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**AMENDMENTS TO THE DEFENCE AND STRATEGIC GOODS
LIST PURSUANT TO THE CUSTOMS ACT 1901, CUSTOMS
(PROHIBITED EXPORTS) REGULATION 13E(1)**

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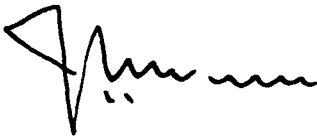
Commonwealth of Australia

**AMENDMENTS TO THE DEFENCE AND STRATEGIC GOODS LIST
PURSUANT TO THE CUSTOMS ACT 1901, CUSTOMS (PROHIBITED
EXPORTS) REGULATION 13E(1)**

(Instrument of Amendment No. DSGL 1/2000)

I, John Moore, Minister for Defence, make the following amendments to the Defence and Strategic Goods List, the document formulated and published under paragraph 112 (2A) (aa) of the Customs Act 1901, contained in the Department of Defence publication entitled "Australian Controls on the Export of Defence and Strategic Goods", dated November 1996.

Dated 2 - 11 - 2000

A handwritten signature in black ink, appearing to read 'John Moore', with a stylized initial 'J' and a wavy line extending to the right.

JOHN MOORE
Minister for Defence

DEFINITIONS

- "Asymmetric algorithm"
N.B. changed to Technical Note.
- "Basic gate propagation delay time"
N.B. became part of the Technical Note
- "Biocatalysis"
N.B. changed to Technical Note
- "Cryptography"
N.B. changed to Technical Note
- "Data signalling rate"
N.B. 1. & 2. changed to Note and Technical Note
- "Digital computer"
N.B. changed to Technical Note
- "Dynamic adaptive routing"
N.B. changed to a Note
- "Film type integrated circuit"
N.B. deleted
- "Focal plane array"
N.B. changed to Note.
- "Frequency hopping"
new definition (replaces "frequency agility")
- "Information Security"
N.B. changed to Technical Note.
- "In the public domain"
N.B. changed to Note.
- "Microcomputer microcircuit"
N.B. changed to Technical Note.
- "Microprocessor microcircuit"
N.B. 1. & 2. Changed to Technical Note and Note.
- "Military pyrotechnic(s)"
parenthesis inserted
- "Multilevel security"
N.B. changed to Technical Note.
- "Robot"
N.B. changed to Note.
- "Stored programmed controlled"
N.B. changed to Technical Note.
- "Superconductive"
N.B. changed to Technical Note.
- "Symmetric algorithm"
N.B. changed to Technical Note.
- "Technology"
N.B. 1. & 2. Changed to Technical Notes.

PART 1 - MUNITIONS LIST

- Item ML3 - addition of new Note 3
Note 3: "ML3. Does not control cartridges specially designed for any of the following purposes:
 - a. signalling;
 - b. bird scaring; or
 - c. lighting of gas flares at oil wells."
- Item ML7.d - redrafted to create para 1 and new para 2
d. Equipment specially designed or modified for the dissemination of any of the following and specially designed components therefor;
 1. Materials or agents controlled by ML7.a or c.; or
 2. CW made up of precursors controlled by ML7.b.
- Item ML 7.e - reference expanded to include 'or c.'
- Item ML 7.f. reference expanded to include 'or c.'
f. Equipment specially designed for the detection or identification of materials controlled by ML7.a. or c. and specially designed components therefor;
- Item ML8.a.4. 'Nitroguanidine (NQ) (CAS 556-88-7)' transferred to 1.C.11.d.
- Item ML8.e.33. polyamines is now plural and 'its' is replaced by 'their'
33. Tetraethylenepentaamineacrylonitrile (TEPAN) (CAS 68412-45-3); cyanoethylated polyamines and their salts;
- Item ML8.e.34. polyamines is now plural and 'its' is replaced by 'their'
34. Tetraethylenepentaamineacrylonitrileglycidol (TEPANOL) (CAS 68412-46-4); cyanoethylated polyamines adducted with glycidol and their salts;
- Item ML13.b. 'and specially designed components therefor' added to entry
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;
- Item ML17.k. 'and' deleted from end of sentence
- Item ML17.m. new entry
m. Bridges specially designed for military use.
- Item ML18. Note 2.b.8.
text in parentheses becomes Note 3 (existing Note 3 renumbered Note 4.)
- ML21.b. new sub-item 3
3. "Software", not controlled by ML21.a., b.1, or b.2, specially designed or modified to enable equipment not controlled by the Munitions List to perform the military functions of equipment controlled by ML5., ML7.f., ML9.c., ML9.e., ML10.e., ML11., ML14., ML15., ML17.i., or ML18.
- Item ML901 new sub-item c.
c. parts and components of a. and b..

