

STATUTORY
INSTRUMENTS.

S.I. No. 300 of 2000.

CONTROL OF EXPORTS ORDER, 2000.

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I, MARY HARNEY, Minister for Enterprise, Trade and Employment, in exercise of the powers conferred on me by [section 2 of the Control of Exports Act, 1983 \(No. 35 of 1983\)](#), and the Trade (Transfer of Departmental Administration and Ministerial Functions) Order, 1997 ([S.I. No. 303 of 1997](#)) (as adapted by the Enterprise and Employment (Alteration of Name of Department and Title of Minister) Order, 1997 ([S.I. No. 305 of 1997](#))), hereby order as follows:

1. (1) This Order may be cited as the Control of Exports Order, 2000.

(2) This Order shall come into operation on 1 day of October, 2000.

2. (1) In this Order—

"International United Nations Force" has the meaning assigned to it by the [Defence \(Amendment\) \(No. 2\) Act, 1960 \(No. 44 of 1960\)](#), or, as appropriate, [the Defence \(Amendment\) Act, 1993 \(No. 19 of 1993\)](#);

"Permanent Defence Forces" has the meaning assigned to it by the [Defence Act, 1954 \(No. 18 of 1954\)](#).

(2) A reference in the Schedule to this Order to a Chemical Abstracts Service Registry Number (or its abbreviation "CAS"), in relation to a chemical, is a reference to the numeric designation assigned to that chemical by the American Chemical Society's Chemical Abstracts Service.

3. Subject to Article 4 of this Order, the exportation of any goods specified in the Schedule to this Order, is hereby prohibited save under and in accordance with a licence.

4. This Order shall not apply to the exportation—

(a) of any goods by the Permanent Defence Forces, or the Garda Síochána—

(i) for use by an International United Nations Force in the course of its duties as such,

- (ii) for the purposes of their being repaired, overhauled, refitted, modified, tested or maintained, and returned to the State,
 - (iii) for the purposes of their being used at international military competitions, or
 - (iv) for the purposes of the testing of munitions,
- (b) to other Member States of the European Communities of—
- (i) rifles, carbines, shotguns and other smoothbore weapons and crossbows and component parts thereof,
 - (ii) silencers, telescopic sights and component parts thereof, or
 - (iii) ammunition for firearms specified in subparagraph (i) of this paragraph,
- (c) of privately owned rifles, carbines, shotguns and other smoothbore weapons and crossbows, legally imported for a period of not more than 6 months by persons resident outside the European Communities, and ammunition therefor not exceeding the amount shown on the document authorising their importation, or
- (d) of rifles, carbines, shotguns and other smoothbore weapons, crossbows and ammunition therefor, which are held by residents on foot of firearm certificates and which are being exported outside the European Communities for use by their owners during a visit of not more than 6 months.

5. The Control of Exports Order, 1996 ([S.I. No. 363 of 1996](#)), is hereby revoked.

SCHEDULE

GOODS WHICH MAY NOT BE EXPORTED WITHOUT A LICENCE

Note 1 Terms in "quotations" are defined terms. Refer to "Definitions of Terms used in the Schedule" annexed to this Schedule.

Note 2 CAS numbers are shown as examples. They do not cover all the chemicals and mixtures controlled by this Schedule.

GENERAL TECHNOLOGY NOTE

The export of "technology" which is "required" for the "development", "production" or "use" of items specified in this Schedule is controlled according to the provisions

in the entries contained in the Schedule. This "technology" remains under control even when applicable to any uncontrolled item.

Controls do not apply to that "technology" which is the minimum necessary for the installation, operation, maintenance (checking) and repair of those items which are not controlled or whose export has been authorised.

Controls do not apply to "technology" "in the public domain", to "basic scientific research" or to the minimum necessary information for patent applications.

1. Small arms, automatic weapons and accessories, as follows, and specially designed components therefor:

(a) Rifles, carbines, revolvers, shotguns, stunguns, crossbows, pistols, machine pistols and machine guns;

(b) Smooth-bore weapons;

(c) Weapons using caseless ammunition;

(d) Silencers, special gun-mountings, clips, weapons sights and flash suppressors for arms specified by sub-items in Paragraphs 1.a., 1.b. or 1.c.

Note 1 Paragraph 1 does not control firearms specially designed for dummy ammunition and which are incapable of firing any ammunition specified in this Schedule.

2. Large calibre armament or weapons, projectors and accessories, as follows, and specially designed components therefor:

(a) Guns, howitzers, cannon, mortars, anti-tank weapons, projectile launchers, military flame throwers, recoilless rifles and signature reduction devices therefor;

Note Paragraph 2.a includes injectors, metering devices, storage tanks and other specially designed components for use with liquid propelling charges for any of the equipment controlled by Paragraph 2.a.

(b) Military smoke, gas and pyrotechnic projectors or generators.

(c) Weapons sights.

3. Ammunition, and specially designed components therefor, for the weapons specified in Paragraphs 1., 2. or 12.

4. Bombs, torpedoes, mines, rockets, missiles, and related equipment and accessories, as follows, and

specially designed components therefor:

(a) Explosive substances, pyrotechnic substances, bombs, torpedoes, grenades, smoke canisters, rockets, mines, missiles, depth charges, demolition-charges, demolition-devices and demolition-kits, pyrotechnic devices, cartridges and simulators (i.e. equipment simulating the characteristics of any of these items);

Note Paragraph 4.a includes:

1. *Smoke grenades, fire bombs, incendiary bombs and other explosive and pyrotechnic articles;*

2. *Missile rocket nozzles and re-entry vehicle nosetips.*

(b) Equipment specially designed for the handling, control, activation, powering with one-time operational output, launching, laying, sweeping, discharging, decoying, jamming, detonation or detection of items specified in Paragraph 4.a.

Note Paragraph 4.b includes:

1. *Mobile gas liquefying equipment capable of producing 1,000 kg or more per day of gas in liquid form;*

2. *Buoyant electric conducting cable suitable for sweeping magnetic mines.*

5. Fire control, and related alerting and warning equipment, and related systems, test and alignment and countermeasure equipment, as follows, specially designed for military use, and specially designed components and accessories therefor:

(a) Weapon sights, bombing computers, gun laying equipment and weapon control systems;

(b) Target acquisition, designation, range-finding, surveillance or tracking systems; detection, data fusion, recognition or identification equipment; and sensor integration equipment;

(c) Countermeasure equipment for items specified in Paragraphs 5.a or 5.b.

(d) Field test or alignment equipment, specially designed for items specified in Paragraphs 5.a or 5.b.

6. Ground vehicles and components therefor specially designed or modified for military use.

Technical Note

For the purposes of Paragraph 6 the term ground vehicles includes trailers.

Note 1 Paragraph 6 includes:

(a) Tanks and other military armed vehicles and military vehicles fitted with mountings for arms or equipment for mine laying or the launching of munitions controlled under paragraph 4;

(b) Armoured vehicles;

(c) Amphibious and deep-water fording vehicles;

(d) Recovery vehicles and vehicles for towing or transporting ammunition or weapon systems and associated load handling equipment.

Note 2 Modification of a ground vehicle for military use entails a structural, electrical or mechanical change involving one or more specially designed military components. Such components include:

(a) Pneumatic tyre casings of a kind specially designed to be bullet-proof or to run when deflated;

(b) Tyre inflation pressure control systems, operated from inside a moving vehicle;

(c) Armoured protection of vital parts, (e.g., fuel tanks or vehicle cabs);

(d) Special reinforcements for mountings for weapons.

