1959 No. 190

The Strategic Goods (Control) Order, 1959

Made - - - -	3*rd February*, 1959
Laid before Parliament	10*th February*, 1959
Coming into Operation	16*th February*, 1959

The Board of Trade in pursuance of the powers conferred upon them by Regulation 55 of the Defence (General) Regulations, 1939, as having effect by virtue of the Supplies and Services (Transitional Powers) Act, 1945(a), as extended by the Supplies and Services (Extended Purposes) Act, 1947(b), and the Supplies and Services (Defence Purposes) Act, 1951(c), and continued in force by the Supplies and Services (Continuance) Order, 1958(d), hereby order as follows:—

1. Subject to the provisions of Article 2 of this Order, a person in, or ordinarily resident in, the United Kingdom shall not dispose of any goods of a description included in the First Schedule hereto situated outside the United Kingdom to the government, any government agency or other authority of, or to any person in, any country or territory specified in the Second Schedule hereto, or, if he has reasonable cause to believe that those goods may be imported directly or indirectly into any such country or territory, to any person whatsoever.

2. Nothing in Article 1 shall be taken to prohibit the disposal of—

(*a*) any goods under the authority of a licence granted by the Board of Trade under this Article, provided that any conditions attached to the licence are complied with;

(*b*) any goods which are to be supplied directly to any ship as ships' stores for that ship or to any aircraft as stores for that aircraft;

(*c*) any aircraft turbine engine fuel which is to be supplied directly to any aircraft as fuel for that aircraft.

3. The Orders specified in the Third Schedule hereto are hereby revoked:

Provided that any licence granted under Article 3 of the Strategic Goods (Control) Order, 1954(e), and in force immediately before the commencement of this Order shall have effect in like manner as if it had been granted under Article 2 of this Order.

4. In this Order—

" dispose of " means disposal whether inside or outside the United Kingdom and includes disposal of

(*a*) ownership or any proprietary interest, or

(*b*) the right to possession, or

(a) 9 & 10 Geo. 6. c. 10 and S.R. & O. 1945/1618 (1945 II, p. 48).
(b) 10 & 11 Geo. 6. c. 55.
(c) 14 & 15 Geo. 6. c. 25.
(d) S.I. 1958/1962 (1958 II, p. 2247).
(e) S.I. 1954/1622 (1954 II, p. 2174).

(*c*) possession whether or not accompanied by any disposal of ownership or of any proprietary interest or of the right to possession,

but does not include disposal by a carrier (otherwise than by way of sale) in the course of his business as such ;

numerical references in the First Schedule hereto to British Standards are references to the standards so numbered published by the British Standards Institution in the year indicated after such reference, with such amendments (if any) thereto as may have been made before the making of this Order ;

references in the First Schedule hereto to percentages of the content of any goods are references to percentages by weight ; and

any other terms, the meaning of which in certain contexts is defined in the First Schedule hereto have, when used in such a context, the meaning so ascribed to them.

5. This Order may be cited as the Strategic Goods (Control) Order, 1959, and shall come into operation on the 16th day of February, 1959.

Dated this 3rd day of February, 1959.

John Rodgers,
Parliamentary Secretary to the Board of Trade.

FIRST SCHEDULE

PART I

GROUP 1

Aircraft, Arms and Military Stores and Appliances

Aircraft and helicopters, of the piloted or pilotless types ; aero-engines and aircraft equipment ; associated equipment and components.

Arms, missiles and munitions ; components and parts specially designed therefor.

Articles (including vehicles) specially designed or adapted for military use, and all components and parts specially designed therefor.

Biological and chemical materials adapted for use in war to produce casualties in men or animals, or to damage crops ; equipment specially designed and intended—

(*a*) for their dissemination, or

(*b*) for defence against them ;

components and parts specially designed therefor.

Cables, electric, buoyant types, suitable for sweeping magnetic mines.

Explosives as defined in Section 3 of the Explosives Act, 1875.

Ground and airborne equipment developed solely or of a kind used mainly for aircraft, other than types in normal civil use.

Machinery and machine tools and apparatus specially designed or adapted for the production, testing, research into and development of any of the items specified in this Group.

Pressurized breathing equipment and partial pressure suits for use in aircraft ; anti-*g* suits ; flak suits ; parachutes of a kind used for combat personnel, cargo-dropping and aircraft deceleration ; liquid oxygen converters of a kind used for

aircraft and missiles; catapults and cartridge actuated devices of a kind utilized in emergency escape of personnel from aircraft.

Self-contained diving and underwater swimming apparatus, the following:—
Closed and semi-closed circuit (rebreathing) apparatus.
Specially designed components for use in the conversion of open-circuit apparatus to military use.
Articles specially designed for military use with self-contained diving and underwater swimming apparatus.

Telemetering and telecontrol equipment suitable for use with aircraft (piloted or pilotless) and missiles (guided or unguided).

Vessels of war and propulsion machinery for such vessels; components, parts, accessories and attachments specially designed therefor.

GROUP 2

Atomic Energy Materials and Appliances

Centrifuges and centrifuge bowls, the following:—
Centrifuges, capable of the enrichment or separation of isotopes, with peripheral speed of 1,000 feet (305 metres) per second or more, wholly made of, or lined with, aluminium, nickel or alloy containing 60 per cent. or more of nickel.
Bowls for centrifuges, capable of the enrichment or separation of isotopes, made of aluminium, nickel or alloy containing 60 per cent. or more of nickel.

Compressors and blowers (turbo, centrifugal and axial flow types), wholly made of, or lined with, aluminium, nickel or alloy containing 60 per cent. or more of nickel, having a capacity of 60 cubic feet per minute or greater.

Deuterium, heavy water, heavy paraffins and other compounds in which the ratio by number of deuterium atoms to hydrogen atoms exceeds 1 to 5,000; mixtures and solutions of any of the foregoing.

Dosimeters capable of measuring dosages above 5 roentgens, other than those specially designed for use with medical radiation equipment.

Electrolytic cells for the production of fluorine.

Equipment specially designed for the separation of isotopes of uranium or lithium or of uranium and lithium.

Fissionable material, the following:—
Plutonium.
Uranium enriched in the isotope 235.
The isotope 233 of uranium.
Alloys, compounds or mixtures of any of the foregoing.

