CPC COOPERATIVE PATENT CLASSIFICATION

C CHEMISTRY; METALLURGY

(NOTES omitted)

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;
 - 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

21/0041 . . {by compression}

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	21/005	{By a process involving melting at least part of the ingredients}
	NOTE	21/0058	{by casting a curable composition, e.g. of the plastisol type}
	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)]	f an indication to the contrary sified in the last appropriate lation by extrusion and chopping 21/0066 • {by granulation, e.g. flaking} • {by extrusion} 21/0075 21/0083 • {Treatment of solid structures, e.g. for coating}	{by extrusion}
21/0008 21/0016	 {Compounding the ingredient} {the ingredient being nitrocellulose or oranitro cellulose based propellant; Working up; gelatinising; stabilising (stabilising of explosives in general C06B 21/0091)} 	21/0091 • {	 C06B 23/00)} {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)}
21/0025 21/0033	• {the ingredient being a polymer bonded explosive or thermic component}• {Shaping the mixture}		

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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 32/02)	27/00	Compositions containing a metal, boron, silicon, selenium or tellurium or mixtures, intercompounds or hydrides thereof, and hydrocarbons or halogenated hydrocarbons
23/001	C06B 33/02)}Fillers, gelling and thickening agents (e.g. fibres) ,	29/00	Compositions containing an inorganic oxygen-
23/001	absorbents for nitroglycerine (binders, plasticisers	20/02	halogen salt, e.g. chlorate, perchlorate
	for propellants C06B 45/10; crosslinking or curing	29/02	of an alkali metal
	agents <u>C06B 45/10</u>)}	29/04	with an inorganic non-explosive or an inorganic non-thermic component
23/002	• {Sensitisers or density reducing agents, foam	29/06	the component being a cyanide; the component
23/003	stabilisers, crystal habit modifiers} • {Porous or hollow inert particles (preparation	2)/00	being an oxide of iron, chromium or manganese
22/004	C06B 21/0091)}	29/08	• • with an organic non-explosive or an organic non-
23/004 23/005	. {Chemical sensitisers}. {Desensitisers, phlegmatisers (coolants for		thermic component
23/003	mining explosives <u>C06B 23/04</u> ; deactivating	29/10	the component being a dye or a colouring agent
	C06B 21/0091)}	29/12	• • with carbon or sulfur
23/006	• {Stabilisers (e.g. thermal stabilisers) (processes	29/14	• with iodine or an iodide
	C06B 21/0091; foam stabilisers C06B 23/002)}	29/16	• • with a nitrated organic compound
23/007	• {Ballistic modifiers, burning rate catalysts, burning	29/18	the compound being nitrated toluene or a
	rate depressing agents, e.g. for gas generating}		nitrated phenol
23/008	• {Tagging additives}	29/20	the compound being nitrocellulose
23/009	• {Wetting agents, hydrophobing agents, dehydrating	29/22	 the salt being ammonium perchlorate
	agents, antistatic additives, viscosity improvers,	31/00	Compositions containing an inorganic nitrogen-
	antiagglomerating agents, grinding agents and other	21,00	oxygen salt
	additives for working up}	31/02	the salt being an alkali metal or an alkaline earth
23/02	for neutralising poisonous gases from explosives		metal nitrate
22/04	produced during blasting	31/04	with carbon or sulfur
23/04	 for cooling the explosion gases {including antifouling and flash suppressing agents} 	31/06	• • • with an organic non-explosive or an organic non-thermic component
25/00	Compositions containing a nitrated organic compound	31/08	• • with a metal oxygen-halogen salt, e.g. inorganic chlorate, inorganic perchlorate
25/02	the nitrated compound being starch or sugar	31/10	with carbon or sulfur
25/04	 the nitrated compound being an aromatic 	31/12	with a nitrated organic compound
25/06	with two or more nitrated aromatic compounds	31/14	the compound being an aromatic
	present	31/16	the compound being a nitrated toluene
25/08	at least one of which is nitrated toluene	31/18	• • • the compound being a nitrated phenol, e.g.
25/10	the compound being nitroglycerine		picric acid
25/12	with other nitrated organic compounds	31/20	the compound being nitroglycerine
25/14	the other compound being a nitrated aliphatic	31/22	the compound being nitrocellulose
	diol	31/24	with other explosive or thermic component
25/16	• • • the other compound being a nitrated aromatic	31/26	• • • • • the other component being nitroglycerine
25/18	• the compound being nitrocellulose present as 10%	31/28	• the salt being ammonium nitrate
25/20	or more by weight of the total composition	31/285	• • {with fuel oil, e.g. ANFO-compositions}
25/20	 with a non-explosive or a non-explosive or a non- thermic component 	31/30	• • with vegetable matter; with resin; with rubber
25/22	with a nitrated aromatic compound	31/32	with a nitrated organic compound
25/24	with a intracted aromatic compound with nitroglycerine	31/34	the nitrated compound being starch or sugar
25/26	with an organic non-explosive or an organic	31/36	with other explosive or thermic component
23/20	non-thermic component	31/38	the nitrated compound being an aromatic
25/28	the compound being nitrocellulose present as less than 10% by weight of the total composition	31/40	non-thermic component
25/30	with nitroglycerine	31/42	• • • with other explosive or thermic component
25/32	the compound being nitrated pentaerythritol	31/44	the compound being nitroglycerine
25/34	the compound being a nitrated acyclic, alicyclic or	31/46	• • • with a vegetable matter component, e.g.
<i>2313</i> - T	heterocyclic amine	21/40	wood pulp, sawdust
25/36	the compound being a nitroparaffin	31/48	with other explosive or thermic component
25/38	with other nitrated organic compound	31/50	the other component being a nitrated organic compound
25/40	with two or more nitroparaffins present	31/52	the compound being nitrocellulose present
	Process	31/32	as 10% or more by weight of the total composition
		31/54	with other nitrated organic compound

