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

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)

21/0008 . [Compounding the ingredient]
21/0016 . {the ingredient being nitrocellulose or oranitrocellulose based propellant; Working up; gelatinising; stabilising (stabilising of explosives in general C06B 21/0091)]
21/0025 . {the ingredient being a polymer bonded explosive or thermic component}
21/0033 . [Shaping the mixture]
21/0041 . {by compression}
21/005 . {By a process involving melting at least part of the ingredients)
21/0058 . {by casting a curable composition, e.g. of the plastisol type}
21/0066 . {by granulation, e.g. flaking}

21/0075 . {by extrusion}
21/0083 . {Treatment of solid structures, e.g. for coating or impregnating with a modifier (compositions therefor C06B 23/00)}
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)}

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}

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)}
23/002 . {Sensitisers or density reducing agents, foam stabilisers, crystal habit modifiers}
Compositions containing a nitrated organic compound
25/00
25/02 . . . the nitrated compound being starch or sugar
25/04 . . . the nitrated compound being an aromatic
25/06 . . . with two or more nitrated aromatic compounds present
25/08 . . . at least one of which is nitrated toluene
25/10 . . . the compound being nitroglycerine
25/12 . . . with other nitrated organic compounds
25/14 . . . the other compound being a nitrated aliphatic diol
25/16 . . . the other compound being a nitrated aromatic
25/18 . . . the compound being nitrocellulose present as 10% or more by weight of the total composition
25/20 . . . with a non-explosive or a non-explosive or a non-thermic component
25/22 . . . with a nitrated aromatic compound
25/24 . . . with nitroglycerine
25/26 . . . with an organic non-explosive or an organic non-thermic component
25/28 . . . the compound being nitrocellulose present as less than 10% by weight of the total composition
25/30 . . . with nitroglycerine
25/32 . . . the compound being nitrated pentaerythritol
25/34 . . . the compound being a nitrated acyclic, alicyclic or heterocyclic amine
25/36 . . . the compound being a nitroparaffin
25/38 . . . with other nitrated organic compound
25/40 . . . with two or more nitroparaffins present

Compositions containing a metal, boron, silicon, selenium or tellurium or mixtures, intercompounds or hydrides thereof, and hydrocarbons or halogenated hydrocarbons
27/00

Compositions containing an inorganic oxygen-halogen salt, e.g. chlorate, perchlorate
29/00
29/02 . . . of an alkali metal
29/04 . . . with an inorganic non-explosive or an inorganic non-thermic component
29/06 . . . the component being a cyanide; the component being an oxide of iron, chromium or manganese
29/08 . . . with an organic non-explosive or an organic non-thermic component
29/10 . . . the component being a dye or a colouring agent
29/12 . . . with carbon or sulfur
29/14 . . . with iodine or an iodide
29/16 . . . with a nitrated organic compound
29/18 . . . the compound being nitrated toluene or a nitrated phenol
29/20 . . . the compound being nitrocellulose
29/22 . . . the salt being ammonium perchlorate

Compositions containing an inorganic nitrogen-oxygen salt
31/00
31/02 . . . the salt being an alkali metal or an alkaline earth metal nitrate
31/04 . . . with carbon or sulfur
31/06 . . . with an organic non-explosive or an organic non-thermic component
31/08 . . . with a metal oxygen-halogen salt, e.g. inorganic chlorate, inorganic perchlorate
31/10 . . . with carbon or sulfur
31/12 . . . with a nitrated organic compound
31/14 . . . the compound being an aromatic
31/16 . . . . . . the compound being a nitrated toluene
31/18 . . . . . . the compound being a nitrated phenol, e.g. picric acid
31/20 . . . . . . the compound being nitroglycerine
31/22 . . . . . . the compound being nitrocellulose
31/24 . . . . . . with other explosive or thermic component
31/26 . . . . . . the other compound being nitroglycerine
31/28 . . . . . . the salt being ammonium nitrate
31/285 . . . . . . { with fuel oil, e.g. ANFO-compositions }
31/30 . . . . . . with vegetable matter; with resin; with rubber
31/32 . . . . . . with a nitrated organic compound
31/34 . . . . . . the nitrated compound being starch or sugar
31/36 . . . . . . with other explosive or thermic component
31/38 . . . . . . the nitrated compound being an aromatic
31/40 . . . . . . with an organic non-explosive or an organic non-thermic component
31/42 . . . . . . with other explosive or thermic component
31/44 . . . . . . the compound being nitroglycerine
31/46 . . . . . . with a vegetable matter component, e.g. wood pulp, sawdust
31/48 . . . . . . with other explosive or thermic component
31/50 . . . . . . the other component being a nitrated organic compound
31/52 . . . . . . the compound being nitrocellulose present as 10% or more by weight of the total composition
31/54 . . . . . . with other nitrated organic compound
31/56 . . . . . . the compound being nitrocellulose present as less than 10% by weight of the total composition

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
33/00
33/02 . . . with an organic non-explosive or an organic non-thermic component
33/04 . . . the material being an inorganic nitrogen-oxygen salt
33/06 . . . the material being an inorganic oxygen-halogen salt
33/08 . . . with a nitrated organic compound
33/10 . . . the compound being an aromatic
the material being two or more oxygen-yielding compounds

at least one being an inorganic nitrogen-oxygen salt

Compositions containing a metal azide

Compositions containing a metal fulminate

with a nitrated organic compound or an inorganic oxygen-halogen salt

Compositions containing free phosphorus or a binary compound of phosphorus, except with oxygen

with a binary compound of phosphorus, except with oxygen

with free metal, alloy, boron, silicon, selenium or tellurium

Compositions containing a nitrated metallo-organic compound

the compound containing lead

with an organic explosive or an organic thermic component

with an inorganic explosive or an inorganic thermic component

with a metal azide or a metal fulminate

with other nitrated metallo-organic compound

Compositions characterised by explosive or thermic constituents not provided for in groups C06B 25/00 - C06B 41/00

Compositions or products which are defined by structure or arrangement of component of product (explosive charges of particular form or shape F42B 1/00, F42B 3/00)

comprising particles of diverse size or shape

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]

the solid solution or matrix containing an organic component

the dispersed solid containing an inorganic explosive or an inorganic thermic component

the organic component containing a resin

{The resin being a polymer bearing energetic groups or containing a soluble organic explosive}

having contiguous layers or zones

a layer or zone containing an inorganic explosive or an inorganic thermic component

the layer or zone containing at least one inorganic component from the group of azide, fulminate, phosphorus and phosphide

comprising a coated component (particles dispersed in a matrix C06B 45/04; coated explosive charges F42B)

the component base containing an organic explosive or an organic thermic component

the coating containing an organic compound

the compound being an organic explosive or an organic thermic component

the compound being a nitrated toluene

the component base containing nitrocellulose and nitroglycerine

the component base containing an inorganic explosive or an inorganic thermic component

the coating containing an organic compound

the compound being an organic explosive or an organic thermic component

the component base containing both an organic explosive or thermic component and an inorganic explosive or thermic component

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}

the components comprising a binary propellant

a component containing a nitrogen oxide or acid thereof

a component being a liquefied normally gaseous material supplying oxygen (C06B 47/04 takes precedence)

a component containing hydrazine or a hydrazine derivative

a component containing free boron, an organic borane or a binary compound of boron, except with oxygen

a component being a liquefied normally gaseous fuel

comprising a solid component and an aqueous phase

{Water in oil emulsion type explosives in which a carbonaceous fuel forms the continuous phase}

Use of single substances as explosives