SCHEDULES

SCHEDULE 1

Regulations 7(3) and 16(8)

Rules for interpretation of regulations 7(2) and 16(7)

Application of Schedule

1.—(1) The rules set out in the following paragraphs of this Schedule apply for the purpose of interpreting regulations 7(2) and 16(7).

(2) They also apply for the purpose of interpreting this Schedule.

Commencement Information
I1 Sch. 1 para. 1 in force at 11.4.2019, see reg. 1(3)(e)

Joint interests

2. If two or more persons each hold a share or right jointly, each of them is treated as holding that share or right.

Commencement Information
I2 Sch. 1 para. 2 in force at 11.4.2019, see reg. 1(3)(e)

Joint arrangements

3.—(1) If shares or rights held by a person and shares or rights held by another person are the subject of a joint arrangement between those persons, each of them is treated as holding the combined shares or rights of both of them.

(2) A "joint arrangement" is an arrangement between the holders of shares or rights that they will exercise all or substantially all the rights conferred by their respective shares or rights jointly in a way that is pre-determined by the arrangement.

(3) "Arrangement" has the meaning given by paragraph 12.

Commencement Information
I3 Sch. 1 para. 3 in force at 11.4.2019, see reg. 1(3)(e)

Calculating shareholdings

4.—(1) In relation to a person who has a share capital, a reference to holding "more than 50% of the shares" in that person is to holding shares comprised in the issued share capital of that person of a nominal value exceeding (in aggregate) 50% of that share capital.

(2) In relation to a person who does not have a share capital—

(a) a reference to holding shares in that person is to holding a right or rights to share in the capital or, as the case may be, profits of that person;

(b) a reference to holding "more than 50% of the shares" in that person is to holding a right or rights to share in more than 50% of the capital or, as the case may be, profits of that person.

Commencement Information

I4 Sch. 1 para. 4 in force at 11.4.2019, see reg. 1(3)(e)

Voting rights

5.—(1) A reference to the voting rights in a person is to the rights conferred on shareholders in respect of their shares (or, in the case of a person not having a share capital, on members) to vote at general meetings of the person on all or substantially all matters.

(2) In relation to a person that does not have general meetings at which matters are decided by the exercise of voting rights—

(a) a reference to holding voting rights in the person is to be read as a reference to holding rights in relation to the person that are equivalent to those of a person entitled to exercise voting rights in a company;

(b) a reference to holding "more than 50% of the voting rights" in the person is to be read as a reference to holding the right under the constitution of the person to block changes to the overall policy of the person or to the terms of its constitution.

Commencement Information

I5 Sch. 1 para. 5 in force at 11.4.2019, see reg. 1(3)(e)

6. In applying regulations 7(2) and 16(7) and this Schedule, the voting rights in a person are to be reduced by any rights held by the person itself.

Commencement Information

I6 Sch. 1 para. 6 in force at 11.4.2019, see reg. 1(3)(e)

Rights to appoint or remove members of the board

7. A reference to the right to appoint or remove a majority of the board of directors of a person is to the right to appoint or remove directors holding a majority of the voting rights at meetings of the board on all or substantially all matters.

Commencement Information

I7 Sch. 1 para. 7 in force at 11.4.2019, see reg. 1(3)(e)

8. A reference to a board of directors, in the case of a person who does not have such a board, is to be read as a reference to the equivalent management body of that person.

Commencement Information
I8 Sch. 1 para. 8 in force at 11.4.2019, see reg. 1(3)(e)

Shares or rights held "indirectly"

9.—(1) A person holds a share "indirectly" if the person has a majority stake in another person and that other person—

(a) holds the share in question, or

(b) is part of a chain of persons—

(i) each of whom (other than the last) has a majority stake in the person immediately below it in the chain, and

(ii) the last of whom holds the share.

(2) A person holds a right "indirectly" if the person has a majority stake in another person and that other person—

(a) holds that right, or

(b) is part of a chain of persons—

(i) each of whom (other than the last) has a majority stake in the person immediately below it in the chain, and

(ii) the last of whom holds that right.

(3) For these purposes, a person ("A") has a "majority stake" in another person ("B") if—

(a) A holds a majority of the voting rights in B,

(b) A is a member of B and has the right to appoint or remove a majority of the board of directors of B,

(c) A is a member of B and controls alone, pursuant to an agreement with other shareholders or members, a majority of the voting rights in B, or

(d) A has the right to exercise, or actually exercises, dominant influence or control over B.