PART 2, CATEGORY 0 - NUCLEAR MATERIALS, FACILITIES AND EQUIPMENT

- Item OB003 addition of new sub-item i.
i. Systems for the conversion of UO2 to UC14.
- Item OB006 Note f. text amended to read
f. Process control instrumentation specially designed or prepared for monitoring or controlling the reprocessing of irradiated "natural uranium", "depleted uranium" or "special fissile materials".
- Item OB003 sub-items g. and h. deleted

- **New entry Item 0B007**
Plant for the conversion of plutonium and equipment specially designed or prepared therefor, as follows:
 - a. Systems for the conversion of plutonium nitrate to oxide;
 - b. Systems for plutonium metal production.

- **New entry Item 0C001**
"Natural uranium" or "depleted uranium" or thorium in the form of metal, alloy, chemical compound or concentrate and any other material containing one or more of the foregoing;
Note: 0C001 does not control the following:
 - a. Four grammes or less of "natural uranium" or "depleted uranium" when contained in a sensing component in instruments;
 - b. "Depleted uranium" specially fabricated for the following civil non-nuclear applications:
 - 1. Shielding;
 - 2. Packaging;
 - 3. Ballasts having a mass not greater than 100 kg;
 - 4. Counter-weights having a mass not greater than 100 kg;
 - c. Alloys containing less than 5% thorium;
 - d. Ceramic products containing thorium, which have been manufactured for non-nuclear use.

- **New entry Item 0C002**
"Special fissile materials"

Note: 0C002 does not control four "effective grammes" or less when contained in a sensing component in instruments.

[Only for separated plutonium and "uranium enriched isotopes 235 or 233" to more than 20%]

- **0D001** Items added to end of para
"Software" specially designed or modified for the "development", "production" or "use" of goods specified in this Category. [As it relates to: 0B001, 0B002, 0B004, 0B006, 0B007 and 0C002]

- **0E001** Items added to end of para
"Technology" according to the Nuclear Technology Note for the "development", "production" or "use" of goods specified in this Category. [As it relates to: 0B001, 0B002, 0B004, 0B006, 0B007 and 0C002]

PART 3 CATEGORY 1 - MATERIALS, CHEMICALS, "MICROORGANISMS" & "TOXINS"

- **Item 1A102** insert 'components'
Resaturated pyrolyzed carbon-carbon components designed for space launch vehicles specified in 9A004 or sounding rockets specified in 9A104.

- **Item 1B002** addition of N.B.
N.B.: SEE ALSO 1B102

- **New entry 1B102**

Metal powder "production equipment", other than that specified in 1B002, usable for the "production", in a controlled environment, of spherical or atomised materials specified in 1C011.a., 1C011.b., 1C111.a.1., 1C111.a.2. or in the Military Goods Controls.
N.B.: SEE ALSO 1B115.b.

Note: 1B102 includes:
 - a. Plasma generators (high frequency arc-jet) usable for obtaining sputtered or spherical metallic powders with organization of the process in an argon-water environment;
 - b. Electroburst equipment usable for obtaining sputtered or spherical metallic powders with organization of the process in an argon-water environment;
 - c. Equipment usable for the "production" of spherical aluminium powders by powdering a melt in an inert medium (e.g. nitrogen).

