STATUTORY INSTRUMENTS

1984 No. 694

CUSTOMS AND EXCISE

The Export of Goods (Control) (Amendment No. 7) Order 1984

Made - - - -	*17th May* 1984
Coming into Operation	*6th June* 1984

The Secretary of State, in exercise of powers conferred by section 1 of the Import, Export and Customs Powers (Defence) Act 1939(**a**) and now vested in him(**b**), and of all other powers enabling him in that behalf, hereby makes the following Order:

1. This Order may be cited as the Export of Goods (Control) (Amendment No. 7) Order 1984 and shall come into operation on 6th June 1984.

2. The Export of Goods (Control) Order 1981(**c**) shall be further amended as follows:

(a) in Article 2(ix), for the words "relating to" there shall be substituted the words "the information contained in which relates to";

(b) in Part II of Schedule 1, for the letters "C" there shall be substituted the letters "A" except in the following entries—

(i) in Group 3A, in the entry relating to machine tools and numerical control systems;

(ii) in Group 3E, in the entry relating to compasses and gyroscopic apparatus;

(iii) in Group 3G, in the entry relating to computers;

(iv) in Group 3I, in the entry relating to silicone fluids and greases;

(c) in Group 1 of Part II of Schedule 1—

(i) the entry relating to bayonets shall be deleted;

(ii) after the entry relating to equipment specially designed for ground functional testing of the hydraulic systems of military aircraft there shall be added the following new entry—

"Equipment specially designed for the design, examination, manufacture, testing and checking of the arms, ammunition, appliances and machines specified in this Group and components specially designed therefor .....A";

(**a**) 1939 c.69.
(**b**) *See* S.I. 1970/1537.
(**c**) S.I. 1981/1641, amended by S.I. 1982/1446 and 1556, 1983/1006 and 1266, 1984/90 and 553.

(iii) for the entry relating to military infra-red equipment there shall be substituted—

"Military infra-red and thermal imaging equipment and image-intensifier equipment, and specially designed components therefor .....A";

(iv) after the entry relating to silencers and telescopic sights there shall be added the following new entries—

"Spacecraft and launch vehicles, the following:—

(1) Spacecraft, manned or unmanned, (not including their payloads unless these fall within a description set out elsewhere in this Schedule) except scientific space probes which do not contain equipment specified either in head (3) below or elsewhere in this Schedule .....A

(2) Launch vehicles for spacecraft specified in head (1) above .....A

(3) Propulsion systems, guidance equipment, attitude control equipment; and on-board communications equipment for remote control of the equipment specified in heads (1) and (2) above .....A

(4) Specially designed components for any of the foregoing .....A

In this entry "spacecraft" are defined as active and passive satellites and space probes."

"Specialised military training equipment and specially designed components and accessories therefor .....A";

(v) the entries relating to specialised machinery, equipment and gear and to training devices shall be deleted;

(d) in Group 3A of Part II of Schedule 1—

(i) in the entry relating to machines, spin-forming and flow-forming in head (1), for the words "80 horse power (59kW)" there shall be substituted "60 horse power (45kW)";

(ii) in the entry relating to precision linear and angular measuring systems—

(a) for "Precision linear and angular measuring systems, the following:— " there shall be substituted—

"Precision linear and angular measuring systems, and specially designed components and specially designed software therefor, the following:—";

(b) for head (5) there shall be substituted—

"(5) Specially designed components and specially designed software for equipment specified in heads (1) to (4) above (inclusive) .....A";

(e) in Group 3B of Part II of Schedule 1, in the entry relating to chemical plant and equipment, head (3) shall be deleted;

(f) in Group 3D of Part II of Schedule 1—

(i) for the entry relating to environmental chambers, there shall be substituted—

"Environmental chambers capable of pressures below 10^{-4} Torr, except equipment fitted with industrial machinery not specified in this Schedule; and specially designed components therefor .....A";

(ii) after the entry relating to equipment specially designed for the production of nickel-, cobalt- or iron-base alloys in crude or semi-fabricated forms there shall be added the following new entries—

"Equipment for the production of fibres specified in the entries in Group 3I relating to fibrous and filamentary materials or their composites, the following:—

