

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

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 oranitro cellulose 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}
- 23/003 . . {Porous or hollow inert particles ([preparation C06B 21/0091](#))}
- 23/004 . . {Chemical sensitisers}
- 23/005 . {Desensitisers, phlegmatisers ([coolants for mining explosives C06B 23/04](#); [deactivating C06B 21/0091](#))}
- 23/006 . {Stabilisers (e.g. thermal stabilisers) ([processes C06B 21/0091](#); [foam stabilisers C06B 23/002](#))}
- 23/007 . {Ballistic modifiers, burning rate catalysts, burning rate depressing agents, e.g. for gas generating}
- 23/008 . {Tagging additives}

23/009	<ul style="list-style-type: none"> • {Wetting agents, hydrophobing agents, dehydrating agents, antistatic additives, viscosity improvers, antiagglomerating agents, grinding agents and other additives for working up} 	31/02	<ul style="list-style-type: none"> • the salt being an alkali metal or an alkaline earth metal nitrate
23/02	<ul style="list-style-type: none"> • for neutralising poisonous gases from explosives produced during blasting 	31/04	<ul style="list-style-type: none"> • . . with carbon or sulfur
23/04	<ul style="list-style-type: none"> • for cooling the explosion gases {including antifouling and flash suppressing agents} 	31/06	<ul style="list-style-type: none"> • . . . with an organic non-explosive or an organic non-thermic component
25/00	Compositions containing a nitrated organic compound	31/08	<ul style="list-style-type: none"> • . . with a metal oxygen-halogen salt, e.g. inorganic chlorate, inorganic perchlorate
25/02	<ul style="list-style-type: none"> • the nitrated compound being starch or sugar 	31/10	<ul style="list-style-type: none"> • . . . with carbon or sulfur
25/04	<ul style="list-style-type: none"> • the nitrated compound being an aromatic 	31/12	<ul style="list-style-type: none"> • . . with a nitrated organic compound
25/06	<ul style="list-style-type: none"> • . . with two or more nitrated aromatic compounds present 	31/14	<ul style="list-style-type: none"> • . . . the compound being an aromatic
25/08	<ul style="list-style-type: none"> • . . . at least one of which is nitrated toluene 	31/16	<ul style="list-style-type: none"> • the compound being a nitrated toluene
25/10	<ul style="list-style-type: none"> • the compound being nitroglycerine 	31/18	<ul style="list-style-type: none"> • the compound being a nitrated phenol, e.g. picric acid
25/12	<ul style="list-style-type: none"> • . . with other nitrated organic compounds 	31/20	<ul style="list-style-type: none"> • . . . the compound being nitroglycerine
25/14	<ul style="list-style-type: none"> • . . . the other compound being a nitrated aliphatic diol 	31/22	<ul style="list-style-type: none"> • . . . the compound being nitrocellulose
25/16	<ul style="list-style-type: none"> • . . . the other compound being a nitrated aromatic 	31/24	<ul style="list-style-type: none"> • with other explosive or thermic component
25/18	<ul style="list-style-type: none"> • the compound being nitrocellulose present as 10% or more by weight of the total composition 	31/26	<ul style="list-style-type: none"> • the other component being nitroglycerine
25/20	<ul style="list-style-type: none"> • . . with a non-explosive or a non-explosive or a non-thermic component 	31/28	<ul style="list-style-type: none"> • the salt being ammonium nitrate
25/22	<ul style="list-style-type: none"> • . . with a nitrated aromatic compound 	31/285	<ul style="list-style-type: none"> • . {with fuel oil, e.g. ANFO-compositions}
25/24	<ul style="list-style-type: none"> • . . with nitroglycerine 	31/30	<ul style="list-style-type: none"> • . . with vegetable matter; with resin; with rubber
25/26	<ul style="list-style-type: none"> • . . . with an organic non-explosive or an organic non-thermic component 	31/32	<ul style="list-style-type: none"> • . . with a nitrated organic compound
25/28	<ul style="list-style-type: none"> • the compound being nitrocellulose present as less than 10% by weight of the total composition 	31/34	<ul style="list-style-type: none"> • . . . the nitrated compound being starch or sugar
