

Properties of Silver Cadmium Oxide Materials (SKO)

Material Designation	Oxidation Method	Silver Content Wt-%	Density		Conductivity %IACS	Hardness HV1
			g/cm3	oz/in3		
SKO-10M	One-Side Oxidation	90	10.2	5.90	76	60
SKO-10B	Powder Metallurgy				88	60
SKO-10D	Through Oxidation				86	60
SKO-10F	Fragmental Oxidation				89	75
SKO-15M	One-Side Oxidation	85	10.0	5.78	62	80
SKO-15B	Powder Metallurgy				79	75
SKO-15D	Through Oxidation				80	80

*Available Forms: Wire, Silver Backed Strip & Tips, Clad to Copper, Brazed Profile, and Multilayer Tapes

Internal Oxidation Methods

One-Side Oxidation, SKO-M Material Photomicrographs

Checon's unique method of oxidizing AgCd alloy from one side yields longer lengths when compared to conventionally welded and oxidized tips. Oxidation is accomplished under high pressure, high temperature conditions, producing a characteristic gradation of oxide particle size from fine to coarse through the strip thickness. Oxidation is halted before completion, leaving a layer of unoxidized AgCd material to be clad, brazed, or welded for further assembly operations.



Short Transverse



Long Transverse

Through Oxidation, SKO-D Material Photomicrographs

With oxygen penetrating both sides of a strip of AgCd material, processing of SKO-10D material takes less time in oxidation than oxidation from one side only. A fine silver backing layer is hot bonded to the material after oxidation to produce a strong bond that is ideal for the manufacture of long lengths and subsequent cladding operations. The resulting material's characteristic structure shows a developed cadmium depletion zone in the center of the strip.



Short Transverse



Long Transverse

Fragmental Oxidation, SKO-F Material Photomicrographs

With oxygen penetrating both sides of a strip of AgCd material, processing of SKO-10D material takes less time in oxidation than oxidation from one side only. A fine silver backing layer is hot bonded to the material after oxidation to produce a strong bond that is ideal for the manufacture of long lengths and subsequent cladding operations. The resulting material's characteristic structure shows a developed cadmium depletion zone in the center of the strip.



Short Transverse



Long Transverse

Powder Metallurgical Method

Direct Strip Production, SKO-B Photomicrographs

Fragmental oxidation allows the production of internally oxidized AgCdO with a very uniform CdO particle size. In this procedure, the processed AgCd alloy is oxidized and then cut to closely controlled dimensions and reconstituted into a billet for subsequent extrusion into either wire or strip form. This material displays excellent ductility, anti-welding, and arc erosion properties making it highly suitable for the manufacture of headed rivets.



Short Transverse



Long Transverse