(1) Filament winding machines of which the motions for positioning, wrapping and winding fibres are co-ordinated and programmed in three or more axes, specially designed to fabricate composite structures or laminates from fibrous and filamentary materials; and co-ordinating and programming controls therefor .....A

(2) Tape-laying machines of which the motions for positioning and laying tape and sheets are co-ordinated and programmed in two or more axes, specially designed for the manufacture of composite airframes and missile structures .....A

(3) Interlacing machines, including adapters and modification kits, for weaving, interlacing or braiding fibres to fabricate composite structures, except textile machinery which has not been modified for the above end-uses .....A

(4) Specially designed or adapted equipment for the production of fibrous and filamentary materials specified in heads (1) and (2) of the entry in Group 3I relating to fibrous and filamentary materials, the following:

(a) equipment for converting polymeric fibres (such as polyacrylonitrile, rayon, or polycarbosilane) including special provision to strain the fibre during heating .....A

(b) equipment for the vapour deposition of elements or compounds on heated filamentary substrates .....A

(c) equipment for the wet-spinning of refractory ceramics (such as aluminium oxide) .....A

(5) Specially designed or adapted equipment for special fibre surface treatment or for producing prepregs and preforms specified in head (3) of the entry in Group 3I relating to fibrous and filamentary materials .....A

Equipment covered by this head includes but is not limited to rollers, tension stretchers, coating equipment, cutting equipment and clicker dies.

(6) Specially designed components and accessories and specially designed software, for equipment specified in heads (1) to (5) above (inclusive) .....A

Specially designed or adapted components and accessories for the machines covered by this entry include, but are not limited to, moulds, mandrels, dies, fixtures and tooling for the preform pressing, curing, casting, sintering or bonding of composite structures, laminates and manufactures thereof covered by the entry therefor in Group 3I."

"Equipment designed for the manufacture or testing of printed circuit boards, the following:—

(1) Equipment specially designed for removal of resists or printed circuit board materials by dry (e.g. plasma) methods .....A

(2) Computer-aided design (CAD) equipment for printed circuit boards, having any of the following functions:

(a) generation of artwork design with an interactive capability .....A

(b) generation of test string lists for multi-layer boards .....A

(c) generation of data or programmes for digitally-controlled printed circuit board drilling equipment .....A

(d) generation of data or programmes for digitally-controlled printed circuit board shaping and profiling equipment .....A

(e) generation of data for control of the sequencing of processes of the equipment for printed circuit board manufacture covered by head (3) of this entry ....A

(3) High-speed automated continuous panel processors for plating capable of delivering 860 A/m^2 (80 A/ft^2) or more of plate current .....A

(4) Digitally-controlled inspection equipment for the detection of defects in printed circuit boards using optical pattern comparison or other machine scanning techniques .....A

(5) Digitally-controlled electrical test equipment for the identification of open and short circuits on bare printed circuit boards, capable of:

(a) continuity testing (4 ohm or less) at a rate of 2,500 or more measurements per second .....A

or

(b) high voltage testing (50 volts or more) at a rate of 10,000 or more measurements per minute .....A

(6) Digitally-controlled multispindle drills and routers having any of the following characteristics:

(a) absolute positioning accuracy of ± 10 micrometres (0.0004 inch) or better .....A

(b) minimum time needed for drill bit changes of 5 seconds or less .....A

(c) X and Y positioning speeds of 0.125 metres per second (300 inches per minute) or higher for drilling or for routing .....A

(7) Digitally-controlled cyclic voltametric stripping equipment specially designed for printed circuit board plating bath monitoring and analysis .....A

(8) Specially designed components and accessories and specially designed software for the equipment specified in heads (1) to (7) above (inclusive) .....A

except equipment with controls using any of the following:

(a) cams and other purely mechanical means;

(b) switches, including thumbwheel switches;

(c) plugboards;

(d) on-off and analogue controllers;

(e) diode matrices; or

(f) punched paper tape controllers without a capability to compute, manipulate, or store and re-run programme data.

In this entry the term "digitally-controlled" refers to equipment the functions of which are, partly or entirely, automatically controlled by stored and digitally-coded electrical signals.

