

Title (en)

Electric fuses employing composite metal fuse elements.

Title (de)

Elektrische Schmelzsicherungen mit Schmelzleitern, die aus verschiedenen Metallen zusammengesetzt sind.

Title (fr)

Fusibles électriques employant des éléments fusibles composés de différents métaux.

Publication

**EP 0016467 A1 19801001 (EN)**

Application

**EP 80101485 A 19800321**

Priority

US 2238179 A 19790321

Abstract (en)

High voltage current limiting fuse employing a composite metal fuse element, which consists of at least two portions of different metals (10, 12) with different electrothermal properties extending through the melt and arc zone, the two portions being bonded to one another along their adjoining faces for good thermal exchange. One metal of the composite should be of high conductivity and high melting point while the other is of low melting point, so that melting of the low melting point metal occurs at any and all locations along the element when its temperature reaches the said low melting point. The resulting composite exhibits properties that are not the mean of the metals employed and has a reversible resistance characteristic thus facilitating the design of the fuse for low current fault interruption. An element having a low melting temperature along its entire length results and gives essential arcing substantially simultaneously of the total element to improve the low current clearing performance of the fuse. The metals are selected from the group consisting of silver, copper, tin, nickel, lead, magnesium, zinc, aluminum and cadmium while the preferred combination is zinc and aluminum or cadmium and silver. A barrier may be provided between the two portions, such as a preformed alloy layer.

IPC 1-7

**H01H 85/04**

IPC 8 full level

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CPC (source: EP)

**H01H 85/055** (2013.01); **H01H 85/06** (2013.01)

Citation (search report)

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