Terminals

Range of dimensions	
	Thickness in mm
Strip	0.6 - 3.0

Range of alloys			
ISO	UNS	EN	JIS
Cu-OFE (OFE-Cu)	C10100	CW009A	C1011
Cu-OF (OF-Cu)	C10200	CW008A	C1020
Cu-HCP (SE-Cu 57)	C10300	CW021A	
Cu-XLP / Cu-PHC (SE-Cu 58)	C10300	CW020A	
CuAg0.1	C10700		
CuAg0.1P	C10700	CW016A	
CuZr 0.1	C15100		
Cu-DLP	C12000	CW023A	C1201
CuSn0.15	C14415	CW117C	

Partly and fully cladded copper aluminum products (Cu/Al99.5 and Cu/AlSi1) available on request via external partners.

Nickel-plated solutions

The electroplating line is loaded with copper components only and therefore guarantees the highest purity.

Electroplating	
Layer	Matte / bright / semi-bright
Nickel (Ni)	3 - 12 µm

Additional types of coatings via service partners.

General Contacts:

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Copper Solutions

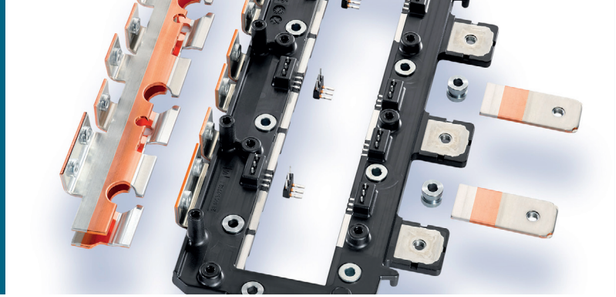
for Base Plates and Terminals

Rudi Göbel GmbH & Co. KG

Aurubis
Metals for Progress

Strong partnership

for copper solutions



Base plates

with unique attributes

Aurubis AG

Aurubis is the major copper strip supplier in Europe for the power electronics industry. This includes dedicated strip and profiles for base plates and terminals.

Rudi Goebel

The European market leader for power module copper components Rudi Goebel produces base plates and terminals including electroplating using Aurubis strips and profiles. Base plates are produced ready-to-use and in one process on the automatic punching press.

Base plates

Range of dimensions	
	Thickness in mm
Strip	1.0 - 5.0
Plates & profiles	5.0 - 6.0

Range of alloys			
ISO	**UNS**	**EN**	**JIS**
Cu-OFE (OFE-Cu)	C10100	CW009A	C1011
Cu-OF (OF-Cu)	C10200	CW008A	C1020
Cu-HCP (SE-Cu 57)	C10300	CW021A	
Cu-XLP / Cu-PHC (SE-Cu 58)	C10300	CW020A	
CuZr 0.1	C15100		
Cu-DLP	C12000	CW023A	C1201
CuFe 0.1	C19210		C1921

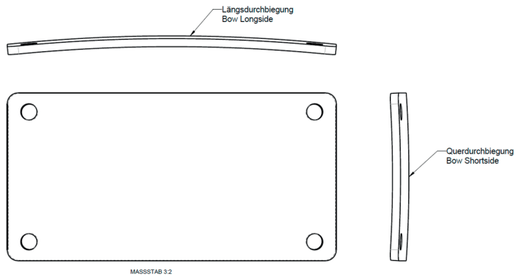
Quality assurance

Aurubis and Rudi Goebel monitor and document product quality using a Quality Management System. The production processes of both manufacturers are certified in accordance with ISO/TS 16949 and DIN EN ISO 9001.

- **High purity of > 99.99 % minimum copper content**
  The high purity of copper content in the copper cathodes used guarantees the product's outstanding quality.

- **Special features and advantages**
  - Mass production consisting of quality-assured processes with the tightest tolerances and in-process inspections of dimensional tolerances, especially the warpage
  - Base plates incl. coatings, plastic components and hybrid parts from one provider
  - The base plates can be individually equipped with solder spacers, dimples (substitutes for flange sockets), imprints or DMX codes for traceability
  - Tool and component production in Germany
  - Compounds with plastic and silicone overmold on request

- **Three-dimensional warpage for baseplates**
  The bow longside and shortside of the base plates can be manufactured according to customer specifications.
  The tolerances of +/- 30 µm depend on the size of the base plate.



Comparison of softening-resistant alloys

The requirements for lead-free solder agents in power module assemblies lead to increased use of softening-resistant copper alloys. The lead-free solder agents require higher temperatures. Copper base plates with standard copper alloys become soft at these temperatures. The solution is the application of softening-resistant copper alloys.

The figure below shows the softening resistance of standard copper alloys (Cu ETP, Cu-HCP) and softening-resistant copper alloys, e.g. C107 (CuAg0.1) and C151 (CuZr0.1) at elevated temperatures. CuAg0.1 is suitable for soldering temperatures of up to 320°C, whereas the copper alloy CuZr0.1 is even resistant to temperatures above 400°C.