Furnaces, vacuum, induction type, designed to operate at pressures lower than 0·1 millimetre of mercury and at temperatures higher than 1,100° Centigrade.

Graphite, artificial, having a boron content of one part per million or less, and a total thermal neutron absorption microscopic cross-section of 5 millibarns or less per atom, in the form of blocks, bricks, plates, rods or electrodes, from which a cube of 2 inches side or greater can be cut.

Heat exchangers (tubular) and components therefor (other than aluminium tubing) designed to operate at pressures of 300 pounds per square inch and above and with flow contact surfaces made of any of the following materials:—
Aluminium.
Nickel.
Alloy containing 60 per cent. or more of nickel.
Titanium.
Zirconium.

Mass spectrographs and mass spectrometers, the following:—
Mass spectrographs and mass spectrometers with analyser assemblies capable of handling uranium hexafluoride.
Solid source mass spectrographs and mass spectrometers of high sensitivity.

Nuclear reactors.

Positive ion sources suitable for use in mass spectrographs or mass spectrometers and capable of handling uranium hexafluoride.

Refractory goods, the following :—

Crucibles, moulds and pouring rods containing 97 per cent. or more of magnesium oxide or 97 per cent. or more of beryllium oxide or 85 per cent. or more of zirconium oxide.

Thorium and its compounds and mixtures containing such substances.

Uranium and its compounds and mixtures containing such substances.

Valves, with bellows seal, wholly made of or lined with aluminium, nickel or alloy containing 60 per cent. or more of nickel.

GROUP 3

Electrical, Electronic and Scientific Appliances

Amplifiers the following :—

Amplifiers designed to operate at frequencies in excess of 300 megacycles per second.

Amplifiers, tuned, having a bandwidth which exceeds 10 megacycles per second or 10 per cent. of the mean frequency, whichever is less.

Amplifiers, untuned, having a bandwidth which exceeds 10 megacycles per second.

Amplifiers, direct current, having a noise level (referred to the input circuit) of 10^{-16} watts or less, or a zero drift in one hour corresponding to a change in input power of 10^{-16} watts or less, or both these characteristics.

In this entry—

" bandwidth " means the band of frequencies over which the power amplification does not drop to less than one-half of its maximum value ; and

" mean frequency " means the arithmetic mean between the frequencies at which the power amplification is one-half of its maximum value.

Apparatus for automatically sorting electronic components in respect of their electrical characteristics.

Apparatus designed to jam or otherwise interfere with radio reception, and parts specially designed therefor.

Apparatus of a kind used for detecting or locating objects under water by magnetic, acoustic or ultrasonic methods, except marine depth sounders of a kind used solely for measuring the depth of water or the distance of submerged objects vertically below the apparatus ; specialized components of such apparatus.

Capacitors, tantalum electrolytic.

Centrifugal testing apparatus possessing any of the following characteristics :—

(*a*) driven by a motor or motors having a total rated horse power greater than 400 horse power ;

(*b*) capable of carrying a load of 250 pounds or more ;

(*c*) capable of exerting a centrifugal acceleration of 8 ***g*** or more on a load of 200 pounds or more.

Communication and detection equipment of a kind using infra-red radiation or ultrasonic waves, and specialized parts therefor.

Communication equipment employing tropospheric, ionospheric or meteoric scatter phenomena and specially designed sub-assemblies, parts and test equipment therefor.

Communication, navigation, direction finding and radar equipment, the following :—

(1) Airborne communication equipment and specialized parts and components therefor.

(2) Airborne navigation equipment and direction finding equipment, the following:—

(*a*) Altimeters, pulse modulated.

(*b*) Equipment designed to make use of the Doppler frequency phenomena.

(*c*) Equipment utilizing the constant velocity or the rectilinear propagation characteristics of electromagnetic waves having frequency less than 4×10^{14} cycles per second (0·75 microns), or both.

(*d*) Equipment, direction finding, operating at frequencies greater than 5 megacycles per second.

(3) Airborne radar equipment.

(4) Ground and marine radar equipment, the following:—

(*a*) Radar equipment, other than commercial equipment designed for pulse operation at frequencies between 1,300 megacycles per second and 1,660 megacycles per second, 2,700 megacycles per second and 3,900 megacycles per second, or 8,500 megacycles per second and 10,000 megacycles per second, and having

(i) in the case of marine navigation radar, a peak output power to the aerial system of 75 kilowatts or less, and

(ii) in the case of ground based radar, a peak output power to the aerial system of less than 50 kilowatts and a maximum usable range against the largest airborne target of less than 50 nautical miles.

(*b*) Radar equipment incorporating

(i) permanent echo cancellation facilities, or

(ii) aerials with circular polarization.

(*c*) Radar equipment utilizing other than conventional pulse modulation and signal processing techniques.

(*d*) Ground direction finding equipment operating at frequencies greater than 5 megacycles per second.

(5) Ground and marine equipment for use with airborne navigation equipment utilizing the constant velocity or the rectilinear propagation characteristics of electromagnetic waves having frequency less than 4×10^{14} cycles per second (0·75 microns), or both.

(6) Specialized parts, specialized accessories and specialized testing or calibrating equipment for use with apparatus mentioned in heads (2), (3), (4) or (5) of this entry.

Compasses and gyroscopic apparatus, the following:—

(*a*) Automatic pilots, except marine types for surface vessels.

(*b*) Gyro compasses, North-seeking only, possessing one or more of the following characteristics:—

(1) automatic correction for the effects on compass accuracy of changes in ship's speed, acceleration, or latitude;

(2) provision for accepting ship's data as an electrical input;

(3) provision for setting in corrections for current set and drift;

(4) utilization of accelerometer, rate gyro, rate integrating gyros or electrolytic levels as sensing devices;

(5) provision for determining and electrically transmitting ship's level reference data (roll, pitch) in addition to own ship's course data.

(*c*) Gyro-magnetic compasses.

(*d*) Gyro-stabilisers other than the kinds used for stabilising an entire surface vessel.

(*e*) Gyroscopes, high precision or miniaturised, designed for use in ship inertia navigation system or in the guidance systems of weapons and aircraft.

(*f*) Pressure proof ship's course indicators.

