

## SECTION C — CHEMISTRY; METALLURGY

## C06 EXPLOSIVES; MATCHES

## C06B EXPLOSIVE OR THERMIC COMPOSITIONS (blasting F42D); MANUFACTURE THEREOF; USE OF SINGLE SUBSTANCES AS EXPLOSIVES [2]

**Note(s)**

- This subclass covers:
  - compositions which are:
    - 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;
    - 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;
    - fuels for rocket engines and intended for reaction with an oxidant, excluding air, in order to provide thrust for motive power purposes;
    - 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.
- In this subclass, the following term is used with the meaning indicated:
  - "nitrated" covers compounds having a nitro group or a nitrate ester group.
- Methods or apparatus for preparing or treating such compositions are classified according to the particular components of the compositions.

**Subclass index**

## EXPLOSIVE OR THERMIC COMPOSITIONS

Containing nitrated derivatives

inorganic..... 31/00

organic..... 25/00, 41/00

Containing nitrides or fulminates..... 35/00, 37/00

Containing chlorates or perchlorates..... 29/00

Containing metal..... 27/00, 33/00

Containing phosphorus..... 39/00

Other compositions..... 23/00, 43/00

Compositions defined by the structure or arrangement of the components..... 45/00, 47/00

USE OF A SINGLE SUBSTANCE AS AN EXPLOSIVE..... 49/00

MANUFACTURE..... 21/00

**21/00 Apparatus or methods for working-up explosives, e.g. forming, cutting, drying****Note(s)**

In groups C06B 23/00-C06B 49/00, in the absence of an indication to the contrary, a composition is classified in the last place that provides for an ingredient.

**23/00 Compositions characterised by non-explosive or non-thermic constituents [2]**

23/02 • for neutralising poisonous gases from explosives produced during blasting [2]

23/04 • for cooling the explosion gases [2]

**25/00 Compositions containing a nitrated organic compound [2]**

25/02 • the nitrated compound being starch or sugar [2]

25/04 • the nitrated compound being an aromatic [2]

25/06 • • with two or more nitrated aromatic compounds present [2]

25/08 • • • at least one of which is nitrated toluene [2]

25/10 • the compound being nitroglycerine [2]

25/12 • • with other nitrated organic compound [2]

25/14 • • • the other compound being a nitrated aliphatic diol [2]

25/16 • • • the other compound being a nitrated aromatic [2]

25/18 • the compound being nitrocellulose present as 10% or more by weight of the total composition [2]

25/20 • • with a non-explosive or a non-thermic component [2]

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- 25/22 • • with a nitrated aromatic compound [2]
- 25/24 • • with nitroglycerine [2]
- 25/26 • • • with an organic non-explosive or an organic non-thermic component [2]
- 25/28 • the compound being nitrocellulose present as less than 10% by weight of the total composition [2]
- 25/30 • • with nitroglycerine [2]
- 25/32 • the compound being nitrated pentaerythritol [2]
- 25/34 • the compound being a nitrated acyclic, alicyclic or heterocyclic amine [2]
- 25/36 • the compound being a nitroparaffin [2]
- 25/38 • • with other nitrated organic compound [2]
- 25/40 • • with two or more nitroparaffins present [2]
  
- 27/00 Compositions containing a metal, boron, silicon, selenium or tellurium or mixtures, intercompounds or hydrides thereof, and hydrocarbons or halogenated hydrocarbons [2]**
  
- 29/00 Compositions containing an inorganic oxygen-halogen salt, e.g. chlorate, perchlorate [2]**
- 29/02 • of an alkali metal [2]
- 29/04 • • with an inorganic non-explosive or an inorganic non-thermic component [2]
- 29/06 • • • the component being a cyanide; the component being an oxide of iron, chromium or manganese [2]
- 29/08 • • with an organic non-explosive or an organic non-thermic component [2]
- 29/10 • • • the component being a dye or a colouring agent [2]
- 29/12 • • with carbon or sulfur [2]
- 29/14 • • with iodine or an iodide [2]
- 29/16 • • with a nitrated organic compound [2]
- 29/18 • • • the compound being nitrated toluene or a nitrated phenol [2]
- 29/20 • • • the compound being nitrocellulose [2]
- 29/22 • the salt being ammonium perchlorate [2]
  
