

**CPC****COOPERATIVE PATENT CLASSIFICATION****C06B**

**EXPLOSIVES OR THERMIC COMPOSITIONS** (blasting [F42D](#));  
**MANUFACTURE THEREOF; USE OF SINGLE SUBSTANCES AS**  
**EXPLOSIVES** (compounds in general [C01](#), [C07](#) or [C08](#); {demolition agents  
 based on cementitious or like materials [C04B 41/0009](#)})

**NOTES**

1. This subclass covers:
  - compositions which are:
    - a. explosive: compositions included are those containing both a fuel and sufficient oxidiser so that, upon initiation, they are capable of undergoing a chemical change of a relatively high rate of speed, resulting in the production of usable force for blasting, firearms, propelling missiles, or the like;
    - b. thermic: compositions included have
      - i. a consumable fuel component which consists of any element which is a metal, B, Si, Se or Te, or mixtures, intercompounds, or hydrides thereof; and
      - ii. in combination an oxidant component which is either a metal oxide or a salt (organic or inorganic) capable of yielding a metal oxide on decomposition;
    - c. fuels for rocket engines and intended for reaction with an oxidant, excluding air, in order to provide thrust for motive power purposes;
    - d. for use in affecting the explosion environment, e.g. for neutralising the poisonous gases of explosives, for cooling the explosion gases, or the like;
  - methods or apparatus for preparing or treating such compositions not otherwise provided for;
  - methods of using single substances as explosives.
2. In this subclass, the following term is used with the meaning indicated:
  - "nitrated" covers compounds having a nitro group or a nitrate ester group.
3. Methods or apparatus for preparing or treating such compositions are classified according to the particular components of the compositions.
4. In this subclass, the words "based on", with reference to explosive compositions, refer to the explosive ingredient present in the largest proportion by weight
5. In the absence of an indication to the contrary a composition is classified in the last place that provides for an ingredient

**C06B 21/00**

**Apparatus or methods for working-up explosives, e.g. forming, cutting, drying**

**NOTE**

In the absence of an indication to the contrary a process is classified in the last appropriate place, e.g. granulation by extrusion and chopping [C06B 21/0075](#)]

**C06B 21/0008**

- {Compounding the ingredient}

- C06B 21/0016
  - {the ingredient being nitrocellulose or oranitro cellulose based propellant; Working up; gelatinising; stabilising (stabilising of explosives in general [C06B 21/0091](#))}
- C06B 21/0025
  - {the ingredient being a polymer bonded explosive or thermic component}
- C06B 21/0033
  - {Shaping the mixture}
- C06B 21/0041
  - {by compression}
- C06B 21/005
  - {By a process involving melting at least part of the ingredients}
- C06B 21/0058
  - {by casting a curable composition, e.g. of the plastisol type}
- C06B 21/0066
  - {by granulation, e.g. flaking}
- C06B 21/0075
  - {by extrusion}
- C06B 21/0083
  - {Treatment of solid structures, e.g. for coating or impregnating with a modifier (compositions therefor [C06B 23/00](#))}
- C06B 21/0091
  - {Elimination of undesirable or temporary components of an intermediate or finished product, e.g. making porous or low density products, purifying, stabilising, drying; Deactivating; Reclaiming; (porous inert particles or chemicals compounded for these purposes [C06B 23/00](#))}

**C06B 23/00****Compositions characterised by non-explosive or non-thermic constituents**

{(in combination with specific explosives [C06B 25/20](#), [C06B 25/26](#), [C06B 29/04](#), [C06B 29/08](#), [C06B 31/06](#), [C06B 31/40](#), [C06B 33/02](#))}

- C06B 23/001
  - {Fillers, gelling and thickening agents (e.g. fibres) , absorbents for nitroglycerine (binders, plasticisers for propellants [C06B 45/10](#); crosslinking or curing agents [C06B 45/10](#))}
- C06B 23/002
  - {Sensitisers or density reducing agents, foam stabilisers, crystal habit modifiers}
- C06B 23/003
  - {Porous or hollow inert particles (preparation [C06B 21/0091](#))}
- C06B 23/004
  - {Chemical sensitisers}
- C06B 23/005
  - {Desensitisers, phlegmatisers (coolants for mining explosives [C06B 23/04](#); deactivating [C06B 21/0091](#))}
- C06B 23/006
  - {Stabilisers (e.g. thermal stabilisers) (processes [C06B 21/0091](#); foam stabilisers [C06B 23/002](#))}
- C06B 23/007
  - {Ballistic modifiers, burning rate catalysts, burning rate depressing agents, e.g. for gas generating}
- C06B 23/008
  - {Tagging additives}
- C06B 23/009
  - {Wetting agents, hydrophobing agents, dehydrating agents, antistatic additives, viscosity improvers, antiagglomerating agents, grinding agents and other additives for working up}
- C06B 23/02
  - for neutralising poisonous gases from explosives produced during blasting
- C06B 23/04
  - for cooling the explosion gases {including antifouling and flash suppressing agents}

