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(b) A *firearm* is a weapon not over .50 caliber which is designed to expel a projectile by the action of an explosive or which may be readily converted to do so.

(c) A *rifle* is a shoulder firearm which can discharge a bullet through a rifled barrel 16 inches or longer.

(d) A *carbine* is a lightweight shoulder firearm with a barrel under 16 inches in length.

(e) A *pistol* is a hand-operated firearm having a chamber integral with or permanently aligned with the bore.

(f) A *revolver* is a hand-operated firearm with a revolving cylinder containing chambers for individual cartridges.

(g) A *submachine gun*, "machine pistol" or "machine gun" is a firearm originally designed to fire, or capable of being fired, fully automatically by a single pull of the trigger.

[58 FR 39287, July 22, 1993, as amended at 64 FR 17533, Apr. 12, 1999]

§ 121.10 Forgings, castings and machined bodies.

Articles on the U.S. Munitions List include articles in a partially completed state (such as forgings, castings, extrusions and machined bodies) which have reached a stage in manufacture where they are clearly identifiable as defense articles. If the end-item is an article on the U.S. Munitions List (including components, accessories, attachments and parts as defined in § 121.8), then the particular forging, casting, extrusion, machined body, etc., is considered a defense article subject to the controls of this subchapter, except for such items as are in normal commercial use.

§ 121.11 Military demolition blocks and blasting caps.

Military demolition blocks and blasting caps referred to in Category IV(a) do not include the following articles:

- (a) Electric squibs.
- (b) No. 6 and No. 8 blasting caps, including electric ones.
- (c) Delay electric blasting caps (including No. 6 and No. 8 millisecond ones).
- (d) Seismograph electric blasting caps (including SSS, Static-Master, Vibrocap SR, and SEISMO SR).

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(e) Oil well perforating devices.

§ 121.12 Military explosives and propellants.

(a) Military Explosives in Category V are military explosives or energetic materials consisting of high explosives, propellants or low explosives, pyrotechnics and high energy solid or liquid fuels, including aircraft fuels specially formulated for military purposes. Military explosives are solid, liquid or gaseous substances or mixtures of substances which, in their application as primary, booster or main charges in warheads, demolition and other military applications, are required to detonate.

Military explosives, military propellants and military pyrotechnics in Category V include substances or mixtures containing any of the following:

(1) Spherical aluminum powder of particle size 60 micrometres or less manufactured from material with an aluminum content of 99% or more;

(2) Metal fuels in particle sizes less than 60 micrometres whether spherical, atomized, spheroidal, flaked or ground, manufactured from material consisting of 99% or more of any of the following: Zirconium, magnesium and alloys of these; beryllium; fine iron powder with average particle size of 3 micrometres or less produced by reduction of iron oxide with hydrogen; boron or boron carbide fuels of 85% purity or higher and average particle size of 60 micrometers or less;

(3) Any of the foregoing metals or alloys of paragraphs (a) (1) and (2) of this section, whether or not encapsulated in aluminum, magnesium, zirconium or beryllium;

(4) Perchlorates, chlorates and chromates composited with powdered metal or other high energy fuel components;

(5) Nitroguanidine (NQ);

(6) With the exception of chlorinetri-fluoride, compounds composed of fluorine and one or more of the following: Other halogens, oxygen, nitrogen;

(7) Carboranes; decaborane; pentaborane and derivatives;

