

Material designation	
EN	CuZn21Si3P/CC768S
UNS	C87850

Chemical composition*	
Cu	76 %
Si	3 %
P	0.06 %
Pb	max. 0.09 %
Zn	balance

* Reference values in % by weight

Physical properties*		
Electrical conductivity	MS/m %IACS	4.5 7.8
Thermal conductivity	W/(m·K)	33
Density	g/cm ³	8.25
Moduls of elasticity	GPa	ca. 85

* Reference values at room temperature

Corrosion resistance

Through alloying additions, special brass generally exhibits excellent corrosion resistance. The addition of silicon increases resistance to tarnishing and reduces susceptibility to stress corrosion cracking and dezincification.

Product standards

none

Material properties and typical applications

Wieland-SW3 is a lead-free special brass resisting high load and exhibiting good corrosion resistance and machinability. The alloy is suitable for the manufacture of sand, gravity die and low pressure die castings.

Through the addition of a grain refiner ECOCAST has a very fine grain in the cast condition already.

The material meets the requirements of ISO 6509 regarding the dezincification resistance. It is accepted for products in contact with drinking water as per 4 MS positive list.

Types of delivery

As ingots. Ingot weight approx. 6 kg.

For more products please contact our Technical Marketing.

Fabrication properties

Forming	
Machinability (CuZn39Pb3 = 100 %)	80 %
Capacity for being cold worked	fair
Capacity for being hot worked	excellent

Joining	
Resistance welding (butt weld)	good
Inert gas shielded arc welding	good
Gas welding	good
Hard soldering	fair
Weichlöten	fair

Mechanical properties	
reference values (cast condition)	
Rm [N/mm ²]	500
Rp0.2 [N/mm ²]	160
A5 [%]	40
HB2.5	~ 150

Surface treatment	
Polishing	
mechanical	good
electrolytic	poor
Electroplating	good*

* For further fabrication properties, please contact our Technical Marketing

Heat treatment	
Melting range	860–925 °C
Hot working	680–750 °C
Soft annealing	530–680 °C 1–3 h

Handelsmarken



Further information is provided in our brochure on ECOCAST