(*g*) Transmitting magnetic compasses specially designed for submarines.

(*h*) Specially designed parts and components for any of the foregoing.

Components, electronic, capable of reliable performance in relation to their electrical and mechanical characteristics and maintaining their design service life-time while operating—

(*a*) over the whole range of ambient temperatures extending from below −45° Centigrade to above 100° Centigrade, or

(*b*) at ambient temperatures of 200° Centigrade or higher.

Computers, electronic, other than business type machines, accounting machines and statistical calculating machines.

Control equipment, the following:—

(*a*) Synchros, the following:—

(1) Control types (transmitters, differential transmitters and transformers) rated to have an electrical error of 18 minutes or less when tested by the proportional voltage method.

(2) Torque types:—

(i) Transmitters and differential transmitters rated to have an electrical error of 18 minutes or less when tested by the proportional voltage method.

(ii) Receivers and differential receivers rated to have an accuracy of 1·5 degrees or less when tested by the dynamic method.

(*b*) Resolvers, including single-phase/single-phase, single-phase/two-phase, two-phase/two-phase, and three-phase/two-phase types—

(1) with a rated electrical error of 0·5 degrees or less, or

(2) with a rated perpendicularity error between axes of 10 minutes or less, or

(3) with a rated null voltage of 10 millivolts or less per maximum volt output.

(*c*) Amplifiers, electronic or magnetic, designed for use with resolvers, the following:—

(1) Isolation types.

(2) Summing types.

(*d*) Linear induction potentiometers—

(1) with a rated linearity of one per cent. or less, or

(2) with a rated null voltage of 10 millivolts or less per maximum volt output.

(*e*) Induction rate generators—

(1) with a rated linearity of one per cent. or less, or

(2) with a rated signal-to-noise ration of 50 to 1 or greater, or

(3) temperature-compensated or temperature-corrected.

(*f*) Servo motors (gear-head or plain)—

(1) designed to operate from power sources of more than 300 cycles per second, or

(2) designed to have a torque-to-inertia ratio of 3,500 radians per second or greater.

(*g*) Potentiometers, the following:—

(1) Linear potentiometers with a rated linearity of 0·1 per cent. or less.

(2) Non-linear potentiometers with a rated conformity of one per cent. or less.

Crystal signal diodes (excluding photodiodes), the following:—

Point contact type diodes suitable for use at frequencies higher than 300 megacycles per second.

Junction type diodes in which the basic semiconductor material is other than germanium.

Junction type diodes in which the basic semiconductor material is germanium, and which are suitable for use at frequencies higher than 50 megacycles per second.

Specially designed parts for any of the foregoing.

Electric generators, mobile types, with a maximum continuous rating of more than 5,000 kilowatts.

Electric-impulse generators of a kind used for providing recurring impulses of peak power exceeding 150 kilowatts or of a duration of less than 0·1 microsecond; pulse transformer and pulse forming equipment and delay lines being parts specially designed for such electric-impulse generators.

Electromagnetic waveguides and components therefor, the following:—

Ferrite waveguide components for use at all frequencies.

Rigid waveguides for use at frequencies in excess of 12,500 megacycles per second.

Flexible waveguides of all types.

Electronic and precision instruments and apparatus, the following:—

(*a*) Electronic instruments, the following:—

(1) Frequency measuring equipment and frequency standards with an accuracy better than 0·00001 per cent.

(2) Instruments operating at frequencies exceeding 300 megacycles per second.

(*b*) Oscilloscopes (cathode ray) and specialized parts therefor, the following:—

(1) Oscilloscopes possessing any of the following characteristics:—

(i) a bandwidth greater than 12 megacycles per second;

(ii) a time base shorter than 0·04 microseconds per centimetre;

(iii) containing or designed for—

(*a*) the use of one or more cathode ray tubes having three or more electron guns, or

(*b*) three or more cathode ray tubes;

(iv) employing accelerating potentials in excess of 5,000 volts.

(2) Specialized parts and accessories, the following:—

Amplifiers and pre-amplifiers having a bandwidth greater than 12 megacycles per second.

In this entry "bandwidth" means the band of frequencies over which the deflection on the cathode ray tube does not fall below 70·7 per cent. of that at the maximum point, measured with a constant input voltage to the amplifier.

Electronic vacuum tubes or valves, the following:—

(*a*) (1) Cathode ray tubes specially designed or of a kind used for radar equipment described in the entry in this Group relating to communication, navigation, direction finding and radar equipment.

(2) Cathode ray tubes with writing speeds of more than 3,000 kilometres per second, or with three or more electron guns.

(*b*) (1) Thyratron and modulator gas-discharge tubes rated for continuous operation with peak current and peak voltage exceeding 100 amperes and 9,000 volts at a pulse repetition frequency of 200 or more pulses per second.

(2) Hydrogen thyratron tubes of any rating.

(*c*) Valves whose output-input ratio at 300 megacycles per second is 50 per cent. or more of the output-input ratio at 20 megacycles per second when measured under the same operating voltages and load impedance.

(*d*) Valves of a kind specially designed for use at frequencies of more than 300 megacycles per second.
(*e*) Indirectly heated valves of a kind that can be passed through a circular hole 7·2 millimetres in diameter.
(*f*) Valves designed to withstand—
(i) sinusoidal vibration of greater than 2 ***g*** for continuous periods in excess of 20 hours at frequencies between 25 and 170 cycles per second, or
(ii) acceleration of short duration (shock) greater than 1,000 ***g***.
(*g*) Valves constructed with a ceramic envelope.
(*h*) Valves designed for operation in ambient temperatures exceeding 100° Centigrade.
(*i*) Amplifier klystrons.
(*j*) Travelling wave tubes.
(*k*) Image converters and electronic storage tubes including memory transformers of radar pictures and ruggedized photo-conductive-type tubes (excluding commercial standard television broadcasting camera tubes and commercial standard X-ray amplifier tubes).
(*l*) X-ray tubes, flash discharge types.

Equipment designed to provide secrecy facilities on either voice or telegraph, line or radio communication circuits other than those systems making use of frequency inversions or band scrambling techniques.

Ion microscopes having a resolving power better than 10 ångströms.