(8) Cyclotetramethylenetetranitramine (HMX); octahydro-1,3,5,7-tetranitro-

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- 1,3,5,7-tetrazine; 1,3,5,7-tetranitro-1,3,5,7-tetraza-cyclooctane; (octogen, octogene);
- (9) Hexanitrostilbene (HNS);
- (10) Diaminotrinitrobenzene (DATB);
- (11) Triaminotrinitrobenzene (TATB);
- (12) Triaminoguanidinenitrate (TAGN);
- (13) Titanium subhydride of stiochiometry TiH 0.65-168;
- (14) Dinitroglycoluril (DNGU, DNGU); tetranitroglycoluril (TNGU, SORGUYL);
- (15) Tetranitrobenzotriazolobenzotriazole (TACOT);
- (16) Diaminohexanitrobiphenyl (DIPAM);
- (17) Picrylaminedinitropyridine (PYX);
- (18) 3-nitro-1,2,4-triazol-5-one (NTO or ONTA);
- (19) Hydrazine in concentrations of 70% or more; hydrazine nitrate; hydrazine perchlorates; unsymmetrical dimethyl hydrazine; monomethyl hydrazine; symmetrical dimethyl hydrazine;
- (20) Ammonium perchlorate;
- (21) 2-(5-cyanotetrozolato) penta amminecobalt (III) perchlorate (CP);
- (22) cis-bis (5-nitrotetrazolato) penta amminecobalt (III) perchlorate (or BNCP);
- (23) 7-amino 4,6-dinitrobenzofurazane-1-oxide (ADNBF); amino dinitrobenzofuroxan;
- (24) 5,7-diamino-4,6-dinitrobenzofurazane-1-oxide, (CL-14 or diaminodinitrobenzofurozan);
- (25) 2,4,6-trinitro-2,4,6-triaza-cyclohexanone (K-6 or keto-RDX);
- (26) 2,4,6,8-tetranitro-2,4,6,8-tetraaza-bicyclo (3,3,0)-octanone-3(tetranitrosemiglycouril, K-55, or keto-bicyclic HMX);
- (27) 1,1,3-trinitroazetidine (TNAZ);
- (28) 1,4,5,8-tetranitro-1,4,5,8-tetraazadecalin (TNAD);
- (29) Hexanitrohexaazaisowurtzitane (CL-20 or NNIW; and chlathrates of CL-20);
- (30) Polynitrocubanes with more than four nitro groups;
- (31) Ammonium dinitramide (ADN or SR-12);
- (32) Cyclotrimethyltrinitramine (RDX); cyclonite; T4; hexahydro-1,3,5-trinitro-1,3,5-triazine; 1,3,5-trinitro-1,3,5-triaza-cyclohexane; hexogen, hexogene;
- (33) Hydroxylammonium nitrate (HAN); hydroxylammonium perchlorate (HAP);
- (34) Hydroxy terminated Polybutadiene (HTPB) with a hydroxyl functionality of less than 2.28, a hydroxyl value of less than 0.77 meq/g, and a viscosity at 30 degrees C of less than 47 poise;
- (b) "Additives" include the following:
- (1) Glycidylazide Polymer (GAP) and its derivatives;
- (2) Polycyanodifluoroamino-ethyleneoxide (PCDE);
- (3) Butanetrioltrinitrate (BTTN);
- (4) Bis-2-Fluoro-2,2-dinitroethylformal (FEFO);
- (5) Butadienenitrileoxide (BNO);
- (6) Catocene, N-butyl-ferrocene and other ferrocene derivatives;
- (7) 3-nitrazo-1,5 pentane diisocyanate;
- (8) Bis(2,2-dinitropropyl) formal and acetal;
- (9) Energetic monomers, plasticisers and polymers containing nitro, azido, nitrate, nitraza or difluoroamino groups;
- (10) 1,2,3-Tris [1,2-bis(difluoroamino)ethoxy] propane; Tris vinoxyl propane adduct, (TVOPA);
- (11) Bisazidomethyloxetane and its polymers;
- (12) Nitratomethylmethyloxetane or poly (3-nitratomethyl, 3-methyl oxetane); (Poly-NIMMO); (NMMO);
- (13) Azidomethylmethyloxetane (AMMO) and its polymers;
- (14) Tetraethylenepentamine-acrylonitrile (TEPAN); cyanoethylated polyamine and its salts;
- (15) Polynitroorthocarbonates;
- (16) Tetraethylenepentamine-acrylonitrileglycidol (TEPANOL); cyanoethylated polyamine adducted with glycidol and its salts;
- (17) Polyfunctional aziridine amides with isophthalic, trimesic BITA or butylene imine trimesamide isoyanuric, or trimethyladipic backbone structures and 2-methyl or 2-ethyl substitutions on the aziridine ring;
- (18) Basic copper salicylate; lead salicylate;
- (19) Lead beta resorcyate;
- (20) Lead stannate, lead maleate, lead citrate;