**C06B 25/00****Compositions containing a nitrated organic compound**

- C06B 25/02
  - the nitrated compound being starch or sugar
- C06B 25/04
  - the nitrated compound being an aromatic
- C06B 25/06
  - with two or more nitrated aromatic compounds present
- C06B 25/08
  - at least one of which is nitrated toluene

C06B 25/10	<ul style="list-style-type: none"> <li>the compound being nitroglycerine</li> </ul>
C06B 25/12	<ul style="list-style-type: none"> <li>with other nitrated organic compounds</li> </ul>
C06B 25/14	<ul style="list-style-type: none"> <li>the other compound being a nitrated aliphatic diol</li> </ul>
C06B 25/16	<ul style="list-style-type: none"> <li>the other compound being a nitrated aromatic</li> </ul>
C06B 25/18	<ul style="list-style-type: none"> <li>the compound being nitrocellulose present as 10% or more by weight of the total composition</li> </ul>
C06B 25/20	<ul style="list-style-type: none"> <li>with a non-explosive or a non-explosive or a non-thermic component</li> </ul>
C06B 25/22	<ul style="list-style-type: none"> <li>with a nitrated aromatic compound</li> </ul>
C06B 25/24	<ul style="list-style-type: none"> <li>with nitroglycerine</li> </ul>
C06B 25/26	<ul style="list-style-type: none"> <li>with an organic non-explosive or an organic non-thermic component</li> </ul>
C06B 25/28	<ul style="list-style-type: none"> <li>the compound being nitrocellulose present as less than 10% by weight of the total composition</li> </ul>
C06B 25/30	<ul style="list-style-type: none"> <li>with nitroglycerine</li> </ul>
C06B 25/32	<ul style="list-style-type: none"> <li>the compound being nitrated pentaerythritol</li> </ul>
C06B 25/34	<ul style="list-style-type: none"> <li>the compound being a nitrated acyclic, alicyclic or heterocyclic amine</li> </ul>
C06B 25/36	<ul style="list-style-type: none"> <li>the compound being a nitroparaffin</li> </ul>
C06B 25/38	<ul style="list-style-type: none"> <li>with other nitrated organic compound</li> </ul>
C06B 25/40	<ul style="list-style-type: none"> <li>with two or more nitroparaffins present</li> </ul>
<b>C06B 27/00</b>	<b>Compositions containing a metal, boron, silicon, selenium or tellurium or mixtures, intercompounds or hydrides thereof, and hydrocarbons or halogenated hydrocarbons</b>
<b>C06B 29/00</b>	<b>Compositions containing an inorganic oxygen-halogen salt, e.g. chlorate, perchlorate</b>
C06B 29/02	<ul style="list-style-type: none"> <li>of an alkali metal</li> </ul>
C06B 29/04	<ul style="list-style-type: none"> <li>with an inorganic non-explosive or an inorganic non-thermic component</li> </ul>
C06B 29/06	<ul style="list-style-type: none"> <li>the component being a cyanide; the component being an oxide of iron, chromium or manganese</li> </ul>
C06B 29/08	<ul style="list-style-type: none"> <li>with an organic non-explosive or an organic non-thermic component</li> </ul>
C06B 29/10	<ul style="list-style-type: none"> <li>the component being a dye or a colouring agent</li> </ul>
C06B 29/12	<ul style="list-style-type: none"> <li>with carbon or sulfur</li> </ul>
C06B 29/14	<ul style="list-style-type: none"> <li>with iodine or an iodide</li> </ul>
C06B 29/16	<ul style="list-style-type: none"> <li>with a nitrated organic compound</li> </ul>
C06B 29/18	<ul style="list-style-type: none"> <li>the compound being nitrated toluene or a nitrated phenol</li> </ul>
C06B 29/20	<ul style="list-style-type: none"> <li>the compound being nitrocellulose</li> </ul>
C06B 29/22	<ul style="list-style-type: none"> <li>the salt being ammonium perchlorate</li> </ul>
<b>C06B 31/00</b>	<b>Compositions containing an inorganic nitrogen-oxygen salt</b>
C06B 31/02	<ul style="list-style-type: none"> <li>the salt being an alkali metal or an alkaline earth metal nitrate</li> </ul>
C06B 31/04	<ul style="list-style-type: none"> <li>with carbon or sulfur</li> </ul>
C06B 31/06	<ul style="list-style-type: none"> <li>with an organic non-explosive or an organic non-thermic component</li> </ul>