- **Item 1B115** text re-written, Notes re-numbered
Equipment, other than that specified in 1B002 or 1B102, for the production of propellant and propellant constituents, as follows, and specially designed components therefor:

- a. "Production equipment" for the "production", handling or acceptance testing of liquid propellants or propellant constituents specified in 1C011.a., 1C011.b., 1C111 or in the Military Goods Controls;
- b. "Production equipment" for the "production", handling, mixing, curing, casting, pressing, machining, extruding or acceptance testing of solid propellants or propellant constituents specified in 1C011.a., 1C011.b., 1C111 or in the Military Goods Controls.

Note: 1B115.b. does not control batch mixers, continuous mixers or fluid energy mills. For the control of batch mixers, continuous mixers and fluid energy mills see 1B117, 1B118 and 1B119.

Note 1: For equipment specially designed for the production of military goods, see ML18.

Note 2: 1B115 does not control equipment for the "production", handling and acceptance testing of boron carbide.

- New entry Item 1B117
Batch mixers with provision for mixing under vacuum in the range of zero to 13.326 kPa and with temperature control capability of the mixing chamber and having all of the following:
 - a. A total volumetric capacity of 110 litres or more; and
 - b. At least one mixing/kneading shaft mounted off centre
- New entry Item 1B118
Continuous mixers with provision for mixing under vacuum in the range of zero to 13.326 kPa and with temperature control capability of the mixing chamber and having all of the following:
 - a. Two or more mixing/kneading shafts; and
 - b. Capability to open the mixing chamber.
- New entry Item 1B119
Fluid energy mills usable for grinding or milling substances specified in C011.a. 1C011.b., 1C111 or in the Military Goods Controls.
- Item 1C001 N.B. changed to a Note
Note 2: Nothing in Note 1 to 1C001.a. releases magnetic materials to provide absorption when contained in paint.
- Item 1C006.a.1. Note changed to Technical Note
- Item 1C006.a.2. Note changed to Technical Note
- Item 1C011.a. addition of new Technical Note and N.B. changed to Note.
Technical Note:
The natural content of hafnium in the zirconium (typically 2% to 7%) is counted with the zirconium
- Item 1C011.b. N.B. changed to a Note.
- Item 1C011 new sub-item d.
d. Nitroguanidine (NQ) (CAS 556-88-7).
- New entry Item 1C102
Resaturated pyrolyzed carbon-carbon materials designed for space launch vehicles specified in 9A004 or sounding rockets specified in 9A104.
- Item 1C107 new text for b., (old b. re-lettered to c.), new sub-item d.
 - b. Pyrolytic or fibrous reinforced graphites, usable for "missile" nozzles and reentry vehicle nose tips;
N.B.: See also 0C004
 - c. Ceramic composite materials (dielectric constant less than 6 at frequencies from 100 Hz to 10,000 MHz) usable for "missile" radomes;
 - d. Bulk machinable silicon-carbide reinforced unfired ceramic, usable for "missile" nose tips.
- Item 1C111.a.1. decrease in particle diameter to 200 micrometres, addition of new Technical Note
 - a. Propulsive substances:
 - 1. Spherical aluminium powder, other than that specified in ML8a, with particles of uniform diameter of less than 200 μm and an aluminium content of 97% by weight or more, if at least 10% of the total weight is made up of particles of less than 63 μm , according to ISO 2591:1988 or national equivalents;
Technical Note:
A particle size of 63 μm (ISO R-565) corresponds to 250 mesh (Tyler) or 230 mesh (ASTM standard E-11).

