Title (en)

High performance active material for an infra-red decoy which emits spectral radiation upon combustion

Title (de)

Hochleistungswirkmasse für ein beim Abbrand spektral strahlendes Infrarotscheinziel

Title (fr)

Masse active à grande puissance pour une cible à rayonnement infrarouge à émission spectrale lors d'une combustion

Publication

EP 2530065 A2 20121205 (DE)

Application

EP 12004098 A 20120526

Priority

DE 102011103482 A 20110603

Abstract (en)

High performance active material comprises a fuel, an oxidizing agent, a binder and a substance containing carbon, where: the fuel and the oxidizing agent are selected such the oxidizing agent is oxidized to the fuel after its ignition in an exothermic primary reaction under the formation of a temperature of at least 1000 K; and the substance is selected such that the substance is endothermally pyrolyzed by the heat released during the primary reaction and releases flammable gas in air. High performance active material comprises a fuel, an oxidizing agent, a binder and a substance containing carbon, where: the fuel and the oxidizing agent are selected such that the oxidizing agent is oxidized to the fuel after its ignition in an exothermic primary reaction under the formation of a temperature of at least 1000 K; the substance is selected such that the substance is endothermally pyrolyzed by the heat released during the primary reaction and releases flammable gas in air; the redox potential of the fuel is at least as high as the redox potential of carbon; and the substance and its proportion are selected on the high-performance active material so that the temperature of the high performance active material does not exceed 2000 K after its ignition due to the heat extraction by pyrolysis, which takes place endothermally.

Abstract (de)

Die Erfindung betrifft eine Hochleistungswirkmasse für ein beim Abbrand spektral strahlendes pyrotechnisches Infrarotscheinziel, umfassend einen Brennstoff, ein Oxidationsmittel, ein Bindemittel und einen Kohlenstoff enthaltenden Stoff, wobei der Brennstoff und das Oxidationsmittel so gewählt sind, dass das Oxidationsmittel den Brennstoff nach dessen Zündung in einer exothermen Primärreaktion unter Entstehung einer Temperatur von mindestens 1000 K oxidieren kann, wobei der Stoff so gewählt ist, dass der Stoff durch die bei der Primärreaktion freiwerdende Wärme endotherm pyrolysiert wird und dabei an Luft brennbares Gas freisetzt.

IPC 8 full level

C06C 15/00 (2006.01)

CPC (source: EP)

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Cited by

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Designated contracting state (EPC)

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