- C06B 31/08 . . with a metal oxygen-halogen salt, e.g. inorganic chlorate, inorganic perchlorate
- C06B 31/10 . . . with carbon or sulfur
- C06B 31/12 . . with a nitrated organic compound
- C06B 31/14 . . . the compound being an aromatic
- C06B 31/16 . . . . the compound being a nitrated toluene
- C06B 31/18 . . . . the compound being a nitrated phenol, e.g. picric acid
- C06B 31/20 . . . the compound being nitroglycerine
- C06B 31/22 . . . the compound being nitrocellulose
- C06B 31/24 . . . . with other explosive or thermic component
- C06B 31/26 . . . . . the other component being nitroglycerine
- C06B 31/28 . the salt being ammonium nitrate
- C06B 31/285 . . {with fuel oil, e.g. ANFO-compositions}
- C06B 31/30 . . with vegetable matter; with resin; with rubber
- C06B 31/32 . . with a nitrated organic compound
- C06B 31/34 . . . the nitrated compound being starch or sugar
- C06B 31/36 . . . . with other explosive or thermic component
- C06B 31/38 . . . the nitrated compound being an aromatic
- C06B 31/40 . . . . with an organic non-explosive or an organic non-thermic component
- C06B 31/42 . . . . with other explosive or thermic component
- C06B 31/44 . . . the compound being nitroglycerine
- C06B 31/46 . . . . with a vegetable matter component, e.g. wood pulp, sawdust
- C06B 31/48 . . . . with other explosive or thermic component
- C06B 31/50 . . . . . the other component being a nitrated organic compound
- C06B 31/52 . . . the compound being nitrocellulose present as 10% or more by weight of the total composition
- C06B 31/54 . . . . with other nitrated organic compound
- C06B 31/56 . . . the compound being nitrocellulose present as less than 10% by weight of the total composition

**C06B 33/00**

**Compositions containing particulate metal, alloy, boron, silicon, selenium or tellurium with at least one oxygen supplying material which is either a metal oxide or a salt, organic or inorganic, capable of yielding a metal oxide**

- C06B 33/02 . with an organic non-explosive or an organic non-thermic component
- C06B 33/04 . the material being an inorganic nitrogen-oxygen salt
- C06B 33/06 . the material being an inorganic oxygen-halogen salt
- C06B 33/08 . with a nitrated organic compound
- C06B 33/10 . . the compound being an aromatic
- C06B 33/12 . the material being two or more oxygen-yielding compounds
- C06B 33/14 . . at least one being an inorganic nitrogen-oxygen salt

