

Schlenk Metallfolien GmbH & Co. KG
 Barnsdorfer Hauptstr. 5
 D-91154 Roth-Barnsdorf
 Tel.: +49 (0)9171 808-0
 Fax: +49 (0)9171 808-191

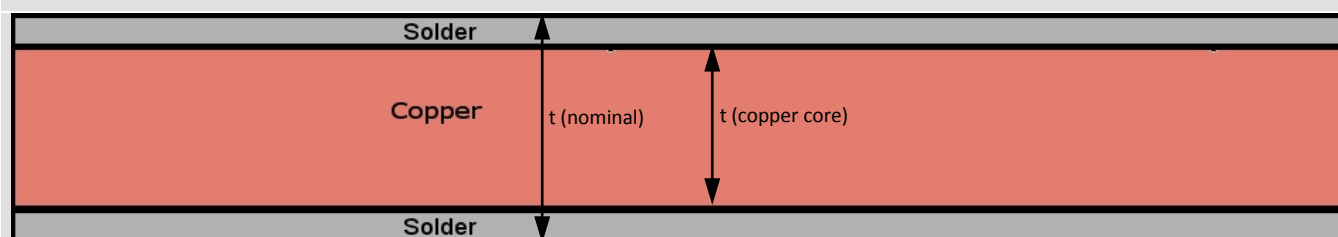
Business Unit: Metal Foils

E-Mail: foils@schlenk.de
 Internet: www.schlenk.com

Solder Coated Busbar

Solder coated busbar is a composite material consisting of a copper conductor with tin solder on both sides. Material is produced by roll-cladding.

composition of material:



Schematic cross-section of solar ribbon

copper core layer 92% of nominal thickness	ETP-Cu acc. to DIN EN 1976; 99.9% Cu incl. Ag; approximately
top and bottom solder layer 4% of nominal thickness	Sn-solder alloy; <i>different types or layer ratio available on request:</i> <ul style="list-style-type: none"> - SnAg3Cu0,5 - SnAg3,5 - SnPb36Ag2 - Sn96,8 with anti-oxidants
layer ratio (Solder /Cu/Solder)	standard: 4/92/4 in thickness percentage
application	Busbar for tabbing solar modules.

physical properties (design values only, will not be certified)	metric units					
	density depending on solder alloy and layer ratio; "mixed" density of solder and copper	Solder	SnAg3Cu0,5	SnAg3,5	SnPb36Ag2	Sn96,8 with anti-oxidants
		Layer	4%	8,796 g/cm ³	8,797 g/cm ³	8,910 g/cm ³
	electrical conductivity of copper core	100 % IACS				

mechanical properties	Yield strength Rp0,2 [MPa]	Tensile strength Rm [MPa]	Elongation A [%]
	Max. 115	200-250	Min. 15

dimensional properties	Camber according to DIN EN 1652 or on agreement	
solder quality	Reflow Quality	-> Only Sn62Pb36Ag2
	Oven annealed	-> All solder types
recommendations for processing	- Do not remove protective wrapping until use	
manufacturing program of strip	thickness of strip [mm]	0.1 – 0.5 mm (<i>nominal value including solder</i>)
	width of strip [mm]	3.0 – 10.0 mm (<i>Standard 5 mm</i>)
	thickness tolerance	±10 % on nominal thickness; thickness of each layer as determined by volume ratio shall not deviate by more than +/-10% from nominal
	width tolerance	+/- 0.05 mm
	preferred spool types [mm]	HKV 200; <i>others on request</i>
	slitting edges	Edges remain untinned due to slitting process

Data in this publication is based on careful investigation and is intended for information only. All information shall be not binding, shall carry no warranty as to certain ingredients, as to the suitability for a special purpose, as to the merchantability or as to industrial property rights of third parties. Any and all users are obliged to carry out tests on their own authority as well as to check the suitability and the danger of the respective product for a particular application. Schlenk shares no liability hereof and as to the exactness and completeness of the data. We apply our General Sales Conditions to be found on www.schlenk.com.