- Item 1C111.a.2. 'boron' deleted, remaining items re-lettered, addition of Technical Note
 2. Metal fuels, other than that specified in the Military Goods Controls, in particle sizes of less than 60 µm, whether spherical, atomized, spheroidal, flaked or ground, consisting 97% by weight or more of any of the following:
 - a. Zirconium;
 - b. Beryllium;
 - c. Magnesium; or
 - d. Alloys of the metals specified by a. to c. above;

Technical Note:
The natural content of hafnium in the zirconium (typically 2% to 7%) is counted with the zirconium.
- Item 1C111.c.1 Butacene added to list of additive and agents
- New entry 1C118
Titanium-stabilised duplex stainless steel (Ti-DSS) having all of the following:
 - a. Having all of the following characteristics:
 1. Containing 17.0 - 23.0 weight percent chromium and 4.5 - 7.0 weight percent nickel;
 2. Having a titanium content of greater than 0.10 weight percent; and
 3. A ferritic-austenitic microstructure (also referred to as a two-phase microstructure) of which at least 10 percent is austenite by volume (according to ASTM E-1181-87 or national equivalents); and
 - b. Having any of the following forms:
 1. Ingots or bars having a size of 100 mm or more in each dimension;
 2. Sheets having a width of 600 mm or more and a thickness of 3 mm or less; or
 3. Tubes having an outer diameter of 600 mm or more and a wall thickness of 3 mm or less.
- Item 1D101 insert 'or modified', inclusion of additional Item No.s
"Software" specially designed or modified for the "use" of goods specified in 1B101, 1B102, 1B115, 1B117, 1B118 or 1B119.
- Item 1E002c.1.c replace 'Being' with 'Having'
- Item 1E002c.1.c.1 new text and re-numbering of sub-items
 - c. Being any of the following:
 1. Zirconia with an average particle size equal to or less than 1 µm and no more than 10% of the particles larger than 5 µm;
 2. Other base materials with an average particle size equal to or less than 5 µm and no more than 10% of the particles larger than 10 µm; or
 3. Having all of the following:
 - a. Platelets with a length to thickness ratio exceeding 5;
 - b. Whiskers with a length to diameter ratio exceeding 10 for diameters less than 2 µm; and
 - c. Continuous or chopped fibres less than 10 µm in diameter;

PART 3 CATEGORY 2 – MATERIELS PROCESSING

- Item 2B Technical Notes incorporated into introduction
- Technical Note 4., N.B.s to paras 1 and 4 became part of those paragraphs. Paragraphs 1 to 6 under Determination of Stated Values re-lettered a. to f.
- Item 2B005.a addition of N.B.
N.B.: SEE ALSO 2B104 AND 2b204
- Item 2.B007.a, and c. Notes changed to Technical Notes
- Item 2B104 text re-worded to read
"Isostatic presses", other than those specified in 2B004, having all of the following:
N.B.: SEE ALSO 2B204.
 - a. Maximum working pressure of 69 MPa or greater;
 - b. Designed to achieve and maintain a controlled thermal environment of 873 K (600°C) or greater; and
 - c. Possessing a chamber cavity with an inside diameter of 254 mm or greater.

- New entry Item 2B105
CVD furnaces, other than those specified in 2B005.a., designed or modified for the densification of carbon-carbon composites.
- Item 2B109.a. and b. re-worded, Technical Notes replaced by a Note and new Technical Note
 - a. Flow-forming machines having all of the following:
 1. According to the manufacturer's technical specification, can be equipped with "numerical control" units or a computer control, even when not equipped with such units; and
 2. With more than two axes which can be coordinated simultaneously for "contouring control".
 - b. Specially designed components for flow-forming machines specified in 2B009 or 2B109.a.

Note: 2B109 does not control machines that are not usable in the production of propulsion components and equipment (e.g. motor cases) for systems specified in 9A005, 9A007.a. or 9A105.a.

Technical Note:

Machines combining the function of spin-forming and flow-forming are for the purpose of 2B109 regarded as flow-forming machines.