25/30	<ul style="list-style-type: none"> • . . with nitroglycerine 	31/36	<ul style="list-style-type: none"> • with other explosive or thermic component
25/32	<ul style="list-style-type: none"> • the compound being nitrated pentaerythritol 	31/38	<ul style="list-style-type: none"> • . . . the nitrated compound being an aromatic
25/34	<ul style="list-style-type: none"> • the compound being a nitrated acyclic, alicyclic or heterocyclic amine 	31/40	<ul style="list-style-type: none"> • with an organic non-explosive or an organic non-thermic component
25/36	<ul style="list-style-type: none"> • the compound being a nitroparaffin 	31/42	<ul style="list-style-type: none"> • with other explosive or thermic component
25/38	<ul style="list-style-type: none"> • . . with other nitrated organic compound 	31/44	<ul style="list-style-type: none"> • . . . the compound being nitroglycerine
25/40	<ul style="list-style-type: none"> • . . with two or more nitroparaffins present 	31/46	<ul style="list-style-type: none"> • with a vegetable matter component, e.g. wood pulp, sawdust
27/00	Compositions containing a metal, boron, silicon, selenium or tellurium or mixtures, intercompounds or hydrides thereof, and hydrocarbons or halogenated hydrocarbons	31/48	<ul style="list-style-type: none"> • with other explosive or thermic component
29/00	Compositions containing an inorganic oxygen-halogen salt, e.g. chlorate, perchlorate	31/50	<ul style="list-style-type: none"> • the other component being a nitrated organic compound
29/02	<ul style="list-style-type: none"> • of an alkali metal 	31/52	<ul style="list-style-type: none"> • . . . the compound being nitrocellulose present as 10% or more by weight of the total composition
29/04	<ul style="list-style-type: none"> • . . with an inorganic non-explosive or an inorganic non-thermic component 	31/54	<ul style="list-style-type: none"> • with other nitrated organic compound
29/06	<ul style="list-style-type: none"> • . . . the component being a cyanide; the component being an oxide of iron, chromium or manganese 	31/56	<ul style="list-style-type: none"> • . . . the compound being nitrocellulose present as less than 10% by weight of the total composition
29/08	<ul style="list-style-type: none"> • . . with an organic non-explosive or an organic non-thermic component 	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
29/10	<ul style="list-style-type: none"> • . . . the component being a dye or a colouring agent 	33/02	<ul style="list-style-type: none"> • with an organic non-explosive or an organic non-thermic component
29/12	<ul style="list-style-type: none"> • . . with carbon or sulfur 	33/04	<ul style="list-style-type: none"> • the material being an inorganic nitrogen-oxygen salt
29/14	<ul style="list-style-type: none"> • . . with iodine or an iodide 	33/06	<ul style="list-style-type: none"> • the material being an inorganic oxygen-halogen salt
29/16	<ul style="list-style-type: none"> • . . with a nitrated organic compound 	33/08	<ul style="list-style-type: none"> • with a nitrated organic compound
29/18	<ul style="list-style-type: none"> • . . . the compound being nitrated toluene or a nitrated phenol 	33/10	<ul style="list-style-type: none"> • . . the compound being an aromatic
29/20	<ul style="list-style-type: none"> • . . . the compound being nitrocellulose 	33/12	<ul style="list-style-type: none"> • the material being two or more oxygen-yielding compounds
29/22	<ul style="list-style-type: none"> • the salt being ammonium perchlorate 	33/14	<ul style="list-style-type: none"> • . . at least one being an inorganic nitrogen-oxygen salt
31/00	Compositions containing an inorganic nitrogen-oxygen salt	35/00	Compositions containing a metal azide
		37/00	Compositions containing a metal fulminate
		37/02	<ul style="list-style-type: none"> • 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	45/36	<ul style="list-style-type: none"> the component base containing both an organic explosive or thermic component and an inorganic explosive or thermic component
