

Silver Cadmium Oxide

Scope

This information refers to silver cadmium oxide wires, profiles and contact tips manufactured by blending of silver and cadmium oxide powder, compacting, sintering, extruding and then drawing or rolling to final dimension. Profiles and tips are available with a brazeable silver backing layer.

Designation of standard compositions

The silver content is designated by the first number: e.g. Ag/CdO 88/12 with 88 wt.-% silver, balance CdO. The standard oxide contents are 10, 12 and 15.

Key Features

- excellent anti-welding properties on make, higher CdO content is improving anti-welding properties
- low contact resistance compared to other metal oxides
- contact resistance stable throughout the time life
- low arc erosion, excellent arc extinguishing properties
- tendency for material transfer in DC applications

Applications

- switches for domestic applications, main switches
- earth leakage breakers, miniature circuit breakers

- contactors
- circuit breakers up to a switching current of 3000 A
- power line relays

Microstructure

The nature of our production process leads to a certain orientation of the CdO particles along the direction of extrusion.



longitudinal section
Ag/CdO 90/10 SP

cross section
Ag/CdO 90/10 SP

cross section
Ag/CdO 85/15 SP

Physical Properties

Material	Ag/CdO 90/10 SP	Ag/CdO 88/12 SP	Ag/CdO 85/15 SP
Density [g/cm ³]	10,2	10,1	10,0
Electrical Conductivity [m/Ω/mm ²]	48	47	45
Hardness soft [HV1]	50	60	65
Tensile Strength soft [MPa]	240	250	260
Elongation [%]	30	29	25



Ag/CdO