Note 3 Paragraph 6 does not control civil automobiles, or trucks designed for transporting money or valuables, having armoured protection.

7. Chemical or biological toxic agents, "tear gases", radioactive materials, related equipment, components, materials and "technology" as follows:

(a) Biological agents and radioactive materials "adapted for use in war" to produce casualties in humans or animals, degrade equipment or damage crops or the environment, and chemical warfare (CW) agents;

(b) CW Binary precursors and key precursors, as follows:

1. Alkyl (Methyl, Ethyl, n-Propyl or Isopropyl) Phosphonyl Difluorides, such as: DF: Methyl Phosphonyldifluoride (CAS 676-99-3);

2. O-Alkyl (H or equal to or less than C₁₀, including cycloalkyl) O-2-dialkyl (Methyl, Ethyl, n-Propyl or Isopropyl) aminoethyl alkyl (Methyl, Ethyl, n-Propyl or Isopropyl) phosphonite and corresponding alkylated and protonated salts, such as: QL: O-Ethyl-2-di-

isopropylaminoethyl methyl-phosphonite (CAS 57856-11-8);

3. Chlorosarin: O-Isopropyl methylphosphonochloridate (CAS 1445-76-7);

4. Chlorosoman: O-Pinakolyl methylphosphonochloridate (CAS 7040-57-5);

(c) "Tear gases" and "riot control agents" including:

1. Bromobenzyl cyanide (CA) (CAS 5798-79-8);

2. o-Chlorobenzylidenemalononitrile (o-Chlorobenzalmalononitrile) (CS) (CAS 2698-41-1);

3. Phenylacetyl chloride (ω-chloroacetophenone) (CN) (CAS 532-27-4);

4. Dibenz-(b,f)-1,4-oxazepine (CR) (CAS 257-07-8);

(d) Equipment specially designed or modified for the dissemination of any of the following and specially designed components therefor:

1. Materials or agents as specified in Paragraph 7.a or c; or

2. CW made up of precursors as specified in Paragraph 7.b.

(e) Equipment specially designed for defence against materials as specified in Paragraph 7.a or c and specially designed components therefor;

Note Paragraph 7.e includes protective clothing.

(f) Equipment specially designed for the detection or identification of materials as specified in Paragraph 7.a or c and specially designed components therefor;

Note Paragraph 7.f does not control personal radiation monitoring dosimeters.

N.B. For civil gas masks and protective equipment see also entry IA004 in Annex 1 to Council Decision 94/942/CFSP as amended.

(g) "Biopolymers" specially designed or processed for the detection or identification of CW agents as specified in Paragraph 7.a, and the cultures of specific cells used to produce them;

(h) "Biocatalysts" for the decontamination or degradation of CW agents, and biological systems therefor, as follows:

1. "Biocatalysts" specially designed for the decontamination or degradation of CW agents as

specified in Paragraph 7.a resulting from directed laboratory selection or genetic manipulation of biological systems;

2. Biological systems, as follows: "expression vectors", viruses or cultures of cells containing the genetic information specific to the production of "biocatalysts" as specified in Paragraph 7.h.1;

(i) "Technology" as follows:

1. "Technology" for the "development", "production" or "use" of toxicological agents, related equipment or components as specified in Paragraph 7.a to Paragraph 7.f;
2. "Technology" for the "development", "production" or "use" of "biopolymers" or cultures of specific cells as specified in Paragraph 7.g;
3. "Technology" exclusively for the incorporation of "biocatalysts", as specified in Paragraph 7.h.1, into military carrier substances or military material.

Note 1 Paragraph 7.a includes the following

(a) CW nerve agents:

1. O-Alkyl (equal to or less than C₁₀, including cycloalkyl) alkyl (Methyl, Ethyl, n-Propyl or Isopropyl) - phosphonofluoridates, such as: Sarin (GB):O-Isopropyl methylphosphonofluoridate (CAS 107-44-8);

and

Soman (GD):O-Pinacolyl methylphosphonofluoridate (CAS 96-64-0);

2. O-Alkyl (equal to or less than C₁₀, including cycloalkyl) N,N-dialkyl (Methyl, Ethyl, n-Propyl or Isopropyl) phosphoramidocyanidates, such as: Tabun (GA):O-Ethyl N, N-dimethylphosphoramidocyanidate (CAS 77-81-6);

3. O-Alkyl (H or equal to or less than C₁₀, including cycloalkyl) S-2-dialkyl (Methyl, Ethyl, n-Propyl or Isopropyl)-amineethyl alkyl (Methyl, Ethyl, n-Propyl or Isopropyl) phosphonothiolates and corresponding alkylated and protonated salts, such as: VX: O-Ethyl S-2-diisopropylaminoethyl methyl phosphonothiolate (CAS 50782-69-9);

Note 1

(b) CW vesicant agents

1. Sulphur mustards, such as:

2-Chloroethylchloromethylsulphide (CAS 2625-76-5);
Bis (2-chloroethyl) sulphide (CAS 505-60-2);
Bis (2-chloroethylthio) methane (CAS 63869-13-6);
1,2-bis (2-chloroethylthio) ethane (CAS 3563-36-8);
1,3-bis (2-chloroethylthio) -n-propane (CAS 63905-10-2);

1,4-bis (2-chloroethylthio) -n-butane;

1,5-bis (2-chloroethylthio) -n-pentane;

Bis (2-chloroethylthiomethyl) ether;

Bis (2-chloroethylthioethyl) ether (CAS 63918-89-8);

2. Lewisities, such as:

2-chlorovinylchloroarsine (CAS 541-25-3);

Tris (2-chlorovinyl) arsine (CAS 40334-70-1) 07-8);

Bis (2-chlorovinyl) chloroarsine (CAS 40334-69-8);

3. Nitrogen mustards, such as:

HN1: bis (2-chloroethyl) ethylamine (CAS 538-07-8);

HN2: bis (2-chloroethyl) methylamine (CAS 51-75-2);

HN3: tris (2-chloroethyl) amine (CAS 555-77-1);

(c) CW incapacitating agents such as:

3-Quinuclidinyl benzilate (BZ) (CAS 6581-06-2);

(d) CW defoliants such as:

1. *Butyl 2-chloro-4-fluorophenoxyacetate (LNF);*

2. *2,4,5-trichlorophenoxyacetic acid mixed with 2,4-dichlorophenoxyacetic acid (Agent Orange).*

Note 2 Paragraph 7.e includes air conditioning units specially designed or modified for nuclear, biological or chemical filtration.

Note 3 Paragraph 7.a and Paragraph 7.c. do not control:

(a) *Cyanogen chloride;*

(b) *Hydrocyanic acid;*

(c) *Chlorine;*

(d) *Carbonyl chloride (phosgene);*

(e) *Diphosgene (trichloromethyl-chloroformate);*

- (f) Ethyl bromoacetate;
- (g) Xylyl bromide;
- (h) Benzyl bromide;
- (i) Benzyl iodide;
- (j) Bromo acetone;
- (k) Cyanogen bromide;
- (l) Bromo methylethylketone;
- (m) Chloro acetone;
- (n) Ethyl iodoacetate;
- (o) Iodo acetone;
- (p) Chloropicrin.

Note 4 The "technology" cultures of cells and biological systems listed in Paragraphs 7.g, 7.h.2. and 7.i.3 are exclusive and these sub-items do not control "technology", cells or biological systems for civil purposes, such as agricultural, pharmaceutical, medical, veterinary, environmental, waste management, or in the food industry.

Note 5 Paragraph 7.c does not control tear gases or riot control agents individually packaged for personal self defence purposes.

