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Abstract

Semi-continuous two-component process for producing a composite explosive charge comprising a polyurethane matrix

The invention relates to the military field of explosive munitions. A subject-matter of the invention is a semi-continuous process for producing a composite explosive charge comprising a charged solid polyurethane matrix, the charge of which is pulverulent and comprises at least one nitro-organic explosive, by introduction into a mould of a pasty explosive composition and then thermal crosslinking of this composition.

The composition is obtained by mixing constituents essentially comprising a polyol prepolymer, a plasticizer, a polyisocyanate monomer and a pulverulent solid charge comprising at least one nitro-organic explosive. More specifically, 2 components:

- . a pasty component A comprising all the polyol prepolymer and all the pulverulent solid charge,
 - . a liquid component B comprising all the polyisocyanate monomer,
- the plasticizer being distributed without distinction between the 2 components A and B,
- are first of all prepared from the combined

constituents.

The component A and the component B are subsequently mixed under continuous conditions such that the component A/component B ratio by mass is constant and between 95/5 and 99.5/0.5.

This simple and economic process makes it possible to dispense, without disadvantage, with the pot life/curing time of the composition compromise.