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31/56	• • • the compound being nitrocellulose present as less than 10% by weight of the total composition	45/14	• a layer or zone containing an inorganic explosive or an inorganic explosive or an inorganic 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	45/16	• • • the layer or zone containing at least one inorganic component from the group of azide, fulminate, phosphorus and phosphide
	metal oxide or a salt, organic or inorganic, capable of yielding a metal oxide	45/18	 comprising a coated component (particles dispersed in a matrix <u>C06B 45/04</u>; coated explosive charges F42B)
33/02	 with an organic non-explosive or an organic non- thermic component 	45/20	the component base containing an organic explosive or an organic thermic component
33/04	 the material being an inorganic nitrogen-oxygen salt 	45/22	the coating containing an organic compound
33/06	 the material being an inorganic oxygen-halogen salt 	45/24	the compound being an organic explosive or
33/08	 with a nitrated organic compound 	73/27	an organic thermic component
33/10	the compound being an aromatic	45/26	the compound being a nitrated toluene
33/12	 the material being two or more oxygen-yielding compounds 	45/28	the component base containing nitrocellulose and nitroglycerine
33/14	• at least one being an inorganic nitrogen-oxygen salt	45/30	the component base containing an inorganic explosive or an inorganic thermic component
25/00		45/32	the coating containing an organic compound
35/00	Compositions containing a metal azide	45/34	the compound being an organic explosive or
37/00	Compositions containing a metal fulminate	43/34	an organic thermic component
37/02	 with a nitrated organic compound or an inorganic oxygen-halogen salt 	45/36	the component base containing both an organic
			explosive or thermic component and an inorganic explosive or thermic component
39/00	Compositions containing free phosphorus or a		explosive of thermic component
	binary compound of phosphorus, except with	47/00	Compositions in which the components are
20.102	oxygen		separately stored until the moment of burning
39/02	 with an inorganic oxygen-halogen salt 		or explosion, e.g. "Sprengel"-type explosives;
39/04	 with a binary compound of phosphorus, except with oxygen 		Suspensions of solid component in a normally non-explosive liquid phase, including a thickened
39/06	 with free metal, alloy, boron, silicon, selenium or 		aqueous phase
	tellurium		NOTE
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	 the compound containing lead 		in which a sond component is not companied;
41/04	with an organic explosive or an organic thermic component	47/02 47/04	 the components comprising a binary propellant a component containing a nitrogen oxide or acid
41/06	• • • with an inorganic explosive or an inorganic thermic component	47/06	thereof a component being a liquefied normally gaseous
41/08 41/10	 with a metal azide or a metal fulminate with other nitrated metallo-organic compound 		material supplying oxygen (<u>C06B 47/04</u> takes precedence)
43/00	Compositions characterised by explosive or	47/08	a component containing hydrazine or a hydrazine derivative
	thermic constituents not provided for in groups $\underline{\text{C06B 25/00}}$ - $\underline{\text{C06B 41/00}}$	47/10	• a component containing free boron, an organic borane or a binary compound of boron, except
45/00	Compositions or products which are defined by structure or arrangement of component of	47/12	with oxygen . a component being a liquefied normally gaseous
	<pre>product (explosive charges of particular form or</pre>		fuel
	shape <u>F42B 1/00</u> , <u>F42B 3/00</u>)	47/14	. comprising a solid component and an aqueous phase
45/02	 comprising particles of diverse size or shape 	47/145	• • {Water in oil emulsion type explosives in which a
45/04	 comprising solid particles dispersed in solid solution 		carbonaceous fuel forms the continuous phase}
	or matrix {not used for explosives where the matrix consists essentially of nitrated carbohydrates or a	49/00	Use of single substances as explosives
4.5.00	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		
45/12	explosive}		
45/12	 having contiguous layers or zones 		

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