Line communication transmission equipment, the following:—
Terminal and intermediate repeater or amplifier equipment designed to deliver, carry or receive frequencies higher than 16 kilocycles per second into, or in, a line communication system.
Multi-channel telegraph terminal transmitting and receiving equipment.
Specialized components, accessories, and sub-assemblies for the above equipment.

Magnetic recorders or reproducers (other than those designed for voice or music) and parts and recording media specially designed therefor.

Magnetometers of the following types:—
fluxgate;
electron beam sensing;
paramagnetic;
nucleonic;
and parts specially designed therefor.

Materials designed and manufactured for use as absorbers of electromagnetic waves having frequencies greater than 2×10^8 cycles per second and less than 3×10^{12} cycles per second.

Measuring and counting apparatus, the following:—
(*a*) Time interval measuring equipment with self-contained reference frequency, having one or both of the following characteristics:—
(1) capable of measuring time intervals of 0·1 second or less with an error not exceeding one microsecond plus 0·001 per cent. of the interval measured;
(2) incorporating counting circuits capable of counting at rates in excess of one megacycle per second.
(*b*) Counting equipment capable of counting at rates in excess of one megacycle per second.

Photo-electric cells, the following:—
Photo-electric cells, photo-conductive cells (including photo-transistors and similar cells) with a peak sensitivity at a wavelength longer than 12,000 ångströms.
Photo-transistors (photo-conductive cells including photo-diodes) with a response time constant of one millisecond or less measured at the operating temperature of the cell for which the time constant reaches a minimum.

Photographic apparatus, the following:—

(1) High speed cameras capable of recording at rates in excess of 250,000 frames per second.

(2) High speed cinematograph cameras, the following:—

(*a*) Cinematograph cameras employing film of a width of 35 millimetres or less, capable of recording at rates in excess of 3,000 frames per second using as the lighting source a steady light flow.

(*b*) Cinematograph cameras employing film of a width of 35 millimetres or less, capable of recording at rates in excess of 10,000 frames per second using as the lighting source flash apparatus connected to the unwinding system.

(*c*) Cinematograph cameras employing film wider than 35 millimetres and capable of recording at rates exceeding 64 frames per second.

(3) Photographic microflash apparatus capable of giving a flash of 10 microseconds or shorter duration at a minimum recurrent frequency of 200 flashes per second.

Photomultiplier tubes, the following:—

Photomultiplier tubes with all the following characteristics for a colour temperature of 2,850 degrees Kelvin:—

(i) sensitivity exceeding the figure of 60 microamperes per lumen;

(ii) overall gain for a mean output current of one milliampere exceeding 10^8;

(iii) dark current plus noise less than 5×10^{-16} ampere mean per square centimetre of active cathode surface.

Photomultiplier tubes of all types for which the maximum sensitivity occurs at wavelengths longer than 7,500 ångströms.

Piezo-electric quartz crystals, blanks, plates, bars, rods and toroids, worked or unworked, mounted or unmounted.

Radio receivers, panoramic, being receivers which search automatically a part of the radio frequency spectrum and indicate the signals received, and parts specially designed for such receivers.

Radio relay communications equipment other than short range and low power links for transmissions between camera or studio and the television transmitter; specialized components and sub-assemblies therefor.

Radio spectrum analysers, being apparatus capable of indicating the single-frequency components of multi-frequency oscillations, designed to operate at frequencies in excess of 300 megacycles per second; parts specially designed therefor.

Radio transmitters and components, the following:—

(*a*) Transmitters or transmitter amplifiers designed to operate—

(1) at output carrier frequencies between 108 and 156 megacycles per second, or

(2) at output carrier frequencies greater than 223 megacycles per second other than television broadcasting transmitters and amplifiers therefor operating between 470 and 585 megacycles per second or between 610 and 940 megacycles per second.

(*b*) Transmitters or transmitter amplifiers designed to provide any of the following features:—

(1) any system of pulse modulation other than amplitude, frequency or pulse modulated television;

(2) special facilities to give continuous operation (on any carrier frequency outside the internationally agreed broadcasting bands) in inter-connection with land-line telephone circuits or switchboards, such as voice-operated gain-adjusting circuits, automatic volume compression and expansion circuits, and automatic monitoring;

(3) rapid selection of more than 20 channels;

(4) operation over a range of ambient temperatures extending from below −45° Centigrade to above 75° Centigrade;

(5) facilities providing a multiplicity of alternative output carrier frequencies controlled by a lesser number of piezo-electric crystals and not forming multiples of a common control frequency;

(*c*) Components and sub-assemblies, including modulators and modulation amplifiers, specially designed for use in any such transmitters.

Telegraph apparatus designed for the transmission or reception of messages at a speed exceeding 200 words per minute or 150 bauds, whichever is the less, except equipment operating at a speed of 300 bauds where the corresponding number of words does not exceed 65 words per minute; parts and accessories specially designed therefor.

Transistors and related devices (or related semi-conductor amplifying devices such as fieldistors, spacistors and technetrons)—

(*a*) of any type using a basic semi-conductor material other than germanium, or

(*b*) having any of the following characteristics:—

(1) designed to be capable of operation at alpha cut-off frequencies greater than 20 megacycles per second;

(2) designed to have a collector dissipation in excess of 100 milliwatts at alpha cut-off frequencies greater than 500 kilocycles per second;

(3) designed to operate with collector voltages greater than 40 volts;

(4) designed to operate with mean collector currents greater than 3 amperes;

specialized parts for any of the foregoing.

Group 4

Chemicals

Ammonium perchlorate.

Beryllium compounds.

Boron compounds, and mixtures, the following:—

(*a*) Boric acids and the esters and ammonium, calcium, magnesium, potassium and sodium salts of boric acids, but not including perborates.

(*b*) Boric oxide.

(*c*) Boron carbide.

(*d*) Boron nitride.

(*e*) Boron trichloride and its complexes.

(*f*) Boron trifluoride and its complexes.

(*g*) Fluoroborates.

(*h*) Other boron compounds and mixtures containing an aggregate of 10 per cent. or more of boron, whether in combined or elemental forms, but excluding:—

Metal borates other than those specified in head (*a*) of this entry.

Perborates.