(4) In the application of this paragraph to the right to appoint or remove a majority of the board of directors, a person ("A") is to be treated as having the right to appoint a director if—

(a) any person's appointment as director follows necessarily from that person's appointment as director of A, or

(b) the directorship is held by A itself.

Commencement Information
I9 Sch. 1 para. 9 in force at 11.4.2019, see reg. 1(3)(e)

Shares held by nominees

10. A share held by a person as nominee for another is to be treated as held by the other (and not by the nominee).

Commencement Information
I10 Sch. 1 para. 10 in force at 11.4.2019, see reg. 1(3)(e)

Rights treated as held by person who controls their exercise

11.—(1) Where a person controls a right, the right is to be treated as held by that person (and not by the person who in fact holds the right, unless that person also controls it).

(2) A person "controls" a right if, by virtue of any arrangement between that person and others, the right is exercisable only—

(a) by that person,

(b) in accordance with that person's directions or instructions, or

(c) with that person's consent or concurrence.

Commencement Information

I11 Sch. 1 para. 11 in force at 11.4.2019, see reg. 1(3)(e)

12. "Arrangement" includes—

(a) any scheme, agreement or understanding, whether or not it is legally enforceable, and

(b) any convention, custom or practice of any kind.

Commencement Information

I12 Sch. 1 para. 12 in force at 11.4.2019, see reg. 1(3)(e)

Rights exercisable only in certain circumstances etc.

13.—(1) Rights that are exercisable only in certain circumstances are to be taken into account only—

(a) when the circumstances have arisen, and for so long as they continue to obtain, or

(b) when the circumstances are within the control of the person having the rights.

(2) But rights that are exercisable by an administrator or by creditors while a person is subject to relevant insolvency proceedings are not to be taken into account while the person is subject to those proceedings.

(3) "Relevant insolvency proceedings" means—

(a) administration within the meaning of the Insolvency Act 1986 [M1]

(b) administration within the meaning of the Insolvency (Northern Ireland) Order 1989 [M2], or

(c) proceedings under the insolvency law of another country during which a person's assets and affairs are subject to the control or supervision of a third party or creditor.

(4) Rights that are normally exercisable but are temporarily incapable of exercise are to continue to be taken into account.

Commencement Information

I13 Sch. 1 para. 13 in force at 11.4.2019, see reg. 1(3)(e)

Marginal Citations

M1 1986 c.45.

M2 S.I. 1989/2405 (N.I. 19).

Rights attached to shares held by way of security

14. Rights attached to shares held by way of security provided by a person are to be treated for the purposes of this Schedule as held by that person—

(a) where apart from the right to exercise them for the purpose of preserving the value of the security, or of realising it, the rights are exercisable only in accordance with that person's instructions, and

(b) where the shares are held in connection with the granting of loans as part of normal business activities and apart from the right to exercise them for the purpose of preserving the value of the security, or of realising it, the rights are exercisable only in that person's interests.

Commencement Information

I14 Sch. 1 para. 14 in force at 11.4.2019, see reg. 1(3)(e)

SCHEDULE 2

Regulations 16, 17 and 59

Persons named in relation to financial restrictions

1. Sberbank

Commencement Information

I15 Sch. 2 para. 1 in force at 31.12.2020 on IP completion day (in accordance with 2020 c. 1, **Sch. 5 para. 1(1)**), see reg. 1(2)

2. VTB bank

Commencement Information

I16 Sch. 2 para. 2 in force at 31.12.2020 on IP completion day (in accordance with 2020 c. 1, **Sch. 5 para. 1(1)**), see reg. 1(2)

3. Gazprombank

Commencement Information

I17 Sch. 2 para. 3 in force at 31.12.2020 on IP completion day (in accordance with 2020 c. 1, **Sch. 5 para. 1(1)**), see reg. 1(2)

4. Vnesheconombank (VEB)

Commencement Information

I18 Sch. 2 para. 4 in force at 31.12.2020 on IP completion day (in accordance with 2020 c. 1, **Sch. 5 para. 1(1)**), see reg. 1(2)

5. Rosselkhozbank

Commencement Information

I19 Sch. 2 para. 5 in force at 31.12.2020 on IP completion day (in accordance with 2020 c. 1, **Sch. 5 para. 1(1)**), see reg. 1(2)

6. OPK Oboronprom

Commencement Information

I20 Sch. 2 para. 6 in force at 31.12.2020 on IP completion day (in accordance with 2020 c. 1, **Sch. 5 para. 1(1)**), see reg. 1(2)