- 31/00 Compositions containing an inorganic nitrogen-oxygen salt [2]**
- 31/02 • the salt being an alkali metal or an alkaline earth metal nitrate [2]
- 31/04 • • with carbon or sulfur [2]
- 31/06 • • • with an organic non-explosive or an organic non-thermic component [2]
- 31/08 • • with a metal oxygen-halogen salt, e.g. inorganic chlorate, inorganic perchlorate [2]
- 31/10 • • • with carbon or sulfur [2]
- 31/12 • • with a nitrated organic compound [2]
- 31/14 • • • the compound being an aromatic [2]
- 31/16 • • • • the compound being a nitrated toluene [2]
- 31/18 • • • • the compound being a nitrated phenol, e.g. picric acid [2]
- 31/20 • • • the compound being nitroglycerine [2]
- 31/22 • • • the compound being nitrocellulose [2]
- 31/24 • • • • with other explosive or thermic component [2]
- 31/26 • • • • • the other component being nitroglycerine [2]
- 31/28 • the salt being ammonium nitrate [2]
- 31/30 • • with vegetable matter; with resin; with rubber [2]
- 31/32 • • with a nitrated organic compound [2]
- 31/34 • • • the nitrated compound being starch or sugar [2]
- 31/36 • • • • with other explosive or thermic component [2]
  
- 31/38 • • • the nitrated compound being an aromatic [2]
- 31/40 • • • • with an organic non-explosive or an organic non-thermic component [2]
- 31/42 • • • • with other explosive or thermic component [2]
- 31/44 • • • the compound being nitroglycerine [2]
- 31/46 • • • • with a vegetable matter component, e.g. wood pulp, sawdust [2]
- 31/48 • • • • with other explosive or thermic component [2]
- 31/50 • • • • • the other component being a nitrated organic compound [2]
- 31/52 • • • the compound being nitrocellulose present as 10% or more by weight of the total composition [2]
- 31/54 • • • • with other nitrated organic compound [2]
- 31/56 • • • the compound being nitrocellulose present as less than 10% by weight of the total composition [2]
  
- 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 [2]**
- 33/02 • with an organic non-explosive or an organic non-thermic component [2]
- 33/04 • the material being an inorganic nitrogen-oxygen salt [2]
- 33/06 • the material being an inorganic oxygen-halogen salt [2]
- 33/08 • with a nitrated organic compound [2]
- 33/10 • • the compound being an aromatic [2]
- 33/12 • the material being two or more oxygen-yielding compounds [2]
- 33/14 • • at least one being an inorganic nitrogen-oxygen salt [2]
  
- 35/00 Compositions containing a metal azide [2]**
  
- 37/00 Compositions containing a metal fulminate [2]**
- 37/02 • with a nitrated organic compound or an inorganic oxygen-halogen salt [2]
  
- 39/00 Compositions containing free phosphorus or a binary compound of phosphorus, except with oxygen [2]**
- 39/02 • with an inorganic oxygen-halogen salt [2]
- 39/04 • • with a binary compound of phosphorus, except with oxygen [2]
- 39/06 • with free metal, alloy, boron, silicon, selenium or tellurium [2]
  
- 41/00 Compositions containing a nitrated metallo-organic compound [2]**
- 41/02 • the compound containing lead [2]
- 41/04 • • with an organic explosive or an organic thermic component [2]
- 41/06 • • • with an inorganic explosive or an inorganic thermic component [2]
- 41/08 • • with a metal azide or a metal fulminate [2]
- 41/10 • • with other nitrated metallo-organic compound [2]
  
- 43/00 Compositions characterised by explosive or thermic constituents not provided for in groups C06B 25/00-C06B 41/00 [2]**