- Item 2B116 Note changed to Technical Note
- New entry 2B117
Equipment and process controls, other than those specified in 2B004, 2B005.a., 2B104 or 2B105, designed or modified for densification and pyrolysis of structural composite rocket nozzles and reentry vehicle nose tips.
- New entry Item 2B119
Balancing machines and related equipment, as follows:
N.B.: SEE ALSO 2B219.
 - a. Balancing machines having all the following characteristics:
 1. Not capable of balancing rotors/assemblies having a mass greater than 3 kg;
 2. Capable of balancing rotors/assemblies at speeds greater than 12,500 rpm;
 3. Capable of correcting unbalance in two planes or more; and
 4. Capable of balancing to a residual specific unbalance of 0.2 g mm per kg of rotor mass;

Note: 2B119.a. does not control balancing machines designed or modified for dental or other medical equipment.
 - b. Indicator heads designed or modified for use with machines specified in 2B119.a.

Technical Note:

Indicator heads are sometimes known as balancing instrumentation.

- New entry Item 2B120
Motion simulators or rate tables having all of the following characteristics:
 - a. Two axes or more;
 - b. Slip rings capable of transmitting electrical power and/or signal information; and
 - c. Having any of the following characteristics:
 1. For any single axis having all of the following:
 - a. Capable of rates of 400 degrees/s or more, or 30 degrees/s or less; and
 - b. A rate resolution equal to or less than 6 degrees/s and an accuracy equal to or less than 0.6 degrees/s;
 2. Having a worst-case rate stability equal to or better (less) than plus or minus 0.05 % averaged over 10 degrees or more; or
 3. A positioning accuracy equal to or better than 5 arc second.

Note: 2B120 does not control rotary tables designed or modified for machine tools or for medical equipment. For controls on machine tool rotary tables see 2B008.

- New entry Item 2B121
Positioning tables (equipment capable of precise rotary positioning in any axes), other than those specified in 2B120, having all the following characteristics:
 - a. Two axes or more; and
 - b. A positioning accuracy equal to or better than 5 arc second.

Note: 2B121 does not control rotary tables designed or modified for machine tools or for medical equipment. For controls on machine tool rotary tables see 2B008.
- New entry 2B122
Centrifuges capable of imparting accelerations above 100 g and having slip rings capable of transmitting electrical power and signal information.
- New entry Item 2B219
Centrifugal multiplane balancing machines, fixed or portable, horizontal or vertical, as follows:
 - a. Centrifugal balancing machines designed for balancing flexible rotors having a length of 600 mm or more and having all of the following characteristics:
 - 1. Swing or journal diameter greater than 75 mm;
 - 2. Mass capability of from 0.9 to 23 kg ; and
 - 3. Capable of balancing speed of revolution greater than 5,000 r.p.m.;
 - b. Centrifugal balancing machines designed for balancing hollow cylindrical rotor components and having all of the following characteristics:
 - 1. Journal diameter greater than 75 mm;
 - 2. Mass capability of from 0.9 to 23 kg;
 - 3. Capable of balancing to a residual imbalance equal to or less than 0.01 kg x mm/kg per plane; and
 - 4. Belt drive type.
- Item 2B350.d. addition of 9. and 10.
 - 9. Silicon carbide; or
 - 10. Titanium carbide
- Item 2B352.d. insert 'tangential' into beginning of entry
 - d. Cross (tangential) flow filtration equipment, capable of continuous separation without the propagation of aerosols, having both of the following characteristics:
 - 1. Equal to or greater than 5 m²; and
 - 1. Capable of in-situ sterilization;
- Item 2D101 insert 'or modified' to entry and list of item no.s
"Software" specially designed or modified for the "use" of equipment specified in 2B104, 2B105, 2B109, 2B116, 2B117 or 2B119 to 2B122.
N.B.:SEE ALSO 9D004.
- Item 2D201 inclusion of items under 2B219 and removal of 2B229.
"Software" specially designed for the "use" of equipment specified in 2B204, 2B206, 2B207, 2B209, 2B219 or 2B227.

