Tin-plated solutions

with outstanding possibilities

Properties and applications

In order to meet the high demands of the automotive, electrical and electronical industries on connectors and stamped grids – such as low insertion forces, good corrosion resistance and good solderability – the strip used is required to have surface treatments. Three main processes are used for coating: hot-dip tinning, electroplating and electroplating with a subsequent reflow treatment.
Accordingly, copper and copper alloy strip can be coated with a variety of metals. Pure tin coatings are particularly important due to their economic efficiency.

Hot-Dip Tinning			
Strip thickness in mm		**Tin layer thickness incl. tolerances (standard tin-plating 99.9 %)**	**Main properties**
0.10 - 1.50	Air level mechanical wipe	0.8 – 1.5 µm	Low insertion force
		1.0 – 3.0 µm	Low insertion force, corrosion protection
		2.0 – 4.0 µm 3.0 – 6.0 µm	Good corrosion protection
		4.0 – 8.0 µm 5.0 – 10.0 µm	Good solderability
		10.0 – 16.0 µm	Special applications

Electroplating		
Strip thickness in mm		**Main properties**
0.20 – 0.80	Tin matte / bright / brushed	Good electrical contact, low insertion force and / or corrosion protection
	Tin reflowed	Mitigates whiskers
	Nickel	Special applications and diffusion barrier (underlayer)
	TN (available in US)	Very low insertion force
	TQ (available in US)	Long-term solderabiltiy
0.10 – 4.0	Tin matte / bright / brushed	Good electrical contact, low insertion force and / or corrosion protection
0.10 – 2.0	Tin reflowed	Mitigates tin whiskers
	Advanced reflow tin	Long-term solderability
	Super thin advanced reflow tin (STAR)	Very low insertion force
	Nickel	Special applications and diffusion barrier (underlayer)
	Silver	High corrosion protection, higher temperature resistance

■ In-house production

Copper underlayer and selective plating on request.