Note 6 Paragraphs 7.d, 7.e and 7.f control equipment specially designed or modified for military purposes.

N.B. See also entry IA004 in Annex 1 to Council Decision 94/942/CFSP as amended.

8. "Military explosives" and fuels, including propellants, and related substances, as follows:

(a) Substances, as follows, and mixtures thereof:

1. Spherical aluminium powder (CAS 7429-90-5) with a particle size of 60 µm or less, manufactured from material with an aluminium content of 99% or more;

2. Metal fuels in particle form whether spherical, atomized, spheroidal, flaked or ground, manufactured from material consisting of 99%, or more, of any of the following:

(a) Metals and mixtures thereof:

1. Beryllium (CAS 7440-41-7) in particle sizes of less than 60 µm;

2. Iron powder (CAS 7439-89-6) with particle size of 3 µm, or less produced by

reduction of iron oxide with hydrogen;

2. (b) Mixtures, which contain any of the following:
 1. Zirconium (CAS 7440-67-7), magnesium (CAS 7439-95-4) and alloys of these in particle sizes of less than 60 μm ;
 2. Boron (CAS 7440-42-8) or boron carbide (CAS 12069-32-8) fuels of 85% purity or higher and particle sizes of less than 60 μm ;
3. Perchlorates, chlorates and chromates composited with powdered metal or other high energy fuel components;
4. Deleted (Nitroguanidine (NQ) (CAS 556-88-7) transferred to IC011.d in Annex I to Council Decision 94/942/CFSP as amended);
5. Compounds composed of fluorine and any of the following: other halogens, oxygen, nitrogen;
6. Carboranes; decaborane (CAS 17702-41-9); pentaborane and derivatives thereof;
7. Cyclotetramethylenetetranitramine (CAS 2691-41-0) (HMX); octahydro-1, 3, 5, 7-tetranitro-1,3,5,7-tetraene; 1, 3, 5, 7-tetra nitro-1, 3, 5, 7-tetraza-cyclooctane; (octogen, octogene);
8. Hexanitrostilbene (HNS) CAS 20062-22-0);
9. Draminotrinitrobenzene (DATB) (CAS 1630-08-6);
10. Triaminotrinitrobenzene (TATB) (CAS 3058-38-6);
11. Triaminoguanidinenitrate (TAGN) (CAS 4000-16-2);
12. Titanium subhydride of stoichiometry $\text{TiH}_{0.65-1.68}$;
13. Dinitroglycoluril (DNGU, DINGU) (CAS 55510-04-8); tetranitroglycoluril (TNGU, SOR-GUYL) (CAS 55510-03-7);
14. Tetranitrobenzotriazolobenzotriazole (TACOT) (CAS 25243-36-1);
15. Diaminohexanitrobiphenyl (DIPAM) (CAS 17215-44-0);
16. Picrylaminedinitropyridine (PYX) (CAS 38082-89-2);
17. 3-nitro-1,2,4-triazol-5-one (NTO or ONTA) (CAS 932-64-9);
18. Hydrazine (CAS 302-01-2) in concentrations

of 70% or more; hydrazine nitrate (CAS 37836-27-4); hydrazine perchlorate (CAS 27978-54-7); unsymmetrical dimethyl hydrazine (CAS 57-14-7); monomethyl (CAS 60-34-4) hydrazine; symmetrical dimethyl hydrazine (CAS 540-73-8);

19. Ammonium perchlorate (CAS 7790-98-9);

20. Cyclotrimethylenetrinitramine (RDX) (CAS 121-82-4); cyclonite; T4; hexahydro-1, 3, 5-trinitro-1, 3, 5-triazine; 1, 3, 5-trinitro-1, 3, 5-triaza-cyclohexane (hexogen, hexogene);

21. Hydroxylammonium nitrate (HAN) (CAS 13465-08-2); hydroxylammonium perchlorate (HAP) (CAS 15588-62-2);

22. 2-(5-cyanotetrazolato) penta amine-cobalt (III) perchlorate (or CP) (CAS 70247-32-4);

23. cis-bis (5-nitrotetrazolato) tetra amine-cobalt (III) perchlorate (or BNCP);

24. 7-Amino-4,6-dinitrobenzofurazane-1-oxide (A DNBF) (CAS 97096-78-1); amino dinitrobenzofuroxan;

25. 5,7-diamino-4,6-dinitrobenzofurazane-1-oxide (CAS 117907-74-1), (CL-14 or diamino dinitrobenzofuroxan);

26. 2, 4, 6-trinitro-2, 4, 6-triazacyclohexanone (K-6 or Keto-RDX) (CAS 115029-35-1);

27. 2, 4, 6, 8-tetranitro-2, 4, 6, 8-tetraazabicyclo [3, 3, 0]-octanone-3 (CAS 130256-72-3) (tetranitrosemiglycouril, K-55 or keto-bicyclic HMX);

28. 1, 1, 3-trinitroazetidine (TNAZ) (CAS 97645-24-4);

29. 1, 4, 5, 8-tetranitro-1, 4, 5, 8-tetraazadecalin (TNAD) (CAS 135877-16-6);

30. Hexanitrohexaazaisowurtzitane (CAS 135285-90-4) (CL-20 or HNIW); and chlathrates of CL-20;

31. Polynitrocubanes with more than four nitro groups;

32. Ammonium dinitramide (ADN or SR 12) (CAS 140456-78-6);

33. Trinitrophenylmethynitramine (tetryl) (CAS 479-45-8);

(b) Explosives and propellants that meet the following performance parameters:

1. Any explosive with a detonation velocity exceeding 8,700 m/s or a detonation pressure

exceeding 34 GPa (340 kbar);

2. Other organic explosives not listed in Paragraph 8 yielding detonation pressures of 25 GPa (250 kbar) or more that will remain stable at temperatures of 523 K (250°C) or higher for periods of 5 minutes or longer;
 3. Any other United Nations (UN) Class 1.1 solid propellant not listed in Paragraph 8 with a theoretical specific impulse (under standard conditions) of more than 250 s for non-metallised, or more than 270 s for aluminised compositions;
 4. Any UN Class 1.3 solid propellant with a theoretical specific impulse of more than 230 s for non-halogenised, 250 s for non-metallised and 266 s for metallised compositions;
 5. Any other gun propellants not listed in Paragraph 8 having a force constant of more than 1,200 kJ/kg;
 6. Any other explosive, propellant or pyrotechnic not listed in Paragraph 8 that can sustain a steady-state burning rate of more than 38 mm/s under standard conditions of 6.89 MPa (68.9 bar) pressure and 294 K (21°C);
- or
7. Elastomer modified cast double based propellants (EMCDB) with extensibility at maximum stress of more than 5% at 233 K (-40°C);

(c) "Military pyrotechnics";

(d) Other substances, as follows:

1. Aircraft fuels specially formulated for military purposes;
2. Military materials containing thickeners for hydrocarbon fuels specially formulated for use in flamethrowers or incendiary munitions, such as metal stearates or palmates (also known as octal) (CAS 637-12-7) and M1, M2, M3 thickeners;
3. Liquid oxidisers comprised of or containing inhibited red fuming nitric acid (IRFNA) (CAS 8007-58-7) or oxygen difluoride;

(e) "Additives" and "precursors", as follows:

1. Azidomethylmethyloxetane (AMMO) and its polymers;
2. Basic copper salicylate (CAS 62320-94-9); lead

salicylate (CAS 15748-73-9);