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- (21) Tris-1-(2-methyl)aziridinyl phosphine oxide (MAPO), bis(2-methyl aziridinyl) 2-(2-hydroxypropanoxy) propylamino phosphine oxide (BOBBA 8), and other MAPO derivatives;
- (22) Bis(2-methyl aziridinyl) methylamino phosphine oxide (methyl BAPO);
- (23) Organo-metallic coupling agents, specifically:
 - (i) Neopentyl (diallyl) oxy, tri [dioctyl] phosphato titanate or titanium IV, 2,2[bis 2-propenolatomethyl, butanolato or tris [dioctyl] phosphato-O], or LICA 12;
 - (ii) Titanium IV, [(2-propenolato-1)methyl, N-propanolatomethyl] butanolato-1 or tris(dioctyl)pyrophosphato, or KR3538;
 - (iii) Titanium IV, [2-propenolato-1)methyl, N-propanolatomethyl] butanolato-1; or tris(dioctyl) phosphate;
- (24) FPF-1 poly-2,2,3,3,4,4-hexafluoro pentane-1,5-diolformal;
- (25) FPF-3 poly-2,4,4,5,5,6,6-heptafluoro-2-trifluoromethyl-3-oxaheptane-1,7-diolformal;
- (26) Polyglycidynitrate (PGN) or poly(nitratomethyl oxirane); (poly-GLYN) (PGN);
- (27) Lead-copper chelates of beta-resorcylate and/or salicylates;
- (28) Triphenyl bismuth (TPB);
- (29) bis-2-hydroxyethylglycolamide (BHEGA);
- (30) Superfine iron oxide (Fe₂O₃ hematite) with a specific surface area greater than 250 m²/g and an average particle size of 0.003 micrometres or less;
- (31) N-methyl-p-nitroaniline;
- (c) "Precursors" include the following:
 - (1) 1,2,4-trihydroxybutane (1,2,4-butanetriol);
 - (2) Guanidine nitrate;
 - (3) 1,3,5-trichlorobenzene;
 - (4) Bischloromethyloxetane (BCMO);
 - (5) Low (less than 10,000) molecular weight, alcohol-functionalised, poly(ephichlorohydrin); poly(ephichlorhydrindiol); and triol;
 - (6) Propyleneimide, 2-methylaziridine;
 - (7) 1,3,5,7,-tetraacetyl-1,3,5,7-tetraazacyclooctane (TAT);
 - (8) Dinitroazetidine-t-butyl salt;
 - (9) Hexabenzylhexaazaisowurtzitane (HBIW);
 - (10) Tetraacetyldibenzylhexaazaisowurtzitane (TAIW);
 - (11) 1,4,5,8-tetraazadecaline.
- (d) Military high energy solid or liquid fuels specially formulated for military purposes: (1) Aircraft fuels controlled by §121.12(a) are finished products not their independent constituents. (2) military materials containing thickeners for hydrocarbon fuels specially formulated for use in flame-throwers or incendiary munitions; metal stearates or palmates (also known as octol); and M1, M2 and M3 thickeners;
- (e) Any substance, or mixture meeting the following performance requirements:
 - (1) Any explosive with a detonation velocity greater than 8,700 m/s or a detonation pressure greater than 340 kilobars;
 - (2) Other organic high explosives yielding detonation pressures of 250 kilobars or greater that will remain stable at temperatures of 523 K (250 degrees C) or higher for periods of 5 minutes or longer;
 - (3) Any other UN Class 1.1 solid propellant with a theoretical specific impulse (under standard conditions) greater than 250 seconds for non-metalized, or greater than 270 seconds for aluminized compositions;
 - (4) Any UN Class 1.3 solid propellant with a theoretical specific impulse greater than 230 seconds for non-halogenized, 250 seconds for non-metalized and 266 seconds for metallized compositions;
 - (5) Any other explosive, propellant or pyrotechnic that can sustain a steady-state burning rate greater than 38mm (1.5 in) per second under standard conditions of 68.9 bar (1,000 PSI) pressure and 294K (21 degrees C);
 - (6) Any other gun propellants having a force constant greater than 1,200 kJ/kg;
 - (7) Elastomer modified cast double based propellants (EMCDB) with extensibility at maximum stress greater than 5% at 233 K (-40 degrees C).
- (f) Liquid oxidizers comprised of or containing the following:
 - (1) Inhibited red fuming nitric acid (IRFNA));

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(2) Oxygen difluoride.

