

# 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

- 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
      - 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
      - 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.
- In this subclass, the words "based on", with reference to explosive compositions, refer to the explosive ingredient present in the largest proportion by weight
- 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)}	29/10	. . . the component being a dye or a colouring agent
23/004	. . {Chemical sensitisers}	29/12	. . with carbon or sulfur
23/005	. {Desensitisers, phlegmatisers (coolants for mining explosives C06B 23/04; deactivating C06B 21/0091)}	29/14	. . with iodine or an iodide
23/006	. {Stabilisers (e.g. thermal stabilisers) (processes C06B 21/0091; foam stabilisers C06B 23/002)}	29/16	. . with a nitrated organic compound
23/007	. {Ballistic modifiers, burning rate catalysts, burning rate depressing agents, e.g. for gas generating}	29/18	. . . the compound being nitrated toluene or a nitrated phenol
23/008	. {Tagging additives}	29/20	. . . the compound being nitrocellulose
23/009	. {Wetting agents, hydrophobing agents, dehydrating agents, antistatic additives, viscosity improvers, antiagglomerating agents, grinding agents and other additives for working up}	29/22	. the salt being ammonium perchlorate
23/02	. for neutralising poisonous gases from explosives produced during blasting	<b>31/00</b>	<b>Compositions containing an inorganic nitrogen-oxygen salt</b>
23/04	. for cooling the explosion gases {including antifouling and flash suppressing agents}	31/02	. the salt being an alkali metal or an alkaline earth metal nitrate
<b>25/00</b>	<b>Compositions containing a nitrated organic compound</b>	31/04	. . with carbon or sulfur
25/02	. the nitrated compound being starch or sugar	31/06	. . . with an organic non-explosive or an organic non-thermic component
25/04	. the nitrated compound being an aromatic	31/08	. . with a metal oxygen-halogen salt, e.g. inorganic chlorate, inorganic perchlorate
25/06	. . with two or more nitrated aromatic compounds present	31/10	. . . with carbon or sulfur
25/08	. . . at least one of which is nitrated toluene	31/12	. . with a nitrated organic compound
25/10	. the compound being nitroglycerine	31/14	. . . the compound being an aromatic
25/12	. . with other nitrated organic compounds	31/16	. . . . the compound being a nitrated toluene
25/14	. . . the other compound being a nitrated aliphatic diol	31/18	. . . . the compound being a nitrated phenol, e.g. picric acid
25/16	. . . the other compound being a nitrated aromatic	31/20	. . . the compound being nitroglycerine
25/18	. the compound being nitrocellulose present as 10% or more by weight of the total composition	31/22	. . . the compound being nitrocellulose
25/20	. . with a non-explosive or a non-explosive or a non-thermic component	31/24	. . . . with other explosive or thermic component
25/22	. . with a nitrated aromatic compound	31/26	. . . . the other component being nitroglycerine
25/24	. . with nitroglycerine	31/28	. the salt being ammonium nitrate
25/26	. . . with an organic non-explosive or an organic non-thermic component	31/285	. . {with fuel oil, e.g. ANFO-compositions}
25/28	. the compound being nitrocellulose present as less than 10% by weight of the total composition	31/30	. . with vegetable matter; with resin; with rubber
25/30	. . with nitroglycerine	31/32	. . with a nitrated organic compound
25/32	. the compound being nitrated pentaerythritol	31/34	. . . the nitrated compound being starch or sugar
25/34	. the compound being a nitrated acyclic, alicyclic or heterocyclic amine	31/36	. . . . with other explosive or thermic component
25/36	. the compound being a nitroparaffin	31/38	. . . the nitrated compound being an aromatic
25/38	. . with other nitrated organic compound	31/40	. . . . with an organic non-explosive or an organic non-thermic component
25/40	. . with two or more nitroparaffins present	31/42	. . . . with other explosive or thermic component
<b>27/00</b>	<b>Compositions containing a metal, boron, silicon, selenium or tellurium or mixtures, intercompounds or hydrides thereof, and hydrocarbons or halogenated hydrocarbons</b>	31/44	. . . the compound being nitroglycerine
<b>29/00</b>	<b>Compositions containing an inorganic oxygen-halogen salt, e.g. chlorate, perchlorate</b>	31/46	. . . . with a vegetable matter component, e.g. wood pulp, sawdust
29/02	. of an alkali metal	31/48	. . . . with other explosive or thermic component
29/04	. . with an inorganic non-explosive or an inorganic non-thermic component	31/50	. . . . the other component being a nitrated organic compound
29/06	. . . the component being a cyanide; the component being an oxide of iron, chromium or manganese	31/52	. . . the compound being nitrocellulose present as 10% or more by weight of the total composition
29/08	. . with an organic non-explosive or an organic non-thermic component	31/54	. . . . with other nitrated organic compound
		31/56	. . . the compound being nitrocellulose present as less than 10% by weight of the total composition
		<b>33/00</b>	<b>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</b>
		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	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
<b>35/00</b>	<b>Compositions containing a metal azide</b>	45/32	the coating containing an organic compound
<b>37/00</b>	<b>Compositions containing a metal fulminate</b>	45/34	the compound being an organic explosive or 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
<b>39/00</b>	<b>Compositions containing free phosphorus or a binary compound of phosphorus, except with oxygen</b>	<b>47/00</b>	<b>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</b>
39/02	with an inorganic oxygen-halogen salt		<b>NOTE</b>
39/04	with a binary compound of phosphorus, except with oxygen		{This group also covers emulsion type explosives in which a solid component is not compulsory}
39/06	with free metal, alloy, boron, silicon, selenium or tellurium		
<b>41/00</b>	<b>Compositions containing a nitrated metallo-organic compound</b>		
41/02	the compound containing lead	47/02	the components comprising a binary propellant
41/04	with an organic explosive or an organic thermic component	47/04	a component containing a nitrogen oxide or acid thereof
41/06	with an inorganic explosive or an inorganic thermic component	47/06	a component being a liquefied normally gaseous material supplying oxygen (C06B 47/04 takes precedence)
41/08	with a metal azide or a metal fulminate	47/08	a component containing hydrazine or a hydrazine derivative
41/10	with other nitrated metallo-organic compound	47/10	a component containing free boron, an organic borane or a binary compound of boron, except with oxygen
<b>43/00</b>	<b>Compositions characterised by explosive or thermic constituents not provided for in groups C06B 25/00 - C06B 41/00</b>	47/12	a component being a liquefied normally gaseous fuel
<b>45/00</b>	<b>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)</b>	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 carbonaceous fuel forms the continuous phase}
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}	<b>49/00</b>	<b>Use of single substances as explosives</b>
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 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 phosphide		
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 organic explosive or an organic thermic component		
45/26	the compound being a nitrated toluene		