**C06B 35/00**

**Compositions containing a metal azide**

<b>C06B 37/00</b>	<b>Compositions containing a metal fulminate</b>
C06B 37/02	<ul style="list-style-type: none"> <li>with a nitrated organic compound or an inorganic oxygen-halogen salt</li> </ul>
<b>C06B 39/00</b>	<b>Compositions containing free phosphorus or a binary compound of phosphorus, except with oxygen</b>
C06B 39/02	<ul style="list-style-type: none"> <li>with an inorganic oxygen-halogen salt</li> </ul>
C06B 39/04	<ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>with a binary compound of phosphorus, except with oxygen</li> </ul> </li> </ul>
C06B 39/06	<ul style="list-style-type: none"> <li>with free metal, alloy, boron, silicon, selenium or tellurium</li> </ul>
<b>C06B 41/00</b>	<b>Compositions containing a nitrated metallo-organic compound</b>
C06B 41/02	<ul style="list-style-type: none"> <li>the compound containing lead</li> </ul>
C06B 41/04	<ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>with an organic explosive or an organic thermic component</li> </ul> </li> </ul>
C06B 41/06	<ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>with an inorganic explosive or an inorganic thermic component</li> </ul> </li> </ul> </li> </ul>
C06B 41/08	<ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>with a metal azide or a metal fulminate</li> </ul> </li> </ul>
C06B 41/10	<ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>with other nitrated metallo-organic compound</li> </ul> </li> </ul>
<b>C06B 43/00</b>	<b>compositions characterised by explosive or thermic constituents not provided for in groups <a href="#">C06B 25/00</a> to <a href="#">C06B 41/00</a></b>
<b>C06B 45/00</b>	<b>Compositions or products which are defined by structure or arrangement of component of product (explosive charges of particular form or shape <a href="#">F42B 1/00</a>, <a href="#">F42B 3/00</a>)</b>
C06B 45/02	<ul style="list-style-type: none"> <li>comprising particles of diverse size or shape</li> </ul>
C06B 45/04	<ul style="list-style-type: none"> <li>comprising solid particles dispersed in solid solution or matrix {not used for explosives where the matrix consists essentially of nitrated carbohydrates or a low molecular organic explosive}</li> </ul>
C06B 45/06	<ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>the solid solution or matrix containing an organic component</li> </ul> </li> </ul>
C06B 45/08	<ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>the dispersed solid containing an inorganic explosive or an inorganic thermic component</li> </ul> </li> </ul> </li> </ul>
C06B 45/10	<ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>the organic component containing a resin</li> </ul> </li> </ul> </li> </ul>
C06B 45/105	<ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>{The resin being a polymer bearing energetic groups or containing a soluble organic explosive}</li> </ul> </li> </ul> </li> </ul> </li> </ul>
C06B 45/12	<ul style="list-style-type: none"> <li>having contiguous layers or zones</li> </ul>
C06B 45/14	<ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>a layer or zone containing an inorganic explosive or an inorganic explosive or an inorganic thermic component</li> </ul> </li> </ul>
C06B 45/16	<ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>the layer or zone containing at least one inorganic component from the group of azide, fulminate, phosphorus and phosphide</li> </ul> </li> </ul> </li> </ul>
C06B 45/18	<ul style="list-style-type: none"> <li>comprising a coated component (particles dispersed in a matrix <a href="#">C06B 45/04</a>; coated explosive charges <a href="#">F42B</a>)</li> </ul>
C06B 45/20	<ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>the component base containing an organic explosive or an organic thermic component</li> </ul> </li> </ul>
C06B 45/22	<ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>the coating containing an organic compound</li> </ul> </li> </ul> </li> </ul>
C06B 45/24	<ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>the compound being an organic explosive or an organic thermic component</li> </ul> </li> </ul> </li> </ul> </li> </ul>
C06B 45/26	<ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>the compound being a nitrated toluene</li> </ul> </li> </ul> </li> </ul> </li> </ul>

- C06B 45/28 . . . the component base containing nitrocellulose and nitroglycerine
- C06B 45/30 . . the component base containing an inorganic explosive or an inorganic thermic component
- C06B 45/32 . . . the coating containing an organic compound
- C06B 45/34 . . . . the compound being an organic explosive or an organic thermic component
- C06B 45/36 . . the component base containing both an organic explosive or thermic component and an inorganic explosive or thermic component
  
- C06B 47/00** **Compositions in which the components are separately stored until the moment of burning or explosion, e.g. "Sprengel"-type explosives; Suspensions of solid component in a normally non-explosive liquid phase, including a thickened aqueous phase {This group also covers emulsion type explosives in which a solid component is not compulsory}**
- C06B 47/02 . the component comprising a binary propellant
- C06B 47/04 . . a component containing a nitrogen oxide or acid thereof
- C06B 47/06 . . a component being a liquefied normally gaseous material supplying oxygen (C06B 47/04 takes precedence)
- C06B 47/08 . . a component containing hydrazine or a hydrazine derivative
- C06B 47/10 . . a component containing free boron, an organic borane or a binary compound of boron, except with oxygen
- C06B 47/12 . . a component being a liquefied normally gaseous fuel
- C06B 47/14 . comprising a solid component and an aqueous phase
- C06B 47/145 . . {Water in oil emulsion type explosives in which a carbonaceous fuel forms the continuous phase}
  
- C06B 49/00** **Use of single substances as explosives**