Cellulose nitrate (nitrocellulose).
Chlorine trifluoride.
*mono*Chlorodifluoromethane.
Chlorotrifluoroethylene.
Cobalt compounds having a cobalt content equivalent to 30 per cent. or more in the anhydrous material (other than paint driers, cobalt organic artificial colouring matters and other paint pigments).
Dichlorotetrafluoroethane.
*sym*Diethyl*sym*diphenylurea (carbamite or centralite).
Diethylenetriamine.
*sym*Dimethyl*sym*diphenylurea (carbamite or centralite).
*asym*Dimethylhydrazine.
Dinitrophenol.
Diphenylamine.
*asym*Diphenylurea.
Ethyl diphenylcarbamate (diphenylurethane).
Ethyl*asym*diphenylurea.
Ethyl di-*o*-tolylcarbamate (di-*o*-tolylurethane).
Ethyl *N*-ethylphenylcarbamate (ethylphenylurethane).
Fluorine.
Guanidine nitrate.
Hydrazine.
Hydrazine hydrate.
Hydrazine nitrate.
Hydrogen peroxide containing 50 per cent. or more of hydrogen peroxide.
Lead azide.
Lead styphnate (lead trinitroresorcinoxide).
Lead thiocyanate.
Lithium compounds.
Magnesium oxide of a purity of 97 per cent. or more.
Methyl*asym*diphenylurea.
Molybdenum disulphide of a purity of 86 per cent. or more.
Nitric acid, fuming.
2-Nitrodiphenylamine.
p-Nitromethylaniline.
Pentaerythritol tetranitrate.
Picrates.
Picric acid.
Sodium azide.
Tantalum compounds.
Tetrafluoroethylene.
Trichlorotrifluoroethane.
Zirconium compounds in which the ratio of hafnium content to zirconium content is less than one part to 500 parts by weight.
Zirconium oxide thermally stabilized with calcium oxide or magnesium oxide or both.

GROUP 5

Minerals and Metals

In this Group—

"raw materials" means ores, concentrates, matte, regulus, residues and dross (ashes), from which the metal described in the entry can be extracted;

"crude forms" means anodes, balls, bars (including notched bars and wire bars), billets, blocks, blooms, briquettes, cathodes, cakes, crystals, cubes, dice, grains, granules, ingots, lumps, pellets, pigs, powder, rondelles, shot, slabs, slugs, sponge and sticks;

"semi-fabricated forms" means the following (whether or not coated, plated, drilled or punched):—

(1) wrought or worked materials, fabricated by rolling, drawing, extruding, forging, impact extruding, pressing, graining, atomising and grinding, the following:—

angles, channels, circles, discs, dust, flakes, foil and leaf, forgings, plates, powder, pressings and stampings, ribbons, rings, rods (including bare welding rods, wire rods and rolled wire), sections, shapes, sheets, strip, pipes and tubes (including tube rounds, squares and hollows) and drawn or extruded wire; or

(2) cast material produced by casting in dies, sand, metal, plaster or other types of moulds, including high pressure castings, sintered forms and forms made by powder metallurgy.

Beryllium, the following:—

Ores (other than gem grade beryl) and concentrates.

Beryllium and alloys containing more than 50 per cent. of beryllium, in crude or semi-fabricated forms (other than windows for medical X-ray machines).

Boron, the following:—

Boron minerals, crude and refined.

Ferro-boron, whether briquetted or not.

Boron and alloys containing 10 per cent. or more of boron, in crude or semi-fabricated forms.

Cobalt, the following:—

Raw materials.

Ferro-cobalt, whether briquetted or not.

Cobalt and alloys containing

(*a*) 50 per cent. or more of cobalt, or

(*b*) 19 per cent. or more of cobalt together with 14 per cent. or more of chromium,

in crude or semi-fabricated forms, or scrap.

Germanium of a resistivity of 50 ohms per centimetre or more, in crude or semi-fabricated forms.

Iron and steel, the following:—

Iron, steel and alloys of iron or steel, being iron, steel and alloys containing 50 per cent. or more of iron if—

(*a*) (i) armour plate

(ii) precipitation hardening steels containing 4 per cent. or more of nickel; or

(*b*) containing one or more of the following constituents in the proportions stated:—

(i) 10 per cent. or more of molybdenum;

(ii) 5 per cent. or more of molybdenum together with more than 14 per cent. of chromium;

(iii) 6 per cent. or more of cobalt, except permanent magnetic metals with a cobalt content of 25 per cent. or less;

(iv) 1·5 per cent. or more of niobium (columbium) or tantalum or both;

(v) 32 per cent. or more of nickel;

(vi) 32 per cent. or more of alloying elements (other than iron) one of which is nickel, together with 0·4 per cent. or more of titanium, niobium (columbium) or tantalum,

in crude or semi-fabricated forms.

Lithium, the following:—

Raw materials.

Lithium in crude or semi-fabricated forms.

Magnesium alloys containing 50 per cent. or more of magnesium and one or more of the following constituents in the proportions stated:—

(*a*) 0·4 per cent. or more of zirconium;

(*b*) 1·5 per cent. or more of thorium;

(*c*) 1·0 per cent. or more of rare earth metals (cerium mischmetall),

in crude or semi-fabricated forms, or scrap.

Magnetic materials in all forms (including specialized forms such as core assemblies, laminations, tapes and wound cores), having any of the following characteristics:—

(1) thickness of 0·0004 inch or less;

(2) initial permeability 50,000 or over;

(3) remanence 98 per cent. or over of maximum flux for materials having magnetic permeability;

(4) a composition capable of an energy product greater than 6 mega-gauss-oersteds, or containing more than 25 per cent. of cobalt;

(5) in the case of silicon steels, a core loss of 0·45 watt per pound or less measured at a flux density of 13,000 gauss and a frequency of 50 cycles per second.

Minerals, raw and treated (including residues and tailings), containing more than 0·05 per cent. of uranium or thorium, singly or together, including but not limited to, the following:—

Monazite and monazite sands.

Ores containing thorium including uranothorianite.

Ores containing uranium including pitchblende.

Molybdenum, the following:—

Ferro-molybdenum, whether briquetted or not.