(Note head (2) of the entry in Group 3F relating to lasers and laser systems)";

(iii) the entry relating to machines for filament winding, tape-laying and interlacing shall be deleted;

(g) in Group 3F of Part II of Schedule 1, in the entry relating to electronic components, for head (1) there shall be substituted—

"(1) Substrates for printed circuits including ceramic substrates and coated metal substrates (single-sided, double-sided or multilayer), and thin copper foils therefor.....A

except:

(a) printed circuit boards manufactured from any of the following materials:

(i) paper base phenolics;

(ii) glass cloth melamine;

(iii) glass epoxy resin uncoated or coated with copper foil of a thickness of 18 micrometres (0.00071 inch) or greater;

(iv) polyethylene terephthalate;

(v) any other insulating material having all of the following characteristics:

(a) a maximum continuous rated operating temperature not exceeding 150°C;

(b) a dissipation factor equal to or greater than 0.009 at 1 MHz;

(c) a relative dielectric constant equal to or less than 8 at 1 MHz;

(d) a coefficient of expansion equal to or greater than 10^{-5} per °C over a temperature range of 0 to 120°C;

(b) ceramic substrates having not more than two layers of interconnection, including the ground plane;

(c) copper foil having a thickness of 18 micrometres (0.00071 inch) or greater";

(h) in Group 3H of Part II of Schedule 1—

(i) for the entry relating to aluminium alloy there shall be substituted—

"Aluminium alloys capable of ultimate tensile strength of 0.460×10^9 N/m² (67,000 pounds per square inch) or greater, in crude, semi-fabricated or fabricated form .....A";

(ii) for the entry relating to graphite, artificial there shall be substituted—

"Graphite, artificial, having all of the following characteristics:

(1) bulk density of 1.79 or greater (measured at 293K).....A

(2) tensile strain to failure of 0.7% or greater (measured at 239K) .....A

(3) coefficient of thermal expansion of 2.75×10^{-6} or less per degree K (in the range of 293K to 1,255K) .....A";

(iii) for the entry relating to maraging steel alloy there shall be substituted—

"Maraging steel alloy capable of ultimate tensile strength of 2.050×10^9 N/m² (300,000 pounds per square inch) or greater, whether or not finally heat-treated, in crude, semi-fabricated or fabricated form .....A";

(i) In Group 3I of Part II of Schedule 1—

(i) for the entry relating to composite structures and laminates there shall be substituted—

"Composite structures, laminates and manufactures thereof made either with an organic matrix or a metal matrix utilising materials specified in heads (1) and (2) of the entry in this Group relating to fibrous and filamentary materials .....A";

(ii) for the entry relating to compounds and materials there shall be substituted—

"Compounds and Materials, the following:—

(1) Monocrystalline silicon, except metallurgical grade monocrystalline silicon having a purity not better than 99.97% .....A

(2) Gallium of a purity of 99.9999% or greater and gallium III/V compounds of any purity level, ...A except

(a) gallium phosphide; or

(b) other gallium III/V compounds having a dislocation density (etch pit density—EPD) greater than 500,000 per cm^2;

(3) Indium and indium compounds containing more than 1% indium .....A

(4) Hetero-epitaxial materials consisting of a monocrystalline insulating substrate epitaxially layered with silicon, compounds of gallium or compounds of indium .....A

(5) Elemental Cd and Te of purity levels of 99.999% or greater, and CdTe compounds of a purity level of 99.99% or greater or single crystals of CdTe of any purity level ...A

(6) Polycrystalline silicon, except polycrystalline silicon having a purity of 99.99% or less and containing at least 0.5 part in 10^6 each of iron, carbon, boron and phosphorus, plus other impurities .....A

(7) Compounds used in the synthesis of the materials specified in head (6) above, having a purity level of 99.5% or better, including but not limited to SiH_4, $SiClH_3$, $SiCl_4$, $SiCl_3H$, and $SiCl_2H_2$ .....A

The purity level of a mixture containing a silicon-bearing compound shall be taken to be the same as that of the silicon-bearing compound.

