

Title (en)

Nitratoethyl nitroamine propellant for automobile safety systems

Title (de)

Nitratoethylnitroamin Treibmittel für Automobilsicherheitssysteme

Title (fr)

Propergol constitué de nitratoéthyle nitramine pour systèmes de sécurité pour automobiles

Publication

**EP 1932817 A1 20080618 (DE)**

Application

**EP 06405515 A 20061212**

Priority

EP 06405515 A 20061212

Abstract (en)

The propellant comprises a binder, a nitratoethylnitroamine softener, preferably butyl nitratoethylnitroamine (Butyl NENA) and an oxidizer, which is free from heavy metals. The binder is a mixture of inert and energetic cellulose derivatives, which is present in 5-30 wt.%, particularly 10-25 wt.% of the mixture. The inert cellulose derivative is a derivative of acetate butyrate and energetic cellulose is a derivative of nitrocellulose.

Abstract (de)

Ein extrudiertes Treibmittel für Automobilsicherheitssysteme beinhaltet einen Binder, einen Weichmacher aus der Klasse der Nitratoethylnitroamine und einen Oxidator, welcher frei von Schwermetallen ist. Besonders bevorzugt ist Butyl-Nitratoethylnitroamin als Weichmacher. Vorzugsweise liegen im Treibmittel energetische Cellulosederivate als Binderkomponenten vor.

IPC 8 full level

**C06D 5/06** (2006.01); **C06B 45/10** (2006.01)

CPC (source: EP)

**C06B 45/105** (2013.01); **C06D 5/06** (2013.01)

Citation (search report)

- [XY] EP 0825074 A2 19980225 - TRW INC [US]
- [X] US 6468370 B1 20021022 - BLOMQUIST HAROLD R [US]
- [DY] EP 1205459 A1 20020515 - DAICEL CHEM [JP]
- [Y] US 2001017175 A1 20010830 - MANGUM MICHAEL G [US], et al
- [DY] US 6875295 B2 20050405 - BLOMQUIST HAROLD R [US], et al
- [Y] WO 9707080 A1 19970227 - ALLIANT TECHSYSTEMS INC [US]
- [A] WO 0110677 A2 20010215 - ATLANTIC RES CORP [US]
- [A] EP 0553476 A1 19930804 - HERCULES INC [US]
- [A] RAO KALA P C ET AL: "Studies on n-Butyl nitroxyethylnitramine (n-BuNENA): Synthesis, characterization and propellant evaluations", PROPELLANTS EXPLOS PYROTECH; PROPELLANTS, EXPLOSIVES, PYROTECHNICS APRIL 2004, vol. 29, no. 2, April 2004 (2004-04-01), pages 93 - 98, XP002449901

Cited by

CN111433172A; FR3014431A1; CN114956916A; EP2388244A1; JP2012188340A; US8845833B2; US8795451B2; WO2015082845A1; WO2011090375A1

Designated contracting state (EPC)

AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LI LT LU LV MC NL PL PT RO SE SI SK TR

Designated extension state (EPC)

AL BA HR MK RS

DOCDB simple family (publication)

**EP 1932817 A1 20080618**

DOCDB simple family (application)

**EP 06405515 A 20061212**