CPC COOPERATIVE PATENT CLASSIFICATION

C CHEMISTRY; METALLURGY

CHEMISTRY

C06 EXPLOSIVES; MATCHES

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

WARNING
In this subclass non-limiting references (in the sense of paragraph 39 of the Guide to the IPC) may still be displayed in the scheme.

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)}
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])

Compositions containing a nitrated organic compound

Compositions containing an inorganic oxygen-halogen salt, e.g. chlorate, perchlorate

Compositions containing an inorganic nitrogen-oxygen salt

Compositions containing a metal, boron, silicon, selenium or tellurium or mixtures, intercompounds or hydrides thereof, and hydrocarbons or halogenated hydrocarbons
Use of single substances as explosives

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

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

33/12 . . . the material being two or more oxygen-yielding compounds

33/14 . . . at least one being an inorganic nitrogen-oxygen salt

35/00 Compositions containing a metal azide

37/00 Compositions containing a metal fulminate

37/02 . . . with a nitrated organic compound or an inorganic oxygen-halogen salt

39/00 Compositions containing free phosphorus or a binary compound of phosphorus, except with oxygen

39/02 . . . with an inorganic oxygen-halogen salt

39/04 . . . with a binary compound of phosphorus, except with oxygen

39/06 . . . with free metal, alloy, boron, silicon, selenium or tellurium

41/00 Compositions containing a nitrated metallo-organic compound

41/02 . . . the compound containing lead

41/04 . . . with an organic explosive or an organic thermic component

41/06 . . . with an inorganic explosive or an inorganic thermic component

41/08 . . . with a metal azide or a metal fulminate

41/10 . . . with other nitrated metallo-organic compound

43/00 Compositions characterised by explosive or thermic constituents not provided for in groups C06B 25/00 - C06B 41/00

45/00 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)

45/02 . . . comprising particles of diverse size or shape

45/04 . . . 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)

45/06 . . . the solid solution or matrix containing an organic component

45/08 . . . the dispersed solid containing an inorganic explosive or an inorganic thermic component

45/10 . . . the organic component containing a resin

45/105 . . . . [The resin being a polymer bearing energetic groups or containing a soluble organic explosive]

45/12 . . . having contiguous layers or zones

45/14 . . . a layer or zone containing an inorganic explosive or an inorganic thermic component

45/16 . . . the layer or zone containing at least one inorganic component from the group of azide, fulminate, phosphorus and phosphate

45/18 . . . comprising a coated component (particles dispersed in a matrix C06B 45/04: coated explosive charges F42B)

45/20 . . . the component base containing an organic explosive or an organic thermic component

45/22 . . . the coating containing an organic compound

45/24 . . . . the compound being an explosive or an organic thermic component

45/26 . . . . the compound being a nitrated toluene

45/28 . . . . the component base containing nitrocellulose and nitroglycerine

45/30 . . . the component base containing an inorganic explosive or an inorganic thermic component

45/32 . . . the coating containing an organic compound

45/34 . . . . the compound being an explosive or an organic thermic component

45/36 . . . . the component base containing both an organic explosive or thermic component and an inorganic explosive or thermic component

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

NOTE

[This group also covers emulsion type explosives in which a solid component is not compulsory]

47/02 . . . the components comprising a binary propellant

47/04 . . . a component containing a nitrogen oxide or acid thereof

47/06 . . . a component being a liquefied normally gaseous material supplying oxygen (C06B 47/04 takes precedence)

47/08 . . . a component containing hydrazine or a hydrazine derivative

47/10 . . . a component containing free boron, an organic borane or a binary compound of boron, except with oxygen

47/12 . . . a component being a liquefied normally gaseous fuel

47/14 . . . comprising a solid component and an aqueous phase

47/145 . . . . [Water in oil emulsion type explosives in which a carbonaceous fuel forms the continuous phase]

49/00 Use of single substances as explosives