CATEGORY 3 – ELECTRONICS

- Item 3A001.a.3.a increase in CTP level from 260 to 3500, para now reads
 - a. A "composite theoretical performance" ("CTP") of 3,500 million theoretical operations per second (Mtops) or more and an arithmetic logic unit with an access width of 32 bit or more;
- Item 3A001.a.7 new sub-item c. and Note
 - c. A toggle frequency exceeding 133 MHz;
 - Note: 3A001.a.7. includes:*
 - Simple Programmable Logic Devices (SPLDs)
 - Complex Programmable Logic Devices (CPLDs)
 - Field Programmable Gate Arrays (FPGAs)
 - Field Programmable Logic Arrays (FPLAs)
 - Field Programmable Interconnects (FPICs)

N.B.: Field programmable logic devices are also known as field programmable gate or field programmable logic arrays.

- Item 3A001.a.8 not used, previous text deleted
- Item 3B002 .b. addition of new Technical Note,
Technical Note:
For the purpose of this entry, 'pattern rate' is defined as the maximum frequency of digital operation of a tester. It is therefore equivalent to the highest data rate that a tester can provide in a non-multiplexed mode. It is also referred to as test speed, maximum digital frequency or maximum digital speed.
- Item 3B002.c text modified
 - c. For testing microwave integrated circuits specified in 3A001.b.2.
- Item 3B002.d text deleted
- Item 3D003 Notes re-numbered to 1. and 2., N.B. changed to Note 2.
Note 1: *3D003 does not control "software" specially designed for schematic entry, logic simulation, placing and routing, layout verification or pattern generation tape.*
Note 2: *Libraries, design attributes or associated data for the design of semiconductor devices or integrated circuits are considered as "technology".*
- Item 3D101 insert 'or modified'
"Software" specially designed or modified for the "use" of equipment specified in 3A101.b
- Item 3E001 N.B. changed to Technical Note
- Item 3E002 addition of new sub-item g. and Note.
 - g. "Technology" according to the General Technology Note other than that specified in 3E001 for the "development" or "production" of "microprocessor microcircuits", "micro-computer microcircuits" and microcontroller microcircuits having a "composite theoretical performance" ("CTP") of 530 million theoretical operations per second (Mtops) or more and an arithmetic logic unit with an access width of 32 bits or more
Note: *The decontrol note to 3E001 also applies to 3E002.g*

PART 3, CATEGORY 4 - COMPUTERS

- Sub-item 4A003.b CTP level increased from 2000 Mtops to 6,500 Mtops.
 - b. "Digital computers" having a "composite theoretical performance" ("CTP") exceeding 6,500 million theoretical operations per second (Mtops);

PART 3, CATEGORY 5 – TELECOMMUNICATIONS AND INFORMATION SECURITY

PART 1 – TELECOMMUNICATIONS

- Item 5A001.b.2.b.3. reference to "frequency agility" has been replaced by "frequency hopping", Note text amended.
- 3. Being radio equipment employing "spread spectrum" techniques, including "frequency hopping" techniques, having any of the following characteristics:
 - a. User programmable spreading codes; or
 - b. A total transmitted bandwidth which is 100 or more times the bandwidth of any one information channel and in excess of 50 kHz;
Note: *5A001.b.3.b. does not control radio equipment specially designed for use with civil cellular radio-communications systems .*
- Item 5A001.b.4. Note reworded,
Note: *5A001.b.4. does not control radio equipment specially designed for use with civil cellular radio-communications systems.*
- Item 5B001.b.4 text re-written, Note deleted
 - 4. Radio equipment employing quadrature-amplitude-modulation (QAM) techniques above level 128; or

- Item 5D001.d.4. text re-written, Note deleted.
4. "Technology" for the "development" of "spread spectrum" techniques, including "frequency hopping" techniques.
- New entry 5D101
"Software" specially designed or modified for the "use" of equipment specified in 5A101
- Item 5E001.b.4. "frequency agility" replaced by "frequency hopping" techniques

CATEGORY 5 PART 2 – "INFORMATION SECURITY"