7. United Aircraft Corporation

Commencement Information

I21 Sch. 2 para. 7 in force at 31.12.2020 on IP completion day (in accordance with 2020 c. 1, **Sch. 5 para. 1(1)**), see reg. 1(2)

8. Uralvagonzavod

Commencement Information

I22 Sch. 2 para. 8 in force at 31.12.2020 on IP completion day (in accordance with 2020 c. 1, **Sch. 5 para. 1(1)**), see reg. 1(2)

9. Rosneft

Commencement Information

I23 Sch. 2 para. 9 in force at 31.12.2020 on IP completion day (in accordance with 2020 c. 1, **Sch. 5 para. 1(1)**), see reg. 1(2)

10. Transneft

Commencement Information

I24 Sch. 2 para. 10 in force at 31.12.2020 on IP completion day (in accordance with 2020 c. 1, **Sch. 5 para. 1(1)**), see reg. 1(2)

11. Gazprom Neft

Commencement Information

I25 Sch. 2 para. 11 in force at 31.12.2020 on IP completion day (in accordance with 2020 c. 1, **Sch. 5 para. 1(1)**), see reg. 1(2)

[F1SCHEDULE 2A

Regulation 21

Critical-industry goods and critical-industry technology

Textual Amendments

F1 Sch. 2A inserted (1.3.2022) by The Russia (Sanctions) (EU Exit) (Amendment) (No. 3) Regulations 2022 (S.I. 2022/195), reg. 1(2), **Sch.** (with reg. 11)

PART 1

Interpretation

1.—(1) A thing is specified in this Schedule if it is specified in Parts 2 to 8, and a reference in any note in this Schedule to a thing being "controlled" or subject to "controls" is to be read as a reference to it being specified.

(2) In this Schedule, defined terms are printed in quotation marks.

(3) Terms printed in quotation marks and not defined in this Schedule have the meaning given to them in—

(a) Schedules 2 and 3 of the Export Control Order 2008, or

(b) Annex I of the Dual-Use Regulation,

as applicable.

2.—(1) In this Schedule—

[F2"controlled materials" means controlled energetic materials specified in 1C011, 1C111, 1C239 of Annex I of the Dual-Use Regulation and ML8 in Schedule 2 to the Export Control Order 2008;**]**

"dynamic adaptive routing" means automatic rerouting of traffic based on sensing and analysis of current actual network conditions, but does not include cases of routing decisions taken on predefined information;

"fluoride fibres" means fibres manufactured from bulk fluoride compounds;

"hybrid computer" means equipment that can—

(a) accept data,

(b) process data, in both analogue and digital representation, and

(c) provide output of data;

"media access unit" means equipment that contains one or more communication interfaces ("network access controller", "communications channel controller", modem or computer bus) to connect terminal equipment to a network;

"stored program controlled" means a control using instructions stored in an electronic storage that a processor can execute in order to direct the performance of predetermined functions, and equipment may be "stored program controlled" whether the electronic storage is internal or external to the equipment;

"terminal interface equipment" means equipment at which information enters or leaves the telecommunication systems, for example a telephone, data device, computer, or facsimile device.

(2) For the purposes of this Schedule, the interpretative notes set out in Table 1 apply.

Table 1

Interpretative notes
"multi-data-stream processing" refers to the "microprogram" or equipment architecture technique that permits simultaneous processing of two or more data sequences under the control of one or more instruction sequences by means such as: *Single Instruction Multiple Data (SIMD) architectures such as vector or array processors;* *Multiple Single Instruction Multiple Data (MSIMD) architectures;* *Multiple Instruction Multiple Data (MIMD) architectures, including those that are tightly coupled, closely coupled or loosely coupled;* *structured arrays of processing elements, including systolic arrays.* *"data signalling rate" means the rate, as defined in International Telecommunications Union Recommendation 53-36, taking into account that, for non-binary modulation, baud and bit per second are not equal.* *Bits for coding, checking and synchronization functions are to be included.* *When determining the "data signalling rate", servicing and administrative channels shall be excluded.* *It is the maximum one-way rate, i.e., the maximum rate in either transmission or reception.* *"spectral efficiency" is a figure of merit parametrized to characterize the efficiency of transmission system that uses complex modulation schemes such as QAM (quadrature amplitude modulation), Trellis coding, QSPK (Q-phased shift key), etc.. It is defined as the Digital transfer rate (bits/second) divided by 6dB spectrum bandwidth (Hz).*