Molybdenum and alloys containing 60 per cent. or more of molybdenum, in crude or semi-fabricated forms (other than clean wire of a diameter not exceeding 500 microns and which, after having been fully annealed, has an elongation factor not exceeding 5 per cent. for diameters up to 200 microns and not exceeding 10 per cent. for diameters of between 200 and 500 microns).

Molybdenum pipes and tubing, platinum clad.

Nickel, the following:—

Raw materials.

Nickel powder.

Nickel-based alloys containing 32 per cent. or more of nickel, in crude or semi-fabricated forms.

Wire of a diameter of 0·1 millimetre or less containing 95 per cent. or more of nickel, and wire mesh, woven, composed of wire containing 95 per cent. or more of nickel and containing 60 or more wires per linear centimetre.

Niobium (columbium), the following:—

Raw materials.

Ferro-niobium and ferro-niobium-tantalum, whether briquetted or not.

Niobium and alloys containing 60 per cent. or more of niobium or 60 per cent. or more of niobium-tantalum in combination, in crude or semi-fabricated forms, or scrap.

Platinum clad molybdenum pipes and tubing.

Silicon of a purity of 99·9 per cent. or more.

Tantalum, the following :—

Raw materials.

Ferro-tantalum and ferro-tantalum-niobium (columbium), whether briquetted or not.

Tantalum and alloys containing 60 per cent. or more of tantalum or 60 per cent. or more of tantalum-niobium (columbium) in combination, in crude or semi-fabricated forms, or scrap.

Thorium and alloys containing 1·5 per cent. or more of thorium, in crude or semi-fabricated forms.

Titanium and alloys containing 70 per cent. or more of titanium, in crude or semi-fabricated forms, or scrap.

Tungsten wire and filament, the following :—

(1) Wire, coated or covered.

(2) Wire, not coated or covered, other than wire of a diameter less than 600 microns the tensile strength of which is not more than 35 grammes per milligramme (140 kilogrammes per square millimetre) when measured on the wire drawn down to 180 microns or less and heated in a hydrogen atmosphere of 2,100° Centigrade for a period of 10 minutes.

(3) Cut coils, coated or covered.

(4) Cut coils, not coated or covered, other than :—

(*a*) coiled coil filaments ;

(*b*) single coil lamp filaments having any of the following characteristics :—

(i) set or sintered ;

(ii) a diameter of 19 microns or less ;

(iii) a diameter of 250 microns or more and a length not exceeding 100 millimetres.

Uranium, the following :—

Ferro-uranium, whether briquetted or not.

Uranium and alloys containing any percentage of uranium, in crude or semi-fabricated forms.

Zirconium, in which the ratio of hafnium content to zirconium content is less than one part to 500 parts by weight, the following :—

Ferro-zirconium, whether briquetted or not.

Zirconium and alloys containing more than 50 per cent. of zirconium in crude or semi-fabricated forms.

Manufactures wholly of zirconium or of alloys containing more than 50 per cent. of zirconium.

GROUP 6

Engineering products

In this Group—

"a specified corrosion-resistant material" means polytetrafluoroethylene, polychlorotrifluoroethylene or metals or alloys containing—

(i) 90 per cent. or more of tantalum, titanium or zirconium, either separately or combined, or

(ii) 50 per cent. or more of cobalt or molybdenum, either separately or combined.

Ball or roller bearings, and parts thereof, the following:—

(*a*) Ball or cylindrical roller bearings (other than separable (magneto type) ball bearings and ball thrust bearings) manufactured to tolerances specified in Part II of this Schedule or closer, and possessing one or more of the following characteristics:—

(1) made of any material other than—

(i) low carbon steel containing not more than 0·4 per cent. of carbon and no other elements except those present as impurities or in such low quantities as not to modify the basic characteristics of the steel;

(ii) high carbon chromium steel type En 31 as specified in British Standard 970: 1955 (wrought steels), or equivalent types normally used in the manufacture of ball or roller bearings;

(iii) nickel-molybdenum steel type En 34 as specified in British Standard 970: 1955 (wrought steels), or equivalent types normally used in the manufacture of ball or roller bearings.

(2) processed by heat treatment for the purpose of stabilizing them for use at normal operation temperatures over 150° Centigrade;

(3) having special low torque or quiet running performance beyond that required for industrial purposes, to provide a superior operating performance for military purposes;

(4) specially designed for use in military equipment and differing substantially in design from normal bearings in order to provide a superior operating performance.

(*b*) Tapered roller, spherical roller and thrust roller bearings having an inner ring bore diameter measuring more than 400 millimetres (15·75 inches).

(*c*) Parts of ball or roller bearings, the following:—

Outer rings, inner rings, retainers, balls, rollers and sub-assemblies usable only for bearings described in heads (*a*) or (*b*) of this entry.

Cables, the following:—

Coaxial-type cables (including submarine types) designed for telecommunication and radar purposes other than those of a type designed or in common use for domestic radio and television receivers.

Communication cable (including submarine cable) containing more than one pair of conductors and containing any conductor, single or stranded, exceeding 0·9 millimetre in diameter.

Centrifugal counter-current solvent extractors specially designed for the extraction of radio-active substances.

Compressors and blowers, multistage, with an overall compression ratio of 2:1 or more coupled with a capacity of over 372,000 cubic feet per minute, or an overall compression ratio of 3:1 or more coupled with a capacity of over 106,000 cubic feet per minute.

Containers, jacketted, including mobile units, of 500 gallons capacity or over, designed for the storage or transportation of the following liquefied gases:—

Argon.

Helium.

Hydrogen.

Nitrogen.

Oxygen.

Ozone.

Equipment for the production or concentration of deuterium oxide.

Equipment specially designed for the conversion of *di*nitrogen tetroxide to nitric acid of 98 per cent. or higher concentration or for the concentration of *di*nitrogen tetroxide or nitric oxides or mixtures thereof.

Equipment specially designed for the purification and processing of germanium, other than equipment for zone purification.

Equipment specially designed for the purification and processing of silicon.

Furnaces, electric, specially designed for the recovery of titanium or zirconium from scrap.

Gas liquefying equipment, the following :—

Equipment for the separation of helium from natural gases.

Equipment specially designed for the production of gases in liquid form, capable of operating at pressures of 300 pounds per square inch gauge and over and producing one ton or more per day of gas in liquid form, other than :—

(*a*) Plants not capable of producing more than 25 per cent. of their total daily product as extractable gas in liquid form.