3. Bis(2,2-dinitropropyl) formal (CAS 5917-61-3) or Bis (2,2-dinitropropyl) acetal (CAS 5108-69-0);

4. Bis-(2-fluoro-2, 2-dinitroethyl) formal (FEFO) (CAS 17003-79-1);

5. Bis-(2-hydroxyethyl) glycolamide (BHEGA) (CAS 17409-41-5);

6. Bis(2-methyl aziridiny) methylamino phosphine oxide (Methyl BAPO) (CAS 85068-72-0);

7. Bisazidomethyloxetane and its polymers (CAS 17607-20-4);

8. Bischloromethyloxetane (BCMO) (CAS 142173-26-0);

9. Butadienenitrileoxide (BNO);

10. Butanetrioltrinitrate (BTTN) (CAS 6659-60-5);

11. Catocene (CAS 37206-42-1) (2,2-Bis-ethylferrocenyl propane); ferrocene carboxylic acids; N-butyl-ferrocene (CAS 319904-29-7); Butacene (CAS 125856-62-4) and other adducted polymer ferrocene derivatives;

12. Dinitroazetidene-t-butyl salt;

13. Energetic monomers, plasticisers and polymers containing nitro, azido, nitrate, nitraza or difluoroamino groups;

14. Poly-2,2,3,3,4,4-hexafluoropentane-1,5-diol formal (FPF-1);

15. Poly-2,4,4,5,5,6,6-heptafluoro-2-tri-fluoromethyl-3-oxaheptane-1, 7-diol formal (FPF-3);

16. Glycidylazide Polymer (GAP) (CAS 143178-24-9) and its derivatives;

17. Hexabenzylhexaazaisowurtzitane (HBIW) (CAS 124782-15-6);

18. Hydroxyl terminated polybutadiene (HTPB) with a hydroxyl functionality equal to or greater than 2.2 and less than or equal to 2.4; a hydroxyl value of less than 0.77 meq/g, and a viscosity at 30°C of less than 47 poise (CAS 69102-90-5);

19. Superfine iron oxide (Fe₂O₃ hematite) with a specific surface area more than 250 m²/g and an average particle size of 0.003 um. or less (CAS 1309-37-1);

20. Lead beta-resorcylate (CAS 20936-32-7);
21. Lead stannate (CAS 12036-31-6), lead maleate (CAS 19136-34-6), lead citrate (CAS 14450-60-3);
22. Lead-copper chelates of beta-resorcylate or salicylates (CAS 68411-07-4);
23. Nitratomethylmethyloxetane or poly (3-Nitratomethyl, 3-methyl oxetane); (Poly-NIMMO) (NMMO) (CAS 84051-81-0);
24. 3-Nitrazo-1,5-pentane diisocyanate (CAS 7406-61-9);
25. N-Methyl-p-Nitroaniline (CAS 100-15-2);
26. Organo-metallic coupling agents, specifically:
 - (a) Neopentyl oxy, tri phosphato titanate (CAS 103850-22-2); also known as titanium IV, 2,2[bis 2-pro-penolato-methyl, butanolato, tris (dioctyl) phosphato] (CAS 110438-25-0); or LICA 12 (CAS 103850-22-2);
 - (b) Titanium IV, [(2-propenolato-1) methyl, n-propanolatomethyl] butanolato-1, tris[-dioctyl] pyrophosphate; or KR3538;
 - (c) Titanium IV, [(2-propenolato-1) methyl, n-propanolatomethyl] butanolato-1, tris(dioctyl) phosphate;
27. Polycyanodifluoroaminoethyleneoxide (PCDE);
28. Polyfunctional aziridine amides with isophthalic, trimesic (BITA or butylene imine trimesamide), isocyanuric or trimethyladipic backbone structures and 2-methyl or 2-ethyl substitutions on the aziridine ring;
29. Polyglycidylnitrate or poly (nitratomethyl oxirane); (Poly-GLYN) (PGN) (CAS 27814-48-8);
30. Polynitroorthocarbonates;
31. Propyleneimine, 2-methylaziridine (CAS 75-55-8);
32. Tetraacetyldibenzylhexaazaisowurtzitane (TAIW);
33. Tetraethylenepentaamineacrylonitrile (TEPAN) (CAS 68412-45-3); cyanoethylated polyamines and their salts;
34. Tetraethylenepentaamineacrylonitrileglycidol (TEPANOL) (CAS 68412-46-4); cyanoethylated polyamines adducted with glycidol and their salts;

35. Triphenyl bismuth (TPB) (CAS 603-33-8);
36. Tris-1-(2-methyl)aziridinyl phosphine oxide (MAPO) (CAS 57-39-6); bis (2-methyl aziridinyl) 2-(2-hydroxypropanoxy) propylamino phosphine oxide (BOBBA 8); and other MAPO derivatives;
37. 1,2,3-Tris[1,2-bis(disfluoroamino)ethoxy] propane (CAS 53159-39-0); tris vinoxyl propane adduct (TVOPA);
38. 1,3,5-trichlorobenzene (CAS 108-70-3);
39. 1,2,4 trihydroxybutane (1,2,4-butanetriol);
40. 1,3,5,7 tetraacetyl-1,3,5,7,-tetraaza cyclo-octane (TAT) (CAS 41378-98-7);
41. 1,4,5,8 Tetraazadecalin (CAS 5409-42-7);
42. Low (less than 10,000) molecular weight, alcohol-functionalised, poly(epichlorohydrin); poly(epichlorohydrindiol) and triol.

Note 1 The military explosives and fuels containing the metals or alloys listed in Paragraphs 8.a.1 and 8.a.2 are controlled whether or not the metals or alloys are encapsulated in aluminium, magnesium, zirconium or beryllium. See also entry 1C011 in the Annex to Council Decision 94/942/CFSP as amended.

Note 2 Paragraph 8 does not control boron and boron carbide enriched with boron-10 (20% or more of total boron-10 content).

Note 3 Aircraft fuels controlled by Paragraph 8.d.1 are finished products, not their constituents.

Note 4 Paragraph 8 does not control perforators specially designed for oil well logging.

Note 5 Paragraph 8 does not control the following substances when not compounded or mixed with military explosives or powdered metals:

- (a) Ammonium picrate;
- (b) Black powder;
- (c) Hexanitrodiphenylamine;
- (d) Difluoroamine (HNF₂);
- (e) Nitrostarch;
- (f) Potassium nitrate;
- (g) Tetranitronaphthalene;

- (h) Trinitroanisol;*
- (i) Trinitronaphthalene;*
- (j) Trinitroxylene;*
- (k) Fuming nitric acid non-inhibited and not enriched;*
- (l) Acetylene;*
- (m) Propane;*
- (n) Liquid oxygen;*
- (o) Hydrogen peroxide in concentrations of less than 85%;*
- (p) Misch metal;*
- (q) N-pyrrolidinone; l-methyl-2-pyrrolidinone;*
- (r) Dioctylmaleate;*
- (s) Ethylhexylacrylate;*
- (t) Triethylaluminium (TEA), trimethylaluminium (TMA), and other pyrophoric metal alkyls and aryls of lithium, sodium, magnesium, zinc and boron;*
- (u) Nitrocellulose;*
- (v) Nitroglycerin (or glyceroltrinitrate, trinitroglycerine) (NG);*
- (w) 2,4,6-trinitrotoluene (TNT);*
- (x) Ethylenediaminedinitrate (EDDN)*
- (y) Pentaerythritoltetranitrate (PETN);*
- (aa) Lead azide, normal and basic lead styphnate, and primary explosives or priming compositions containing azides or azide complexes;*
- (bb) Triethyleneglycoldinitrate (TEGDN);*
- (cc) 2,4,6 trinitroresorcinol (styphnic acid);*
- (dd) Diethyldiphenyl urea; dimethyldiphenyl urea; methylethyldiphenyl urea [Centralites];*
- (ee) N, N-diphenylurea (unsymmetrical diphenylurea);*
- (ff) Methyl-N,N-diphenylurea (methyl unsymmetrical diphenylurea);*
- (gg) Ethyl-N,N-diphenylurea (ethyl unsymmetrical diphenylurea);*
- (hh) 2-Nitrodiphenylamine (2-NDPA);*

(ii) *4-Nitrodiphenylamine (4-NDPA)*;

(jj) *2,2-dinitropropanol*;

(kk) *Chlorine trifluoride*.

