

# Arc Affected Surface Composition Changes in Silver Tin Oxide Contacts

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*Abstract:* The pressure to replace silver-cadmium oxide (Ag/CdO), which has been a preferred material for many contact applications, presents a continued need for data to allow for informed design decisions. The effect of arcing on contacts in service typically creates a layer of disturbed material that over time fully replaces the original composition as the mating material. For this study several tin oxide mixtures are compared to determine how greatly this change is from the original composition. In this study the comparison of performance between silver cadmium oxide (Ag/CdO) and several silver-tin oxide (Ag/SnO<sub>2</sub>) compositions made with various additives is expanded. This study builds on the prior work done on these contact compositions which compared weld strength, switching life and arc eroded surface contact resistance.

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