NOTE: Category V includes the following substances when compounded or mixed with military explosives, fuels or propellants controlled under this category:

- Ammonium picrate
- Black powder
- Hexanitrodiphenylamine
- Difluoroamine (HNF₂)
- Nitrostarch
- Potassium nitrate
- Tetranitronaphthalene
- Trinitroanisol
- Trinitronaphthalene
- Trinitroxylene
- Fuming nitric acid non-inhibited and non-enriched
- Acetylene
- Propane
- Liquid oxygen
- Hydrogen peroxide in concentrations less than 85%
- Misch metal
- N-pyrrolidinone and 1-methyl-2-pyrrolidinone
- Dioctylmaleate
- Ethylhexylacrylate
- Triethylaluminum (TEA), trimethylaluminum (TMA) and other pyrophoric metal alkyls and aryls of lithium, sodium, magnesium, zinc or boron
- Nitrocellulose
- Nitroglycerin (or glyceroltrinitrate, trinitroglycerine (NG))
- 2,4,6 trinitrotoluene (TNT)
- Pentaerythritol tetranitrate (PETN)
- Trinitrophenylmethylnitramine (Tetryl)
- Ethylenediaminedinitrate (EDDN)
- Lead azide, normal and basic lead styphnate, and primary explosives or priming composition containing azides or azide complexes
- Triethyleneglycoldinitrate (TEGDN)
- 2,4,6-trinitroresorcinol (styphnic acid)
- Diethyldiphenyl urea, dimethyldiphenyl urea and methylethyldiphenyl urea (Centralites)
- N,N-diphenylurea (unsymmetrical diphenylurea)
- Methyl-N,N-diphenylurea (methyl unsymmetrical diphenylurea)
- Ethyl-N,N-diphenylurea (ethyl unsymmetrical diphenylurea)
- 2-nitrodiphenylamine (2-NDPA)
- 4-nitrodiphenylamine (4-NDPA)
- 2,2-dinitropropanol
- Chlorinetri fluoride.

[58 FR 60113, Nov. 15, 1993]

§ 121.13 Military fuel thickeners.

Military fuel thickeners in Category V include compounds (e.g., octal) or mixtures of such compounds (e.g., napalm) specifically formulated for the purpose of producing materials which,

when added to petroleum products, provide a gel-type incendiary material for use in bombs, projectiles, flame throwers, or other defense articles.

§ 121.14 [Reserved]

§ 121.15 Vessels of war and special naval equipment.

Vessels of war means vessels, waterborne or submersible, designed, modified or equipped for military purposes, including vessels described as developmental, “demilitarized” or decommissioned. Vessels of war in Category VI, whether developmental, “demilitarized” and/or decommissioned or not, include, but are not limited to, the following:

(a) Combatant vessels: (1) Warships (including nuclear-powered versions):

- (i) Aircraft carriers.
- (ii) Battleships.
- (iii) Cruisers.
- (iv) Destroyers.
- (v) Frigates.
- (vi) Submarines.

(2) Other Combatants:

- (i) Patrol Combatants (e.g., including but not limited to PHM).
- (ii) Amphibious Aircraft/Landing Craft Carriers.
- (iii) Amphibious Materiel/Landing Craft Carriers.
- (iv) Amphibious Command Ships.
- (v) Mine Warfare Ships.
- (vi) Coast Guard Cutters (e.g., including but not limited to: WHEC, WMEC).

(b) Combatant Craft: (1) Patrol Craft (patrol craft described in § 121.1, Category VI, paragraph (b) are considered non-combatant):

- (i) Coastal Patrol Combatants.
- (ii) River, Roadstead Craft (including swimmer delivery craft).
- (iii) Coast Guard Patrol Craft (e.g., including but not limited to WPB).

(2) Amphibious Warfare Craft:

- (i) Landing Craft (e.g., including but not limited to LCAC).
- (ii) Special Warfare Craft (e.g., including but not limited to: LSSC, MSSC, SDV, SWCL, SWCM).

(3) Mine Warfare Craft and Mine Countermeasures Craft (e.g., including but not limited to: MCT, MSB).

(c) Non-Combatant Auxiliary Vessels and Support Ships:

- (1) Combat Logistics Support:
 - (i) Underway Replenishment Ships.