9. Vessels of war, special naval equipment and accessories, as follows, and components therefor, specially designed for military use:

(a) Combatant vessels and vessels (surface or underwater) specially designed or modified for offensive or defensive action, whether or not converted to non-military use, regardless of current state of repair or operating condition, and whether or not they contain weapon delivery systems or armour, and hulls or parts of hulls for such vessels;

(b) Engines, as follows:

1. Diesel engines specially designed for submarines with both of the following characteristics:

(a) A power output of 1.12 MW (1,500 hp.) or more; and

(b) A rotary speed of 700 rpm or more;

2. Electric motors specially designed for submarines having all of the following characteristics:

(a) A power output of more than 0.75 MW (1000 hp.);

(b) Quick reversing;

(c) Liquid cooled;

and

(d) Totally enclosed;

3. Non-magnetic diesel engines specially designed for military use with a power output of 37.3 KW (50 hp.) or more and with a non-magnetic content in excess of 75% of total mass;

(c) Underwater detection devices specially designed for military use and controls thereof;

(d) Submarine and torpedo nets;

(e) Equipment for guidance and navigation, specially designed for military use;

(f) Hull penetrators and connectors specially designed for military use that enable interaction with equipment external to a vessel;

Note Paragraph 9.f includes connectors for vessels which are of the single-conductor, multi-

conductor, coaxial or waveguide type, and hull penetrators for vessels, both of which are capable of remaining impervious to leakage from without and of retaining required characteristics at marine depths exceeding 100 m; and fibre-optic connectors and optical hull penetrators specially designed for "laser" beam transmission regardless of depth. It does not include ordinary propulsive shaft and hydrodynamic control-rod hull penetrators.

(g) Silent bearings, with gas or magnetic suspension, active signature or vibration suppression controls, and equipment containing those bearings, specially designed for military use.

10. "Aircraft", unmanned airborne vehicles, aero-engines and "aircraft" equipment, related equipment and components, specially designed or modified for military use, as follows:

(a) Combat "aircraft" and specially designed components therefor;

(b) Other "aircraft" specially designed or modified for military use, including military reconnaissance, assault, military training, transporting and air-dropping troops or military equipment, logistics support, and specially designed components therefor;

(c) Aero-engines specially designed or modified for military use, and specially designed components therefor;

(d) Unmanned airborne vehicles and related equipment, specially designed or modified for military use, as follows, and specially designed components therefor:

1. Unmanned airborne vehicles including remotely piloted air vehicles (RPV's) and autonomous programmable vehicles;

2. Associated launchers and ground support equipment;

3. Related equipment for command and control.

(e) Airborne equipment, including airborne refuelling equipment, specially designed for use with the "aircraft" specified in Paragraphs 10.a or 10.b or the aero-engines specified in Paragraph 10.c, and specially designed components therefor;

(f) Pressure refuellers, pressure refuelling equipment, equipment specially designed to facilitate operations in

confined areas and ground equipment developed specially for "aircraft" specified in Paragraphs 10.a or 10.b, or for aero-engines specified in Paragraph 10.c;

(g) Pressurised breathing equipment and partial pressure suits for use in "aircraft", anti-g suits, military crash helmets and protective masks, liquid oxygen converters used for "aircraft" or missiles, and catapults and cartridge actuated devices for emergency escape of personnel from "aircraft";

(h) Parachutes used for combat personnel, cargo dropping or "aircraft" deceleration, as follows:

1. Parachutes for:

(a) Pin point dropping of rangers;

(b) Dropping of paratroopers;

2. Cargo parachutes;

3. Paragliders, drag parachutes, drogue parachutes for stabilisation and attitude control of dropping bodies, (e.g. recovery capsules, ejection seats, bombs);

4. Drogue parachutes for use with ejection seat systems for deployment and inflation sequence regulation of emergency parachutes;

5. Recovery parachutes for guided missiles, drones or space vehicles;

6. Approach parachutes and landing deceleration parachutes;

7. Other military parachutes;

(i) Automatic piloting systems for parachutes loads; equipment specially designed or modified for military use for controlled-opening jumps at any height, including oxygen equipment.

Note 1 Paragraph 10.b does not control "aircraft" or variants of those "aircraft" specially designed for military use which:

(a) Are not configured for military use and are not fitted with equipment or attachments specially designed or modified for military use; and

(b) Have been certified for civil use by the civil aviation authority in a participating state.

Note 2 Paragraph 10.c does not control:

(a) Aero-engines designed or modified for military use which have been certified by civil aviation authorities in a participating state for use in "civil

aircraft", or specially designed components therefor;

(b) Reciprocating engines or specially designed components therefor.

Note 3 The control in Paragraphs 10.b and 10.c on specially designed components and related equipment for non-military "aircraft" or aero-engines modified for military use applies only to those military components and to military related equipment required for the modification to military use.

11. Electronic equipment, not specified elsewhere on this Schedule, specially designed for military use and specially designed components therefor.

Note Paragraph 11 includes:

(a) Electronic countermeasure and electronic counter-countermeasure equipment (i.e., equipment designed to introduce extraneous or erroneous signals into radar or radio communication receivers or otherwise hinder the reception, operation or effectiveness of adversary electronic receivers including their countermeasure equipment), including jamming and counter-jamming equipment;

(b) Frequency agile tubes;

(c) Electronic systems or equipment designed either for surveillance and monitoring of the electro-magnetic spectrum for military intelligence or security purposes or for counter-acting such surveillance and monitoring;

(d) Underwater countermeasures, including acoustic and magnetic jamming and decoy equipment designed to introduce extraneous or erroneous signals into sonar receivers;

(e) Data processing security equipment, data security equipment and transmission and signalling line security equipment, using ciphering processes;

(f) Identification, authentication and keyloader equipment and key management, manufacturing and distribution equipment.

12. High velocity, kinetic energy weapon systems and related equipment, as follows, and specially designed components therefor:

(a) Kinetic energy weapon systems specially designed for destruction or effecting mission-abort of a target;

(b) Specially designed test and evaluation facilities and test models, including diagnostic instrumentation and targets, for dynamic testing of kinetic energy projectiles and systems.

N.B. For weapon systems using sub-calibre ammunition or employing solely chemical propulsion, and ammunition therefor, see Paragraph 1 to Paragraph 4.

Note 1 Paragraph 12 includes the following when specially designed for kinetic energy weapon systems:

(a) Launch propulsion systems capable of accelerating masses larger than 0.1 g to velocities in excess of 1.6 km/s, in single or rapid fire modes;

(b) Prime power generation, electric armour, energy storage, thermal management, conditioning, switching or fuel-handling equipment; and electrical interfaces between power supply, gun and other turret electric drive functions;

(c) Target acquisition, tracking, fire control or damage assessment systems;

(d) Homing seeker, guidance or divert propulsion (lateral acceleration) systems for projectiles.