- Item 5A002.a.5 reference to "frequency agility" replaced by "frequency hopping", para now reads as,
5. Designed or modified to use cryptographic techniques to generate the spreading code for "spread spectrum" systems, including the hopping code for "frequency hopping" systems;
- Note b. to 5A002 'broadcast' replaces 'television'
b. *Receiving equipment for radio broadcast, pay television or similar restricted audience broadcast of the consumer type, without digital encryption except that exclusively used for sending the billing or programme-related information back to the broadcast providers;*

PART 3, CATEGORY 6 - SENSORS AND LASERS

- Item 6A001.c.2 add 'or' at the end
- Item 6A001.d Notes 1. & 2. incorporated in first para
d. Acoustic systems, equipment and specially designed components for determining the position of surface vessels or underwater vehicles designed to operate at a range exceeding 1,000 m with a positioning accuracy of less than 10 m rms (root mean square) when measured at a range of 1,000 m;
- Item 6A002.2 addition of new Note after a.
Note: The control status of hydrophones specially designed for other equipment is determined by the control status of the other equipment.
- Item 6A002.a.4. reference to 'hydrophone sensitivity' deleted, items 5. and 6. deleted, remaining items renumbered to read;
4. When designed to operate at depths exceeding 35 m with acceleration compensation; or
5. Designed for operation at depths exceeding 1,000 m.
- Item 6A001.c.2 amend to text and addition of a. and b.
2. Incorporating multiplexed hydrophone group signal modules having all of the following characteristics:
a. Designed to operate at depths exceeding 35 m or having an adjustable or removable depth sensing device in order to operate at depths exceeding 35 m; and
b. Capable of being operationally interchanged with towed acoustic hydrophone array modules;
- Item 6A002.a.3 Note 2 a., b. and c. incorporated into beginning of Note, new text for c. remaining items renumbered;
Note 2: 6A002.a.3. does not control:
a. Silicon "focal plane arrays";
b. Multi-element (not to exceed 16 elements) encapsulated photoconductive cells using either lead sulphide or lead selenide;
c. Pyroelectric detectors using any of the following:
1. Triglycine sulphate and variants;
2. Lead-lanthanum-zirconium titanate and variants;
3. Lithium tantalate;
4. Polyvinylidene fluoride and variants; or
5. Strontium barium niobate and variants
- Item 6A003 addition of new Note
Note: Instrumentation cameras, specified in 6A003.a.3. to 6A003.a.5., with modular structures should be evaluated by their maximum capability, using "electronic assemblies" available according to the camera manufacturer's specifications

- Item 6A004 addition on new e.
 - e. 'Aspheric optical elements' having all of the following characteristics:
 1. The largest dimension of the optical-aperture is greater than 400 mm;
 2. The surface roughness is less than 1 nm (rms) for sampling lengths equal to or greater than 1 mm; and
 3. The coefficient of linear thermal expansion's absolute magnitude is less than $3 \times 10^{-6}/K$ at 25°C.

Technical Notes:

1. An 'aspheric optical element' is any element used in an optical system whose imaging surface or surfaces are designed to depart from the shape of an ideal sphere.
2. Manufacturers are not required to measure the surface roughness listed in 6A004.e.2. unless the optical element was designed or manufactured with the intent to meet, or exceed, the control parameter.

Note

6A004.e. does not control aspheric optical elements having any of the following:

- a. A largest optical-aperture dimension less than 1 m and a focal length to aperture ratio equal to or greater than 4.5:1;
- b. A largest optical-aperture dimension equal to or greater than 1 m and a focal length to aperture ratio equal to or greater than 7:1;
- c. Being designed as Fresnel, flyeye, stripe, prism or diffractive optical elements;
- d. Being fabricated from borosilicate glass having a coefficient of linear thermal expansion greater than $2.5 \times 10^{-6}/K$ at 25 °C; or
- e. Being an x-ray optical element having inner mirror capabilities (e.g. tube-type mirrors).