Textual Amendments

F2 Words in Sch. 2A para. 2 inserted (15.7.2022) by The Russia (Sanctions) (EU Exit) (Amendment) (No. 11) Regulations 2022 (S.I. 2022/792), regs. 2, **12(2)** (with reg. 13)

Textual Amendments

F2 Words in Sch. 2A para. 2 inserted (15.7.2022) by The Russia (Sanctions) (EU Exit) (Amendment) (No. 11) Regulations 2022 (S.I. 2022/792), regs. 2, **12(2)** (with reg. 13)

[F3PART 1A

Special materials and related equipment

Textual Amendments

F3 Sch. 2A Pts. 1A, 1B inserted (15.7.2022) by The Russia (Sanctions) (EU Exit) (Amendment) (No. 11) Regulations 2022 (S.I. 2022/792), reg. 1(2), **Sch. 1** (with reg. 13)

Microorganisms and Toxins

Item	*Regulation 53A applies?*
1B999 Specific processing equipment as follows:	
a. Electrolytic cells for fluorine "production";	
b. Particle accelerators;	
c. Industrial process control hardware/systems designed for power industries;	
d. Freon and chilled water-cooling systems capable of continuous cooling duties of 100,000 BTU/hr (29.3 kW) or greater;	
e. Equipment for the "production" of structural composites, fibres, prepregs and preforms.	
1C990 Fibrous and filamentary materials for "use" in "composite" structures and with a specific modulus of 3.18 x 10^6 m or greater and a specific tensile strength of 7.62 x 10^4 m or greater.	Yes
1C992 Commercial charges and devices containing energetic materials, and nitrogen trifluoride in a gaseous state.	Yes
Note: For the purposes of this entry the mass of the non-controlled substance in any 'mixture' is omitted when determining the total mass of the controlled material.	
These items are as follows: a. Shaped charges specially designed for oil well operations, utilising one charge functioning along a single axis, that upon detonation produce a hole, and a.1. Contain any formulation of controlled materials; a.2. Have only a uniform shaped conical liner with an included angle of 90 degrees or less; a.3. Contain more than 0.010 kg but less than or equal to 0.090 kg of "controlled materials"; and a.4. Have a diameter not exceeding 4.5 inches;	Yes
b. Shaped charges specially designed for oil well operations containing less than or equal to 0.010 kg of controlled materials;	Yes

Item	*Regulation 53A applies?*
c. Detonation cord or shock tubes containing less than or equal to 0.064 kg per meter (300 grains per foot) of controlled materials;	Yes
d. Cartridge power devices, that contain less than or equal to 0.70 kg of controlled materials in the deflagration material;	Yes
e. Oil well cartridges, that contain less than or equal to 0.015 kg of "controlled materials";	Yes
f. Commercial prefabricated slurries and emulsions containing less than or equal to 10.0 kg and less than or equal to thirty-five percent by weight of materials controlled by ML8 in Schedule 2 of the Export Control Order 2008;	Yes
g. Cutters and severing tools containing less than or equal to 3.5 kg of controlled materials;	Yes
h. Pyrotechnic devices when designed exclusively for commercial purposes (e.g., theatrical stages, motion picture special effects, and fireworks displays) and containing less than or equal to 3.0 kg of controlled materials;	Yes
i. Other commercial explosive devices and charges not controlled by 1C992.a to.h. containing less than or equal to 1.0 kg of controlled materials. *Note: 1C992.i includes automotive safety devices; extinguishing systems; cartridges for riveting guns; explosive charges for agricultural, oil and gas operations, sporting goods, commercial mining, or public works purposes; and delay tubes used in the assembly of commercial explosive devices.*	Yes
j. Nitrogen trifluoride (NF_3) in a gaseous state - Nitrogen trifluoride (CAS RN 7783-54-2)	
1C996 Hydraulic fluids containing synthetic hydrocarbon oils, having all the following characteristics:	Yes
a. A flash point exceeding 477 K (204 degrees C); b. A pour point at 239 K (-34 degrees C) or less; c. A viscosity index of 75 or more; and d. A thermal stability at 616 K (343 degrees C).	
1C997 Ammonium nitrate, including fertilisers and fertiliser blends containing more than 15% by weight ammonium nitrate, except liquid fertilisers (containing any amount of ammonium nitrate) or dry fertilisers containing less than 15% by weight ammonium nitrate	
1C998 Non fluorinated polymeric substances as follows: a. Polyarylene ether ketones, as follows: a.1 Polyether ether ketone (PEEK); a.2. Polyether ketone ketone (PEKK);	Yes