Note 2 Paragraph 12 controls weapon systems using any of the following methods of propulsion:

(a) Electromagnetic;

(b) Electrothermal;

(c) Plasma;

(d) Light gas;

or

(e) Chemical (when used in combination with any of the above).

Note 3 Paragraph 12 does not control "technology" for magnetic induction for continuous propulsion of civil transport devices.

13. Armoured or protective equipment and constructions and components, as follows:

(a) Armoured plate as follows:

1. Manufactured to comply with a military standard or specification;

or

2. Suitable for military use;

(b) Constructions of metallic or non-metallic materials or combinations thereof specially designed to provide ballistic protection for military systems, and specially designed components therefor;

(c) Military helmets;

(d) Body armour and flak suits manufactured according to military standards or specifications, or equivalent, and specially designed components therefor.

Note 1 Paragraph 13.b includes materials specially designed to form explosive reactive armour or to construct military shelters.

Note 2 Paragraph 13.c does not control conventional steel helmets, neither modified or designed to accept, nor equipped with any type of accessory device.

Note 3 Paragraph 13.d does not control individual suits of body armour for personal protection and accessories therefor when accompanying their users.

N.B. See also entry IA005 in Annex I to Council Decision 94/942/CFSP as amended. 94/942/CFSP as amended. 94/942/CFSP as amended.

14. Specialised equipment for military training or for simulating military scenarios and specially designed components and accessories therefor.

Technical Note

The term 'specialised equipment for military training' includes military types of attack trainers, operational flight trainers, radar target trainers, radar target generators, gunnery training devices, anti-submarine warfare trainers, flight simulators (including human-rated centrifuges for pilot/astronaut training), radar trainers, instrument flight trainers, navigation trainers, missile launch trainers, target equipment, drone "aircraft", armament trainers, pilotless "aircraft" trainers and mobile training units.

Note Paragraph 14 includes image generating and interactive environment systems for simulators when specially designed or modified for military use.

15. Imaging or countermeasure equipment, as follows, specially designed for military use, and specially designed components and accessories therefor:

(a) Recorders and image processing equipment;

(b) Cameras, photographic equipment and film processing equipment;

- (c) *Image intensifier equipment;*
- (d) *Infrared or thermal imaging equipment;*
- (e) *Imaging radar sensor equipment;*

(f) *Countermeasure or counter-countermeasure equipment for the equipment specified in sub-items Paragraphs 15.a to 15.e.*

Note Paragraph 15.f includes equipment designed to degrade the operation or effectiveness of military imaging systems or to minimize such degrading effects.

Note 1 The term 'specially designed components' includes the following when specially designed for military use:

- (a) *Infrared image converter tubes;*
- (b) *Image intensifier tubes (other than first generation);*
- (c) *Microchannel plates;*
- (d) *Low-light-level television camera tubes;*
- (e) *Detector arrays (including electronic interconnection or read out systems);*
- (f) *Pyroelectric television camera tubes;*
- (g) *Cooling systems for imaging systems;*
- (h) *Electrically triggered shutters of the photochromic or electro-optical type having a shutter speed of less than 100 ms, except in the case of shutters which are an essential part of a high speed camera;*
- (i) *Fibre optic image inverters;*
- (j) *Compound semiconductor photocathodes.*

Note 2 Paragraph 15 does not control "first generation image intensifier tubes" or equipment specially designed to incorporate "first generation image intensifier tubes".

N.B. For the status of weapons sights incorporating "first generation image intensifier tubes" see Paragraphs 1,2 and 5.a.

N.B. See also entries 6A002a and 6A002b in Annex I to Council Decision 94/942/CFSP as amended.

16. Forgings, castings and other unfinished products the use of which in a specified product is identifiable by material composition, geometry or function, and which are specially designed for any products specified in Paragraphs 1 to 4, 6, 9, 10, 12 or 19.

17. Miscellaneous equipment, materials and libraries, as follows, and specially designed components therefor:

(a) Self-contained diving and underwater swimming apparatus, as follows:

1. Closed or semi-closed circuit (rebreathing) apparatus specially designed for military use (i.e. specially designed to be non magnetic);
2. Specially designed components for use in the conversion of open-circuit apparatus to military use;
3. Articles designed exclusively for military use with self-contained diving and underwater swimming apparatus;

(b) Construction equipment specially designed for military use;

(c) Fittings, coatings and treatments for signature suppression, specially designed for military use;

(d) Field engineer equipment specially designed for use in a combat zone;

(e) "Robots", "robot" controllers and "robot" "end-effectors", having any of the following characteristics:

1. Specially designed for military use;
2. Incorporating means of protecting hydraulic lines against externally induced punctures caused by ballistic fragments (e.g., incorporating self-sealing lines) and designed to use hydraulic fluids with flash points higher than 839 K (566°C);

or

3. Specially designed or rated for operating in an electro-magnetic pulse (EMP) environment;

(f) Libraries (parametric technical databases) specially designed for military use with equipment specified in this Schedule;

(g) Nuclear power generating equipment or propulsion equipment, including "nuclear reactors", specially designed for military use and components therefor specially designed or modified for military use;

(h) Equipment and material, coated or treated for signature suppression specially designed for military use, other than those specified elsewhere in this Schedule;

(i) Simulators specially designed for military "nuclear reactors";

(j) Mobile repair shops specially designed to

- service military equipment;
- (k) Field generators specially designed for military use;
- (l) Containers specially designed for military use;
- (m) Bridges specially designed for military use.

Technical Note

For the purpose of Paragraph 17, the term 'library' (parametric technical database) means a collection of technical information of a military nature, reference to which may enhance the performance of military equipment or systems.

18. Equipment and "technology" for the production of products referred to in this Schedule, as follows:

- (a) Specially designed or modified production equipment for the production of products specified in this Schedule, and specially designed components therefor;
- (b) Specially designed environmental test facilities and specially designed equipment therefor, for the certification, qualification or testing of products specified in this Schedule;
- (c) Specific production "technology", even if the equipment with which such "technology" is to be used is not specified in this Schedule;
- (d) "Technology" specific to the design of, the assembly of components into, and the operation, maintenance and repair of complete production installations even if the components themselves are not specified in this Schedule.

Note 1 Paragraph 18.a and Paragraph 18.b include the following equipment:

- (a) *Continuous nitrators;*
- (b) *Centrifugal testing apparatus or equipment having any of the following characteristics:*
 - 1. *Driven by a motor or motors having a total rated horsepower of more than 298 kW (400 hp);*
 - 2. *Capable of carrying a payload of 113 kg or more;*

or

 - 3. *Capable of exerting a centrifugal acceleration of 8 g or more on a payload of 91 kg or more;*
- (c) *Dehydration presses;*

(d) Screw extruders specially designed or modified for military explosive extrusion;

(e) Cutting machines for the sizing of extruded propellants;

(f) Sweetie barrels (tumblers) 1.85 m or more in diameter and having over 227 kg product capacity;

(g) Continuous mixers for solid propellants;

(h) Fluid energy mills for grinding or milling the ingredients of military explosives;

(i) Equipment to achieve both sphericity and uniform particle size in metal powder listed in Paragraph 8.a.1;

(j) Convection current converters for the conversion of materials listed in Paragraph 8.a.6.

Technical Note

For the purposes of Paragraph 18, the term 'production' includes design, examination, manufacture, testing and checking.