(*b*) Plants specially designed for liquefying chlorine and ammonia.

(*c*) Stationary equipment for liquefying carbon dioxide.

(*d*) Equipment for liquefying low molecular weight refinery gases.

Liquid fluorine producing equipment.

Machines and apparatus for the manufacture and testing of electronic valves, the following :—

Machines and apparatus specially designed for the manufacture and testing of electronic valves, transistors and crystal diodes (including components and sub-assemblies therefor) described in Group 3.

Machines and apparatus specially designed for the automatic or semi-automatic assembly or testing of electronic valves, transistors and crystal diodes (including components and sub-assemblies therefor).

Machines and apparatus of the kind used for making telecommunication cables, the following :—

(*a*) Machines of the kind specially designed for the manufacture of multi-pair electric cables for telecommunication purposes, the following :—

(1) Machines of the kind used for applying insulating material to conductors.

(2) Machines of the kind used for laying conductors together or for applying an insulating, separating, binding or identifying material thereto.

(*b*) Machines of the kind specially designed for the manufacture of coaxial electric cables, the following :—

(1) Machines of the kind used for applying insulating separators to the inner conductor of air-spaced coaxial electric cables.

(2) Machines of the kind used for applying metal strip or sheet to form the outer conductor of coaxial electric cables.

(*c*) Machines of the kind used for laying up or stranding conductors, pairs, quads, multiple units thereof, or coaxial tubes, to form complete cable covers or parts thereof.

(*d*) Automatic apparatus for controlling the diameter or the eccentricity of extruded dielectric on wires and cables.

Machines, apparatus and tools specially designed for the manufacture and testing of gas turbines, the following :—

Compressor case boring machines.

Compressor and turbine disc turning machines.

Machines and apparatus for making or measuring gas turbine blades.

Rotor grinding machines.

Surface broaching tools for the manufacture of gas turbine blades and discs.

Machines, milling, having a travelling head or heads, capable of milling aircraft spars.

Machines for milling aircraft skin.

Machines, metalworking, the following :—

Deep hole drilling machines of the kind designed to use tubular drills or bars in which the coolant passes through the drill or bar.

Forging hammers, the following :—

Gravity hammers having a falling weight of over 10 tons.

Steam, air or mechanical hammers (except counter-blow hammers) of rated size over 10 tons.

Counter-blow hammers of rated size of 180,825 foot pounds or more.

Horizontal impact hammers, hydraulically actuated, of rated size of 10,000 foot pounds or more.

Gear-making or gear finishing machinery, the following :—

Gear-grinding machines, generating type, of 36 inches work diameter or over.

Machines capable of the production of gears having a pitch finer than 0·5 module.

Grinding machines, the following :—

Internal grinding machines of the kinds incorporating or specially designed for the utilization of grinding heads designed or rated for operation at speeds in excess of 80,000 revolutions per minute.

Jig grinding machines with any traversing motion (longitudinal, transverse or vertical) exceeding 44 inches.

Jig boring machines with any traversing motion (longitudinal, transverse or vertical) exceeding 44 inches.

Machines incorporating electronic closed loop feed back controls in which a continuous feed back of information from the work piece or tool or work piece carrier or tool-holder itself results in continuous correction of the control commands.

Presses, hydraulic and mechanical, with total rated pressures of over 5,000 tons.

Spinning lathes designed for use with or equipped with spindle drive motor exceeding 25 horse power.

Machines specially designed for the working or forming of aircraft sheet, aircraft plate or aircraft extrusions.

Machine tool parts, accessories and associated apparatus, the following :—

Electronic closed loop feed back controls for controlling machine tools in which a continuous feed back of information from the work piece or tool or work piece carrier or tool-holder itself results in continuous correction of the control commands.

Grinding heads and spindle assemblies for internal grinding machines, designed or rated for operation at speeds in excess of 80,000 revolutions per minute.

Marine steam boilers designed to operate at temperatures of 593° Centigrade and above.

Metal cutting and working tools for machine operations, the following :—

Deep hole drills or bars of the type in which a hardened steel or hard metal cutting piece is fixed into a tubular shank and the coolant passes through the drill or bar.

Pipe and tubing (metal) lined with polytetrafluoroethylene or polychlorotrifluoroethylene.

Pipe valves, cocks and pressure regulators, either—

(1) designed to operate at temperatures below −130° Centigrade ; or

(2) having all flow contact parts made of or lined with a specified corrosion-resistant material.

Plant for the production of military explosives and parts specially designed therefor, including nitrators, continuous types.

Plant for the production of titanium metal (other than separate plant for the production of titanium tetrachloride) and parts specially designed therefor.

Plant for the production of zirconium (other than separate plant for the production of zirconium tetrachloride) and parts specially designed therefor.

Printed circuit equipment, the following :—

Equipment specially designed to produce electronic assemblies—

(*a*) by depositing or printing on insulating panels, including plates or wafers, or otherwise forming in situ, component parts other than basic wiring, or

(*b*) by automatically inserting or soldering components on insulating panels, including plates or wafers, to which wiring is applied by printing or other means.

Pumps (other than vacuum pumps) capable of delivering liquids separately or in combination with solids, gases, or solids and gases, and having any of the following characteristics: —

(1) designed to move molten metals by electromagnetic forces ;
(2) designed to operate at temperatures below − 130° Centigrade ;
(3) all flow contact surfaces made of a specified corrosion-resistant material.

Rock drill bits, rotary type, that is to say, of a kind having cones or sections which rotate separately and independently of the rotation of the body of the bit.

Rolling mills, the following :—

(*a*) having the work-rolls supported by multiple back-up rolls or bearings ;
(*b*) having multiple work-rolls rotating in a planetary form around the back-up rolls ;
(*c*) continuous cold strip mills, more than 3-high.

GROUP 7

Transport Equipment

Compression ignition (diesel) engines capable of developing 50 brake horse power and over and having a non-magnetic content exceeding 50 per cent. of their total weight.

Construction equipment built to military specifications, specially designed for airborne transportation.

Mechanically propelled vehicles, tractors and lift trucks, possessing or built to current military specifications differing materially from normal civilian specifications.

