

# Wieland-S34

CuZn34Mn2SiAlNi | Lead-free special brass

## Material designation

EN	no EN standard
UNS	C67340

## Chemical composition\*

Cu	62 %
Mn	1.5 %
Si	0.5 %
Al	0.5 %
Ni	0.5 %
Fe	0.5 %
Zn	balance

\*Reference values in % by weight

## Physical properties\*

Electrical conductivity	MS/m	11
	%IACS	19
Thermal conductivity	W/(m·K)	75
Thermal expansion coefficient (0–300 °C)	10 <sup>-6</sup> /K	19.6
Density	g/cm <sup>3</sup>	8.15
Modulus of elasticity	GPa	117

\*Reference values at room temperature

## Corrosion resistance

Special brass generally has excellent corrosion resistance due to alloying additions. **Wieland-S34** is characterised by good resistance to organic substances and neutral or alkaline compounds.

## Product standards

no EN standard

## Material properties and typical applications

**Wieland-S34** is a special brass which exhibits a good machinability due to embedded silicides. Furthermore, this alloy has excellent cold-working properties. Therefore it is ideal for components which – apart from being machined – are to be coined, riveted, crimped or flanged. Due to the silicides **Wieland-S34** exhibits a better resistance to stress relaxation compared with standard brass.

This material is lead free as required by the RoHS and ELV (Pb max. 0.1 %).

## Types of delivery

The BU Extruded Products supplies bars, wire, sections and tubes. Please get in touch with your contact person regarding the available delivery forms, dimensions and temps.

## Fabrication properties

### Forming

Machinability	70 %
(CuZn39Pb3 = 100 %)	
Capacity for being cold worked	good
Capacity for being hot worked	excellent

### Surface treatment

Polishing	
mechanical	good
electrolytic	poor
Electroplating	good

## Joining

Resistance welding (butt weld)	fair
Inert gas shielded arc welding	fair
Gas welding	fair
Hard soldering	fair
Soft soldering	fair

## Heat treatment

Melting range	840–885 °C
Hot working	600–750 °C
Soft annealing	570–680 °C 1–3 h
Thermal stress relieving	300–420 °C 1–3 h