(8) Single crystals sapphire substrates .....A

(9) B_2O_3 with a purity of 99.9% or greater, containing 1,000 parts per million of H_2O or less, in powder or cast form ...A

(10) Monocrystalline germanium with a resistivity greater than 100 ohm.cm. .....A

(11) Resist materials with any of the following characteristics:

(a) sensitive to X-rays or deep ultraviolet light (wavelength less than 436 nanometres) with a sensitivity of 500 millijoules/cm^2 or better .....A

(b) sensitive to electrons or ion beams with a sensitivity of 100 microcoulombs/cm^2 or better .....A

(c) specified or optimised for dry development .....A

(12) Single-crystal forms of bismuth germanium oxide having piezo-electric properties and single-crystal forms of lithium niobate, of lithium tantalate and of aluminium phosphate .....A";

(iii) in the entry relating to compounds of tantalum and niobium at the end there shall be added the following—

"This entry does not cover single-crystal lithium tantalate for which see the entry in this Group relating to compounds and materials.";

(iv) for the entry relating to fibrous and filamentary materials there shall be substituted—

"Fibrous and filamentary materials suitable for use in composite structures or laminates, the following:—

(1) having both of the following characteristics: .....A

(a) specific modulus greater than 3.18×10^6m (1.25×10^8 in);

(b) specific tensile strength greater than 7.62×10^4m (3×10^6 in); or

(2) having both of the following characteristics: .....A

(a) specific modulus greater than 2.54×10^6m (1×10^8 in);

(b) melting or sublimation point higher than 1,922 K (1,649°C) (3,000°F) in an inert environment;

except carbon fibres having a specific modulus less than 5.08×10^6m (2×10^8 in) and a specific tensile strength less than 2.54×10^4m (1×10^6 in);

(3) Resin-impregnated fibres (prepregs) and metal-coated fibres (preforms) made with materials specified in heads (1) or (2) above .....A

In this entry—

"specific modulus" means Young's modulus in N/m^2 (lbs force/sq.in) divided by specific weight in N/m^3 (lbs force/cu.in), measured at a temperature of (296 ± 2) K ((23 ± 2)°C) ((73.4 ± 3.6)°F)) and a relative humidity of (50 ± 5)%; and

"specific tensile strength" means ultimate tensile strength in N/m^2 (lbs force/sq.in) divided by specific weight in N/m^3 (lbs force/cu.in) measured at a temperature of (296 ± 2) K ((23 ± 2)°C) ((73.4 ± 3.6)°F)) and a relative humidity of (50 ± 5)%.";

(j) In Group 3J of Part II of Schedule 1 in the entry for synthetic rubber—

(i) for the word "rubber" there shall be substituted the word "rubbers";

(ii) head (1) shall be deleted;

(iii) heads (2), (3) and (4) shall be re-numbered (1), (2) and (3) respectively;

(iv) in head (3) as re-numbered the words "and polyisobutylene" shall be deleted.

D. J. Hall,
An Assistant Secretary,
Department of Trade and Industry.

17th May 1984.

EXPLANATORY NOTE

(This Note is not part of the Order.)

This Order further amends the Export of Goods (Control) Order 1981.

Export control is:—

(a) introduced on military thermal imaging equipment, spacecraft and associated launch vehicles and equipment for the manufacture or testing of printed circuit boards;

(b) extended in scope on military training equipment;

(c) re-defined and extended in scope on spin-forming and flow-forming machines, equipment for the production of certain fibres, maraging steel alloy and compounds and materials;

(d) re-defined and extended to all destinations on artificial graphite and on composite structures, laminates and their manufactures;

(e) re-defined on equipment specially designed for the design, manufacturing and testing of military goods, on precision linear and angular measuring systems, on chemical plant and equipment, on substrates for printed circuits, on aluminium alloys and on certain fibrous and filamentary materials;

(f) reduced in scope but extended to all destinations on synthetic rubber;

(g) extended to all destinations in respect of other strategic goods which are subject to control other than ships, except that most machine tools and numerical control systems, most compasses and gyroscopic apparatus, certain computers, and silicone fluids and greases may still be exported to countries listed in Schedule 2 to the principal Order (Commonwealth and former Commonwealth countries, the Republic of Ireland and the USA);

(h) clarified in respect of technological documents, environmental chambers and compounds of tantalum and niobium; and

(i) removed on bayonets.

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