Note 2

(a) The term 'products referred to in this Schedule' includes:

1. Products not controlled if inferior to specified concentrations as follows:

(a) hydrazine (see Paragraph 8.a.18);

(b) "Military explosives" (see Paragraph 8);

2. Products not controlled if inferior to technical limits, (i.e., "superconductive" materials not controlled by 1 C005 in Annex I of Council Decision 94/942/CFSP as amended; "superconductive" electromagnets not controlled by 3A001.e.3 in Annex I of Council Decision 94/942/CFSP as last amended; "superconductive" electrical equipment excluded from control under Paragraph 20.b);

3. Metal fuels and oxidants deposited in laminar form from the vapour phase (see Paragraph 8.a.2);

(b) The term 'products referred to in this Schedule' does not include:

1. Signal pistols (see Paragraph 2.b);

2. The substances excluded from control under Note 3 to Paragraph 7;

3. Personal radiation monitoring dosimeters (see Paragraph 7.f) and masks for protection against specific

industrial hazards, see also Annex I of Council Decision 94/942/CFSP;

4. Acetylene, propane, liquid oxygen, difluoramine (HNF₂), fuming nitric acid and potassium nitrate powder (see Note 5 to Paragraph 8);

5. Aero-engines excluded from control under Paragraph 10;

6. Conventional steel helmets not equipped with, or modified or designed to accept, any type of accessory device (see Note 2 to Paragraph 13);

7. Equipment fitted with industrial machinery, which is not controlled such as coating machinery not elsewhere specified and equipment for the casting of plastics;

8. Muskets, rifles and carbines dated earlier than 1938, reproductions of muskets, rifles and carbines dated earlier than 1890, revolvers, pistols and machine guns dated earlier than 1890, and their reproductions;

Note 3 Note 2.b.8 of Paragraph 18 does not release from controls "technology" or production equipment for non-antique small arms, even if used to produce reproductions of antique small arms.

Note 4 Paragraph 18.d does not control "technology" for civil purposes, such as agricultural, pharmaceutical, medical, veterinary, environmental, waste management, or in the food industry.

N.B. See Note 4 to Paragraph 7.

19. Directed energy weapon systems (DEW), related or countermeasure equipment and test models, as follows, and specially designed components therefor:

(a) "Laser" systems specially designed for destruction or effecting mission-abort of a target;

(b) Particle beam systems capable of destruction or effecting mission-abort of a target;

(c) High power radio-frequency (RF) systems capable of destruction or effecting mission-abort of a target;

(d) Equipment specially designed for the detection or identification of, or defence against, systems specified in paragraph 19.a to Paragraph 19.c;

(e) Physical test models and related test results for the systems, equipment and components specified by this Item.

(f) Continuous wave or pulsed "laser" systems specially designed to cause permanent blindness to unenhanced vision, i.e., to the naked eye or to the eye with corrective eyesight devices.

Note 1 Directed energy weapon systems controlled by Paragraph 19 include systems whose capability is derived from the controlled application of:

(a) "Lasers" of sufficient continuous wave or pulsed power to effect destruction similar to the manner of conventional ammunition;

(b) Particle accelerators which project a charged or neutral particle beam with destructive power;

(c) High pulsed power or high average power radio frequency beam transmitters which produce fields sufficiently intense to disable electronic circuitry at a distant target.

Note 2 Paragraph 19 includes the following when specially designed for directed energy weapon systems:

(a) Prime power generation, energy storage, switching, power conditioning or fuel-handling equipment;

(b) Target acquisition or tracking systems;

(c) Systems capable of assessing target damage, destruction or mission-abort;

(d) Beam-handling, propagation or pointing equipment;

(e) Equipment with rapid beam slew capability for rapid multiple target operations;

(f) Adaptive optics and phase conjugators;

(g) Current injectors for negative hydrogen ion beams;

(h) "Space qualified" accelerator components;

(i) Negative ion beam funnelling equipment;

(j) Equipment for controlling and slewing a high energy ion beam;

(k) "Space qualified" foils for neutralising negative hydrogen isotope beams.

20. Cryogenic and "superconductive" equipment, as follows, and specially designed components and accessories therefor:

(a) Equipment specially designed, or configured, to

be installed in a vehicle for military ground, marine, airborne or space applications, capable of operating while in motion and of producing or maintaining temperatures below 103 K (-170°);

Note Paragraph 20.a includes mobile systems incorporating or employing accessories or components manufactured from non-metallic or non-electrical conductive materials, such as plastics or epoxy-impregnated materials.

(b) "Superconductive" electrical equipment (rotating machinery and transformers) specially designed or configured to be installed in a vehicle for military ground, marine, airborne or space applications, capable of operating while in motion.

Note Paragraph 20.b does not control direct-current hybrid homopolar generators that have single-pole, normal metal armatures which rotate in a magnetic field produced by superconducting windings, provided those windings are the only superconducting component in the generator.

21. Security (including personal security) and paramilitary equipment as follows:

(a) Acoustic devices represented by the manufacturers or suppliers thereof as suitable for riot control purposes, and specialised components thereof;

(b) Anti-riot shields and components therefor;

(c) Leg-irons, shackles and gangchains, specially designed for restraining human beings;

(d) Portable anti-riot devices for administering an electric shock or an incapacitating substance, and specialised components therefor;

(e) Portable devices designed for self-protection by the administration of an incapacitating substance and specially designed components therefor;

(f) Water cannon and components therefor;

(g) Riot control vehicles which have been specially designed or modified to be electrified to repel boarders;

(h) Ground vehicles: all wheel-drive vehicles capable of off-road use which have been manufactured or fitted with metallic or non-metallic materials to provide ballistic protection;

(i) Simulators: simulators specially designed or represented by the manufacturers as suitable for

training in the use of any firearm or weapon specified in this Schedule, and specially designed or modified components or accessories therefor;

(j) Other equipment:

(i) Ferries, rafts not specified in Paragraph 9 and components therefor, specially designed or modified for military use;

(ii) Forgings, castings and semi-finished products specially designed for weapons specified in Paragraph 21.i;

(iii) Ammunition and cartridges, including projectiles, and specially designed components therefor, for the items specified in Paragraph 21.i.

Note 1 For the purposes of Paragraph 21.g, the ballistic protection includes protection specified in National Institute of Justice (NIJ) standard 0101.03 (April 1987) types IIIA-IV.

Note 2 Paragraph 21.g does not control vehicles for transportation of valuables and funds.

22. "Software", as follows:

(a) "Software" specially designed or modified for the "development", "production" or "use" of equipment or materials specified in this Schedule;

(b) Specific "software", as follows:

1. "software", as follows:

(a) Modelling, simulation or evaluation of military weapon systems;

(b) "Development", monitoring, maintenance or up-dating of "software" embedded in military weapon systems;

(c) Modelling or simulating military operation scenarios, not specified in Paragraph 14;

(d) Command, Communications, Control and Intelligence (C³I) applications;

2. "Software" for determining the effects of conventional, nuclear, chemical or biological warfare weapons.

3. "Software", not specified in Paragraph 22.a, b.1 or b.2., specially designed or modified to enable equipment which is not specified in this Schedule to perform the functions of equipment specified in Paragraphs 5, 7.f, 9.c, 9.e, 10.e, 11,

14, 15, 17.i or 18

23. "Technology" according to the General Technology Note of the this Schedule for the "development", "production" or "use" of items specified in this Schedule, other than that "technology" specified in Paragraph 7 and Paragraph 18.

DEFINITIONS OF TERMS USED IN THE SCHEDULE

This document contains the definitions of the terms used in the Schedule of Goods, in alphabetical order.

