloys maintain exceptional quality and performance without the use of lead.

Lead-free / low-lead alloys			
C69300	C89833	C90800	C95900
C87850	C89835	C90810	
C89325	C89844	C95400	
C89831	C90300	C95500	

## Wieland Concast certifications



























- AS9100:2016-certified quality management system
- ISO 9001:2015-certified quality management system

## Industry-specific applications:

- Bearings
- Bushings
- Corrosion-resistant/pressure-tight castings
- Faucet stems
- Faucets
- Fittings/valves for potable water
- Gear blanks
- Gears
- High-speed/high-pressure bearings
- Impellers
- Marine products
- Pipe fittings
- Pumps
- Water meter cases
- Valve bodies for water



## Lead-free / low-lead alloys overview

	Copper Alloy UNS No.	Cu (%)	Pb (%)	Sn (%)	Zn (%)	Fe (%)	P (%)	Ni (%) <sup>4</sup>	Al (%)	Bi (%)	Mn (%)	S (%)	Sb (%)	Si (%)
<b>Silicon Brass</b>														
	C69300 <sup>1</sup>	73.00-	0.02 <sup>2</sup> -	0.20	Rem.	0.10	0.04-	0.15	0.10		0.10		0.10	2.70-
		77.00	0.09											
	C87850	75.00-	0.02 <sup>2</sup> -	0.30	Rem.	0.10	0.05-	0.20			0.10		0.10	2.70-
		78.00	0.09											
<b>Bismuth Tin Bronze</b>														
	C89325	84.00-	0.10	9.00-	1.00	0.15	0.10	1.00	0.005	2.70-		0.08	0.50	0.005
		88.00		11.00						3.70				
	C89831	87.00-	0.10	2.70-	2.00-	0.30	0.05	1.00	0.005	2.70-		0.08	0.25	0.005
		91.00		3.70	4.00									
	C89833	86.00-	0.09	4.00-	2.00-	0.30	0.05	1.00	0.005	1.70-		0.08	0.25	0.005
		91.00		6.00	6.00					2.70				
	C89835	85.00-	0.09	6.00-	2.00-	0.20	0.10	1.00	0.005	1.70-		0.08	0.35	0.005
		89.00		7.50	4.00					2.70				
	C89844	83.00-	0.20	3.00-	7.00-	0.30	0.05	1.00	0.005	2.00-		0.08	0.25	0.005
		86.00		5.00	10.00					4.00				
<b>High Tin Bronze</b>														
	C90300	86.00-	0.30	7.50-	3.00-	0.20	1.50	1.00	0.005			0.05	0.20	0.005
		89.00 <sup>2</sup>		9.00	5.00									
	C90800	85.00-	0.25	11.00-	0.25	0.15	0.30	0.50	0.005			0.05	0.20	0.005
		90.00 <sup>2</sup>		13.00										
	C90810	Rem. <sup>2</sup>	0.25	11.00-	0.30	0.15	0.15-	0.50	0.005			0.05	0.20	0.005
				13.00			0.80 <sup>3</sup>							
<b>Aluminum Bronze</b>														
	C95400	83.00					3.00-	1.50	10.00-		0.50			
		min					5.00		11.50					
	C95500	78.00					3.00-		3.00-	10.00-				
		min					5.00		5.50	11.50				
	C95900	Rem.					3.00-	0.50	12.00-		1.50			
							5.00		13.50					

<sup>1</sup>Lead-free brass <sup>2</sup>Pb content is greater than 0.02%. <sup>3</sup>In determining Cu min., Cu may be calculated as Cu + Ni.

<sup>4</sup>For continuous castings, P shall be 1.5% max. <sup>5</sup>Ni value includes Co.

Note: Unless otherwise noted, single values represent maximums.

 Lead-Free Alloy  Low-Lead Alloy  Standard-Stocked Alloy  Other Available Alloy

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