N.B. For aspheric optical elements specially designed for lithography equipment, see 3B001

- Item 6A102 omit 'for use in' replace with 'specifically designed or modified for'
- Item 6A107.a after 0.7mgal insert $7 \times 10^{-6} \text{ m/s}^2$ (0.7 milligal)
- Item 6B108 insert 'their' before subsystems.
- Item 6D102 insert 'or modified' after designed.
- Item 6D103 delete 'obtained from the systems specified in 6A108.b.,' add 'specially designed or modified for "missiles" at end of sentence.

PART 3, CATEGORY 7 - NAVIGATION AND AVIONICS

- Item 7A115 Note b. add '(both active and passive);' to end of sentence; c. add 'Passive' to beginning of sentence.
- Item 7D101 insert 'or modified' after designed, include reference to items 7A116.a., 7A116.b., and 7B001.
- Item 7D102 amend to read;
Integration "software" as follows:
 - a. Integration "software" for the equipment specified in 7A103.b.;
 - c. Integration "software" specially designed for the equipment specified in 7A003 or 7A103.a.
- Item 7E101 addition of 7B001 to item list

PART 3, CATEGORY 8 - MARINE

- Item 8A002.q addition of new Note after q.
Note: 8A002.q. does not control an individual apparatus for personal use when accompanying its user.

PART 3, CATEGORY 9 PROPULSION SYSTEMS, SPACE VEHICLES AND RELATED EQUIPMENT

- Item 9B106.a.3. insert 'range' after temperature
- Item 9B106.b.3. insert 'range' after temperature
- New entry Item 9C110
Resin impregnated fibre prepregs and metal coated fibre preforms therefor, for composite structures, laminates and manufactures specified in 9A110, made either with organic matrix or metal matrix utilising fibrous or filamentary reinforcements having a "specific tensile strength" greater than 7.62×10^6 m and a "specific modulus" greater than 3.18×10^6 m.
N.B.: SEE ALSO 1C010 and 1C210.

Note: The only resin impregnated fibre prepregs specified in entry 9C110 are those using resins with a glass transition temperature (T_g), after cure, exceeding 418 K (145°C) as determined by ASTM D4065 or equivalent.
- Item 9D101 insert 'or modified' after designed
- New entry 9D104
"Software" specially designed or modified for the "use" of goods specified in 9A001, 9A005, 9A006.d., 9A006.g., 9A007.a., 9A008.d., 9A009.a., 9A010.d., 9A011, 9A101, 9A105, 9A106.c., 9A106.d., 9A107, 9A108.c., 9A109, 9A111, 9A115.a., 9A116.d., 9A117 or 9A118.
- New entry 9D105
"Software" which coordinates the function of more than one subsystem, specially designed or modified for "use" in space launch vehicles specified in 9A004 or sounding rockets specified in 9A104.
- 9E002 Note changed to N.B.
- 9E003.3. addition of a., b., and c.
 3. Components manufactured from any of the following:
 - a. Organic "composite" materials designed to operate above 588 K (315°C);
 - b. Metal "matrix" "composite", ceramic "matrix", intermetallic or intermetallic reinforced materials specified in 1C007; or
 - c. "Composite" material specified in 1C010 and manufactured with resins

ACRONYMS No changes

STATEMENTS OF UNDERSTANDING

Category 2 Validity Note to 2.E.3.f. (diamond like carbon technology) extended for one year.

ADDITIONS TO INDEX

Bridges, military ML17m
Centrifugal multiplane balancing machines, fixed or portable 2B219
Frequency hopping (frequency agile) radio equipment 5A001b
Fluid energy mills 1B119
Motion simulators 2B120
Nitroguanidine (NQ) 1C011.d
Positioning Tables 2B121
Resaturated pyrolyzed materials, carbon & carbon 1C102
Rate tables 2B120
Titanium-stabilised duplex stainless steel (Ti-DSS) 1C118

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Director, Strategic Trade Policy and Operations
Industry Division
Department of Defence CP3-7-05
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