- 45/00 Compositions or products which are defined by structure or arrangement of component or product** (explosive charges of particular form or shape F42B 1/00, F42B 3/00) [2]
- 45/02 • comprising particles of diverse size or shape [2]
- 45/04 • comprising solid particles dispersed in solid solution or matrix [2]
- 45/06 • • the solid solution or matrix containing an organic component [2]
- 45/08 • • • the dispersed solid containing an inorganic explosive or an inorganic thermic component [2]
- 45/10 • • • the organic component containing a resin [2]
- 45/12 • having contiguous layers or zones [2]
- 45/14 • • a layer or zone containing an inorganic explosive or an inorganic thermic component [2]
- 45/16 • • • the layer or zone containing at least one inorganic component from the group of azide, fulminate, phosphorus and phosphide [2]
- 45/18 • comprising a coated component (particles dispersed in a matrix C06B 45/04; coated explosive charges F42B) [2]
- 45/20 • • the component base containing an organic explosive or an organic thermic component [2]
- 45/22 • • • the coating containing an organic compound [2]
- 45/24 • • • • the compound being an organic explosive or an organic thermic component [2]
- 45/26 • • • • • the compound being a nitrated toluene [2]
- 45/28 • • • the component base containing nitrocellulose and nitroglycerine [2]
- 45/30 • • the component base containing an inorganic explosive or an inorganic thermic component [2]
- 45/32 • • • the coating containing an organic compound [2]
- 45/34 • • • • the compound being an organic explosive or an organic thermic component [2]
- 45/36 • • the component base containing both an organic explosive or thermic component and an inorganic explosive or thermic component [2]
- 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** [2]
- 47/02 • the components comprising a binary propellant [2]
- 47/04 • • a component containing a nitrogen oxide or acid thereof [2]
- 47/06 • • a component being a liquefied normally gaseous material supplying oxygen (C06B 47/04 takes precedence) [2]
- 47/08 • • a component containing hydrazine or a hydrazine derivative [2]
- 47/10 • • a component containing free boron, an organic borane or a binary compound of boron, except with oxygen [2]
- 47/12 • • a component being a liquefied normally gaseous fuel [2]
- 47/14 • comprising a solid component and an aqueous phase [2]
- 49/00 Use of single substances as explosives** [2]

**C06C DETONATING OR PRIMING DEVICES; FUSES; CHEMICAL LIGHTERS; PYROPHORIC COMPOSITIONS** [2]

**5/00 Fuses, e.g. fuse cords**

- 5/04 • Detonating fuses
- 5/06 • Fuse igniting means; Fuse connectors
- 5/08 • Devices for the manufacture of fuses

- 7/02 • Manufacture; Packing

**7/00 Non-electric detonators; Blasting caps; Primers**

**9/00 Chemical contact igniters; Chemical lighters**

**15/00 Pyrophoric compositions; Flints** (chemical lighters C06C 9/00)

**C06D MEANS FOR GENERATING SMOKE OR MIST; GAS-ATTACK COMPOSITIONS; GENERATION OF GAS FOR BLASTING OR PROPULSION (CHEMICAL PART)** [2]

**3/00 Generation of smoke or mist (chemical part)** (compositions used as biocides, pest repellants or attractants, or plant growth regulators A01N 25/18)

- 5/02 • by decompressing compressed, liquefied, or solidified gases

**5/00 Generation of pressure gas, e.g. for blasting cartridges, starting cartridges, rockets** (explosive compositions containing an oxidizer, fuels for rocket engines intended for reaction with an oxidant other than air C06B)

- 5/04 • by auto-decomposition of single substances
- 5/06 • by reaction of two or more solids
- 5/08 • by reaction of two or more liquids
- 5/10 • by reaction of solids with liquids

**7/00 Compositions for gas-attacks**

**C06F MATCHES; MANUFACTURE OF MATCHES**

**1/00 Mechanical manufacture of matches**

- 1/02 • Cutting match splints
- 1/04 • Filling match splints into carrier bars; Discharging matches

- 1/06 • Dipping, coating, impregnating, or drying of matches [2]
- 1/08 • Carrier bars
- 1/10 • • Guiding means for carrier bars
- 1/12 • Filling matches into boxes

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- 1/14 • Manufacture of ignition strips
- 1/16 • Manufacture of matches connected together, e.g. in bands or blocks
- 1/18 • Printing on matches or match-boxes when combined with match manufacture
- 1/20 • Applying strike-surfaces, e.g. on match-boxes, on match-books
- 1/22 • Assembling matches
- 1/24 • Safety devices against fire
- 1/26 • Machines for complete match manufacture

### **3/00 Chemical features in the manufacture of matches**

- 3/02 • Wooden strip for matches or substitute therefor
- 3/04 • • Chemical treatment before or after dipping, e.g. dyeing, impregnating
- 3/08 • Strike-surface compositions

### **5/00 Matches (match-books A24F 27/12)**

- 5/02 • Permanent matches
- 5/04 • Wax matches