

Ag/SnO₂/In₂O₃ pre-ox.

SILVER TIN INDIUM OXIDE



/ SILVER TIN INDIUM OXIDE (Ag/SnO₂/In₂O₃ pre-ox.)

Scope: This information refers to pre-oxidized contact material produced by internal oxidation of silver tin indium alloy, compacting, extrusion. Profiles and tips are available with a backing layer of silver and optionally with an additional layer of brazing alloy.

Application

- Automotive relays
- Power line relays

Characteristics

- Good workability, even at high total metal oxide contents
- Excellent anti-welding properties up to 1000 A
- Low erosion rate

Delivery forms

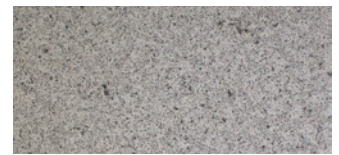
- Wire
- Profile
- Contact tip

Microstructure

The metal oxide particles are homogeneously distributed in the cross section. The directional forming during extrusion leads to a slight orientation of the oxide particles in the longitudinal section.

Composition

Ag/SnO ₂	Ag [wt.-%]	SnO ₂ [wt.-%]	In ₂ O ₃ [wt.-%]	Impurities [wt.-%]
86/14 POX 1	86 ± 1	balance	4.5 ± 0.5	≤ 0.1
88/12 POX 1	88 ± 1	balance	3.5 ± 0.5	≤ 0.1
90/10 POX 1	90 ± 1	balance	3.2 ± 0.5	≤ 0.1



cross section
Ag/SnO₂ 86/14 POX 1



longitudinal section
Ag/SnO₂ 86/14 POX 1

Physical Properties

Ag/SnO ₂	Density [g/cm ³]	Electrical Conductivity [m/(Ω·mm ²)]	Hardness Soft [HV1]	Tensile Strength Soft Wire [N/mm ²]	Elongation to Rupture [%]
86/14 POX 1	9.6 (100% of theoretical density)	45 ± 5	95 ± 15	330, typical 315 ± 15	> 20, typical 25
88/12 POX 1	9.8 (100% of theoretical density)	48 ± 5	90 ± 15	325, typical 310 ± 15	> 25, typical 28
90/10 POX 1	9.9 (100% of theoretical density)	50 ± 5	85 ± 15	310, typical 290 ± 15	> 25, typical 30