

Title (en)

Non-detonatable pyrotechnic materials for microsystems

Title (de)

Nichtdetonierbare pyrotechnische Materialien für Mikrosysteme

Title (fr)

Nouveaux matériaux pyrotechniques non détonables pour microsytèmes

Publication

EP 0936205 B1 20021002 (FR)

Application

EP 99400281 A 19990208

Priority

- CA 2267512 A 19990326
- FR 9801538 A 19980210
- NO 991464 A 19990325

Abstract (en)

[origin: EP0936205A1] Non-explosive pyrotechnic material, which is auto-combustible at or near atmospheric pressure, comprises an energizing binder and ammonium perchlorate. The material is auto-combustible after initiation by an electrical pulse. Non-explosive pyrotechnic material, which is auto-combustible at or near atmospheric pressure, comprises an energizing binder and ammonium perchlorate. The material has a thickness less than 500 microns or a mass less than 15 mg. The material is auto-combustible after initiation by an electrical pulse, P, such that $150 \text{ mW} \leq P \leq 800 \text{ mW}$ for a time, t, such that $20 \text{ ms} \leq t \leq 600 \text{ ms}$. the material comprises: 25-80 wt.% energetic binder based on glycidyl polyazote (PAG), or poly-3,3-bis(azidomethyl)oxetane (BAMO), or polyester or polyether and at least one energizing plastifier; 10-70 wt.% ammonium perchlorate with grain size of 0.5-30 microns; and 0-45 wt.% at least one nitroamine. Independent claims are also included for energizing compound for making the material; and use of the material as micro-generator for gas or heat.

IPC 1-7

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IPC 8 full level

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CPC (source: EP US)

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