SAXONIA®
TECHNICAL MATERIALS

DODUCO®

Ag/ZnO

SILVER ZINC OXIDE

/ SILVER ZINC OXIDE (Ag/ZnO)

Scope: This information refers to silver zinc oxide wires, profiles, and contact tips manufactured by blending of silver and zinc oxide powder without (SP) and with additives (SPW/PW25), compacting, sintering, extruding and drawing or rolling to final dimension. Profiles and tips are available with a backing layer of silver and optionally with an additional layer of brazing alloy.

Manufacturing process and delivery forms

The material is manufactured by blending silver and zinc oxide powder, compacting, sintering, and extruding in the form of wire, profile and contact tips.

The latter are available with a brazable silver layer and, optionally, with an additional layer of brazing alloy.

Key features

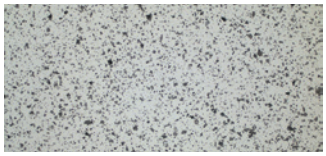
- high resistance to welding on make
- low contact resistance (comparable with other silver metal oxides)
- low erosion in small current-limiting circuit breakers and motor-protection circuit breakers
- free of toxic and carcinogenic components

Applications

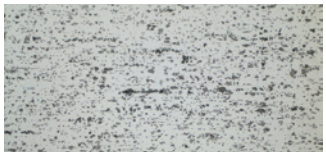
- earth-leakage circuit breaker
- motor-protection circuit breaker
- circuit breaker
- general purpose relays
- small contactors

Microstructure

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



Ag/ZnO 92/8 SPW
cross section



Ag/ZnO 92/8 SPW
longitudial section

Physical Properties

Ag/ZnO	Additive	Density	Electrical Conductivity	Hardness Soft
		[g/cm³]	[m/(Ω·mm²)]	[HV1]
92/8 SP	none	9.7	50	60
92/8 SPW	WO3	9.7	49	60
92/8 PW25	Ag_2WO_4	9.6	48	65
90/10 SPW	WO3	9.6	45	70

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