GROUP 8

Miscellaneous

Alkyl polysulphide liquid polymers (other than water dispersions).

Condenser tissue, that is, synthetic film for dielectric use, of 0·0015 inch (0·038 millimetre) or less thickness.

Fluorinated silicone rubbers and other fluorinated elastomeric materials, and such organic intermediates for their manufacture as contain 10 per cent. or more of combined fluorine.

Fuels for aircraft turbine engines, the following :—

(*a*) wide cut gasoline types ;
(*b*) kerosene types having a freezing point below − 60° Centigrade ;
(*c*) high flash kerosene types having a minimum flash point of 60° Centigrade ;
(*d*) any liquid fuel, including petroleum, which contains high energy components or compounds thereof, having a gross calorific value of not less than 23,400 British Thermal Units per pound.

High octane blending agents for aircraft fuels, the following :—

(*a*) Alkylates, aviation grade.
(*b*) Isopentane.
(*c*) Neohexane.

Hydraulic fluids, the following:—

(*a*) petroleum based, having a kinematic viscosity of 4·6 centistokes or greater at 98·9° Centigrade and a pour point of −34·4° Centigrade or lower and a viscosity index of 130 or higher;

(*b*) synthetic, having a viscosity of not more than 4,000 centistokes at −54° Centigrade and not less than 1·5 centistokes at 150° Centigrade.

Lubricating oils and greases, synthetic (ester type) being or containing:—

(1) esters of dibasic saturated aliphatic acids combined with one or both of the following:—

(*a*) saturated aliphatic monohydric alcohols, where both of the two constituents contain six or more carbon atoms, and

(*b*) polyglycols where one or both of the two constituents contain six or more carbon atoms; or

(2) fluoro-alcohol esters;

other than oils and greases containing either—

(*a*) 50 per cent. or more of neutral castor oil, or

(*b*) 5 per cent. or more of neutral castor oil and 50 per cent. or more of castor oil and petroleum oil together.

Polychlorotrifluoroethylene and manufactures wholly thereof.

Polytetrafluoroethylene and manufactures wholly thereof.

Silicone fluids and greases, the following:—

Halogenated silicone fluids.

Lubricating greases capable of operating at temperatures of 180° Centigrade or higher and having a drop point of 220° Centigrade or higher.

PART II

Ball and roller bearings: tolerances for bore and outside diameter, eccentricity, parallelism of races and wobble (parallelism of track to faces) referred to in Group 6 of Part I of this Schedule.

1. Inner Ring

Bore sizes

Inch type / Metric type	Over 0 including 2 in. / Over 0 including 50 mm.	Over 2 including 3 in. / Over 50 including 80 mm.	Over 3 including 5 in. / Over 80 including 120 mm.	Over 5 including 7 in. / Over 120 including 180 mm.	Over 7 including 10 in. / Over 180 including 250 mm.	Over 10 in. / Over 250 mm.
Total bore tolerance (inches)	·0002	·0003	·0003	·0004	·0005	·0005
Eccentricity (inches)	·0002	·0002	·0003	·0003	·0004	·0005
Parallelism of races (inches)...	·0002	·0002	·0003	·0003	·0004	·0005
Wobble or parallelism of track to faces (inches)	·0003	·0003	·0004	·0004	·0005	·0006

2. Outer Ring

Outside Diameter Sizes

Inch type / Metric type	Over 0 incl. 2 in. / Over 0 incl. 50 mm.	Over 2 incl. 3 in. / Over 50 incl. 80 mm.	Over 3 incl. 5 in. / Over 80 incl. 120 mm.	Over 5 incl. 6 in. / Over 120 incl. 150 mm.	Over 6 incl. 7 in. / Over 150 incl. 180 mm.	Over 7 incl. 10 in. / Over 180 incl. 250 mm.	Over 10 incl. 12 in. / Over 250 incl. 315 mm.	Over 12 incl. 16 in. / Over 315 incl. 400 mm.	Over 16 in. / Over 400 mm.
Total outside diameter tolerance (inches)	·0002	·0003	·0003	·0004	·0005	·0005	·0005	·0006	·0007
Eccentricity (inches)	·0002	·0003	·0004	·0004	·0005	·0005	·0006	·0007	·0008
Parallelism of races (inches) ...	·0002	·0002	·0003	·0003	·0003	·0004	·0005	·0005	·0006
Wobble or parallelism of track to faces (inches)	·0003	·0004	·0005	·0005	·0006	·0006	·0007	·0008	·0009

SECOND SCHEDULE

Albania.
Bulgaria.
China.
Czecho-Slovakia.
Hungary.
North Korea.
North Viet Nam, that is, all that part of Viet Nam north of a line running from the mouth of the Song Ben Hat River along the course thereof to the village of Bo Ho Su and thence due west to the frontier of Laos.
Poland.
Roumania.
Soviet Zone of Germany.
Tibet.
Union of Soviet Socialist Republics.

THIRD SCHEDULE

ORDERS REVOKED

The Strategic Goods (Control) Order, 1954 (S.I. 1954/1622).
The Strategic Goods (Control) (Amendment) Order, 1955 (S.I. 1955/1280).
The Strategic Goods (Control) (Amendment No. 2) Order, 1956 (S.I. 1956/577).
The Strategic Goods (Control) (Amendment No. 3) Order, 1957 (S.I. 1957/245).
The Strategic Goods (Control) (Amendment No. 4) Order, 1957 (S.I. 1957/1282).
The Strategic Goods (Control) (Amendment No. 5) Order, 1957 (S.I. 1957/2170).

EXPLANATORY NOTE

(This Note is not part of the Order, but is intended to indicate its general purport.)

This Order revokes and replaces the Strategic Goods (Control) Order, 1954, and the amendments thereto.

It prohibits the disposal of the goods specified in the First Schedule and situated outside the United Kingdom—

(*a*) to the Government of, any authority of, or any person in, any country or territory specified in the Second Schedule, or

(*b*) to any person whatsoever, if the person disposing of the goods has reasonable cause to believe that the goods will be imported into any such country or territory.

The Order effects a considerable reduction in the range of goods which are subject to control and in consequence the grouping of the descriptions in the First Schedule has been re-arranged.