

## 1. Requirements

### Chemical Composition (%)

	Cu	Ni	P	Pb	Sn	Al	Fe	Mn	S	Sb	Si	Zn
<b>Min.</b>	85,0	-	-	-	11,0 <sup>a</sup>	-	-	-	-	-	-	-
<b>Max.</b>	88,5 <sup>a</sup>	2,0	0,60	0,7	13,0	0,01	0,2	0,2	0,05	0,15	0,01	0,5

<sup>a</sup> For continuous castings and centrifugal castings, the minimum tin content shall be 10,5 % and the maximum copper content shall be 89,0 %

### Mechanical properties (Minimum values)

Casting process and designation	Tensile strength R <sub>m</sub> (MPa)	0,2% proof strength R <sub>p0,2</sub> (MPa)	Elongation 5D A (%)	HBW (10-1000)
<b>Continuous(GC)</b> <sup>1</sup>	300	150	6	90
<b>Centrifugal (GZ)</b>	280	150	5	90

<sup>1</sup> The mechanical property requirements given apply to sizes up to and including 300 mm external diameter. For larger continuous castings, the mechanical property requirements should be agreed between the supplier and the purchaser.

## 2. Closest International standards

Standard	Alloy	Status
Europa BS 1400 DIN 1705 NFA-53707	PB2 CuSn12 UE12, CuSn12P	Withdrawn
USA ASTM B505 ASTM B271	C90700 (SAE65)	Active
Australia AS 1565	C90710	Active
Japan JIS H5121 JIS H5120	CAC503C CAC503	Active
ISO 1338	CuSn12	Withdrawn

## 3. Optional Heat Treatments at clients' request

- Stress Relieve
- Phase transformation

## 4. Technical Characteristics

- Harsh machining properties; that's why lead content is added
- Good self-lubricating properties
- Working condition should not exceed 200°C
- Resistant to fatigue