39/02	<ul style="list-style-type: none"> with an inorganic oxygen-halogen salt 		
39/04	<ul style="list-style-type: none"> with a binary compound of phosphorus, except with oxygen 	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
39/06	<ul style="list-style-type: none"> with free metal, alloy, boron, silicon, selenium or tellurium 		<u>NOTE</u>
41/00	Compositions containing a nitrated metallo-organic compound		{ This group also covers emulsion type explosives in which a solid component is not compulsory }
41/02	<ul style="list-style-type: none"> the compound containing lead 	47/02	<ul style="list-style-type: none"> the component comprising a binary propellant
41/04	<ul style="list-style-type: none"> with an organic explosive or an organic thermic component 	47/04	<ul style="list-style-type: none"> a component containing a nitrogen oxide or acid thereof
41/06	<ul style="list-style-type: none"> with an inorganic explosive or an inorganic thermic component 	47/06	<ul style="list-style-type: none"> a component being a liquefied normally gaseous material supplying oxygen (C06B 47/04 takes precedence)
41/08	<ul style="list-style-type: none"> with a metal azide or a metal fulminate 	47/08	<ul style="list-style-type: none"> a component containing hydrazine or a hydrazine derivative
41/10	<ul style="list-style-type: none"> with other nitrated metallo-organic compound 	47/10	<ul style="list-style-type: none"> a component containing free boron, an organic borane or a binary compound of boron, except with oxygen
43/00	compositions characterised by explosive or thermic constituents not provided for in groups C06B 25/00 - C06B 41/00	47/12	<ul style="list-style-type: none"> a component being a liquefied normally gaseous fuel
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)	47/14	<ul style="list-style-type: none"> comprising a solid component and an aqueous phase
45/02	<ul style="list-style-type: none"> comprising particles of diverse size or shape 	47/145	<ul style="list-style-type: none"> { Water in oil emulsion type explosives in which a carbonaceous fuel forms the continuous phase }
45/04	<ul style="list-style-type: none"> 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} 	49/00	Use of single substances as explosives
45/06	<ul style="list-style-type: none"> the solid solution or matrix containing an organic component 		
45/08	<ul style="list-style-type: none"> the dispersed solid containing an inorganic explosive or an inorganic thermic component 		
45/10	<ul style="list-style-type: none"> the organic component containing a resin 		
45/105	<ul style="list-style-type: none"> { The resin being a polymer bearing energetic groups or containing a soluble organic explosive } 		
45/12	<ul style="list-style-type: none"> having contiguous layers or zones 		
45/14	<ul style="list-style-type: none"> a layer or zone containing an inorganic explosive or an inorganic explosive or an inorganic thermic component 		
45/16	<ul style="list-style-type: none"> the layer or zone containing at least one inorganic component from the group of azide, fulminate, phosphorus and phosphide 		
45/18	<ul style="list-style-type: none"> comprising a coated component (particles dispersed in a matrix C06B 45/04; coated explosive charges F42B) 		
45/20	<ul style="list-style-type: none"> the component base containing an organic explosive or an organic thermic component 		
45/22	<ul style="list-style-type: none"> the coating containing an organic compound 		
45/24	<ul style="list-style-type: none"> the compound being an organic explosive or an organic thermic component 		
45/26	<ul style="list-style-type: none"> the compound being a nitrated toluene 		
45/28	<ul style="list-style-type: none"> the component base containing nitrocellulose and nitroglycerine 		
45/30	<ul style="list-style-type: none"> the component base containing an inorganic explosive or an inorganic thermic component 		
45/32	<ul style="list-style-type: none"> the coating containing an organic compound 		
45/34	<ul style="list-style-type: none"> the compound being an organic explosive or an organic thermic component 		