Note 1 Definitions apply throughout the Schedule of Goods. The reference are purely advisory and have no effect on the universal application of defined terms throughout the Schedule of Goods.

Note 2 Words and terms contained in the List of Definitions only take the defined meaning where this is indicated by their being enclosed in quotation marks (" "). Elsewhere, words and terms take their commonly accepted (dictionary) meanings, unless a local definition for a particular control is given.

"Adapted for use in war"

Any modification or selection (such as altering purity, shelf life, virulence, dissemination characteristics, or resistance to UV radiation) designed to increase the effectiveness in producing casualties in humans or animals, degrading equipment or damaging crops or the environment.

"Additives"

Substances used in explosive formulations to improve their properties.

"Aircraft"

A fixed wing, swivel wing, rotary wing (helicopter), tilt rotor or tilt wing airborne vehicle.

"Basic scientific research"

Experimental or theoretical work undertaken principally to acquire new knowledge of the fundamental principles of phenomena or observable facts, not primarily directed towards a specific practical aim or objective.

"Biocatalysts"

Enzymes for specific chemical or biochemical reactions or other biological compounds which bind to and accelerate the degradation of CW agents.

Technical Note

'Enzymes' means "biocatalysts" for specific chemical or biochemical reactions.

"Biopolymers"

Biological macromolecules as follows:

(a) Enzymes for specific chemical or biochemical reactions;

(b) Antibodies, monoclonal, polyclonal or anti-idiotypic;

(c) Specially designed or specially processed receptors;

Technical Note

1. *'Anti-idiotypic antibodies' means antibodies which bind to the specific antigen binding sites of other antibodies;*

2. *'Monoclonal antibodies' means proteins, which bind to one antigenic site and are produced by a single clone of cells;*

3. *'Polyclonal antibodies' means a mixture of proteins which bind to the specific antigen and are produced by more than one clone of cells;*

4. *'Receptors' means biological macromolecular structures capable of binding ligands, the binding of which affects physiological functions.*

"Civil aircraft"

Those "aircraft" listed by designation in published aerworthiness certification lists by the civil aviation authorities to fly commercial civil, internal and external, routes or for legitimate civil, private or business use.

"Development"

Is related to all stages prior to serial production, such as: design, design research, design analyses, design concepts, assembly and testing of prototypes, pilot production schemes, design data, process of transforming design data into a product, configuration design, integration design, layouts.

"End-effectors"

Grippers, active tooling units and any other tooling that is attached to the baseplate on the end of a "robot" manipulator arm.

Technical Note

'Active tooling units' are devices for applying motive power, process energy or sensing to a workpiece.

"Expression Vectors"

Carriers (e.g., plasmid or virus) used to introduce genetic material into host cells.

"First generation image intensifier tubes"

Electrostatically focused tubes, employing input and output fibre optic or glass face plates, multi-alkali photocathodes (S-20 or S-25), but not microchannel plate amplifiers.

"In the public domain"

This means "technology" or "software" which has been made available without restrictions upon its further dissemination.

Note Copyright restrictions do not remove "technology" or "software" from being "in the public domain".

"Laser"

An assembly of components which produce both spatially and temporally coherent light that is amplified by stimulated emission of radiation.

"Military explosives"

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.

"Nuclear reactor"

Includes the items within or attached directly to the reactor vessel, the equipment which controls the level of power in the core, and the components which normally contain or come into direct contact with or control the primary coolant of the reactor core.

"Precursors"

Speciality chemicals used in the manufacture of military explosives.

"Production"

Means all production stages, such as: product engineering, manufacture, integration, assembly (mounting), inspection, testing, quality assurance.

"Required"

As applied to "technology", refers to only that portion of "technology" which is peculiarly responsible for achieving or exceeding the controlled performance levels, characteristics or functions. Such "required" "technology" may be shared by different products.

"Riot control agents"

Substances which produce temporary irritating or disabling physical effects which disappear within minutes of removal from exposure. There is no significant risk of permanent injury and medical treatment is rarely required.

"Robot"

A manipulation mechanism, which may be of the continuous path or of the point-to-point variety, may use sensors, and has all the following characteristics:

(a) Is multifunctional;

(b) Is capable of positioning or orienting material, parts, tools or special devices through variable movements in three dimensional space;

(c) Incorporates three or more closed or open loop servo-devices which may include stepping motors;

and

(d) Has "user-accessible programmability" by means of the teach/playback method or by means of an electronic computer which may be a programmable logic controller, i.e., without mechanical intervention.

Note The above definition does not include the following devices:

1. Manipulation mechanisms which are only manually/teleoperator controllable;

2. Fixed sequence manipulation mechanisms which are automated moving devices, operating according to mechanically fixed programmed motions. The programme is mechanically limited by fixed stops, such as pins or cams. The sequence of motions and the selection of paths or angles are not variable or changeable by mechanical electronic or electrical means;

3. Mechanically controlled variable sequence manipulation mechanisms which are automated moving devices, operating according to mechanically fixed programmed motions. The programme is mechanically

limited by fixed, but adjustable, stops such as pins or cams. The sequence of motions and the selection of paths or angles are variable within the fixed programme pattern. Variations or modifications of the programme pattern (e.g., changes of pins or exchanges of cams) in one or more motion axes are accomplished only through mechanical operations;

4. Non-servo-controlled variable sequence manipulation mechanisms which are automated moving devices, operating according to mechanically fixed programmed motions. The programme is variable but the sequence proceeds only by the binary signal from mechanically fixed electrical binary devices or adjustable stops;

5. Stacker cranes defined as Cartesian coordinate manipulator systems manufactured as an integral part of a vertical array of storage bins and designed to access the contents of those bins for storage or retrieval.

"Software"

A collection of one or more "programmes" or "microprogrammes" fixed in any tangible medium of expression.

"Solidify rapidly"

A process involving the solidification of molten material at cooling rates exceeding 1,000 K/sec.

"Space qualified"

Products designed, manufactured and tested to meet the special electrical, mechanical or environmental requirements for use in the launch and deployment of satellites or high altitude flight systems operating at altitudes of 100 km or higher.

"Superconductive"

Refers to materials, (i.e., metals, alloys or compounds) which can lose all electrical resistance (i.e., which can attain infinite electrical conductivity and carry very large electrical currents without Joule heating).

Technical Note

The "superconductive" state of a material is individually characterised by a "critical temperature", a critical magnetic field, which is a function of temperature, and a critical current density which is, however, a function of both magnetic field and temperature.

"Tear gases"

Gases which produce temporary irritating or disabling effects which disappear within minutes of removal from exposure.

"Technology"

Specific information necessary for the "development", "production" or "use" of a product. The information takes the form of technical data or technical assistance. Controlled "technology" is defined in the General Technology Note.

Technical Notes

1. 'Technical data' may take forms such as blueprints, plans, diagrams, models, formulae, tables, engineering designs and specifications, manuals and instructions written or recorded on other media or devices such as disk, tape, read-only memories.

2. 'Technical assistance' may take forms such as instruction, skills, training, working knowledge, consulting services. 'Technical assistance' may involve transfer of 'technical data'.

"Use"

Operation, installation (including on-site installation), maintenance (checking), repair, overhaul and refurbishing.



GIVEN under my Official Seal, this 21st day of September, 2000.

MARY HARNEY,

Minister for Enterprise, Trade and
Employment

EXPLANATORY NOTE.

(This note is not part of the Instrument and does not purport to be a legal interpretation.)

The effect of this Order is to enable the Minister for Enterprise, Trade and Employment to control the export of the goods indicated in the Schedule to this Order.