Item	*Regulation 53A applies?*
a.3. Polyether ketone (PEK); a.4. Polyether ketone ether ketone ketone (PEKEKK);	
1C999 Specific materials, as follows:	
a. Hardened steel and tungsten carbide precision ball bearings (3mm or greater diameter);	Yes
b. 304 and 316 stainless steel plate;	
c. Monel plate;	
d. Tributyl phosphate;	
e. Nitric acid in concentrations of 20 weight percent or greater;	
f. Fluorine;	
g. Alpha emitting radionuclides,	
1D999 Specific software as follows:	
a. “Software” specially designed for industrial process control hardware/systems controlled by 1B999; b. “Software” specially designed for equipment for the “production” of structural composites, fibres, prepregs and preforms controlled by 1B999.	
1E994 “Technology” for the “development”, “production”, or “use” of fibrous and filamentary materials controlled by 1C990.	Yes

PART 1B

MATERIALS PROCESSING

Item	*Regulation 53A applies?*
2A983 Explosives or detonator detection equipment, both bulk and trace based, consisting of an automated device, or combination of devices for automated decision making to detect the presence of different types of explosives, explosive residue, or detonators as follows and specifically designed components thereof: *Note: For the purpose of this entry, automated decision making is the ability of the equipment to detect explosives or detonators at the design or operator-selected level of sensitivity and provide an automated alarm when explosives or detonators at or above the sensitivity level are detected. This entry does not control equipment that depends on operator interpretation of indicators such as inorganic/organic colour mapping of the items(s) being scanned.*	

Item	*Regulation 53A applies?*
Note: Explosives or detonation detection equipment in 2A983 includes equipment for screening people, documents, baggage, other personal effects, cargo and/or mail.	
a. Explosives detection equipment for automated decision making to detect and identify bulk explosives utilising, but not limited to, x-ray (e.g., computed tomography, dual energy, or coherent scattering), nuclear (e.g. thermal neutron analysis, pulse fast neutron analysis, pulse fast neutron transmission spectroscopy, and gamma resonance absorption), or electromagnetic techniques (e.g. quadropole resonance and dielectrometry).	Yes
b. Detonator detection equipment for automated decision making to detect and identify initiation devices (e.g. detonators, blasting caps) utilising, but not limited to, x-ray (e.g. dual energy or computed tomography) or electromagnetic techniques.	Yes
2A984 Concealed object detection equipment operating in the frequency range from 30 GHz to 3000 GHz and having a spatial resolution of 0.1 milliradian up to and including 1 milliradian at a standoff distance of 100 metres; and specially designed components thereof. *Note: Concealed object detection equipment includes but is not limited to equipment for screening people, documents, baggage, other personal effects, cargo and mail.* *Technical Note: The range of frequencies span what is generally considered as the millimetre-wave, submillimetre-wave and terahertz frequency regions.*	Yes
2A991 Bearings and bearing systems as follows:	
This entry does not control balls with tolerance specified by the manufacturer in accordance with ISO 3290 as grade 5 or worse. *Note (1) (a) DN is the product of the bearing bore diameter in mm and the bearing rotational velocity in rpm.* *(b) Operating temperatures include those temperatures obtained when a gas turbine engine has stopped after operation.* *(2) Annular Bearing Engineers Committee (ABEC); American National Standards Institute (ANSI); Anti-Friction Bearing Manufacturers Association (AFBMA).*	
a. Ball bearings or solid ball bearings, having tolerances specified by the manufacturer in accordance with ABEC 7, ABEC 7P, or ABEC 7T or ISO Standard Class 4 or better (or equivalents) and having any of the following characteristics.	Yes
a.1. Manufactured for “use” at operating temperatures above 573 K (300 degrees C) either by using special materials or by special heat treatment; or	
a.2. With lubricating elements or component modifications that, according to the manufacturer’s specifications, are specially designed to enable the bearings to operate at speeds exceeding 2.3 million DN.	

Item	*Regulation 53A applies?*
b. Solid tapered roller bearings, having tolerances specified by the manufacturer in accordance with ANSI/AFBMA Class 00 (inch) or Class A (metric) or better (or equivalents) and having any of the following characteristics.	
b.1. With lubricating elements or component modifications that, according to the manufacturer's specifications, are specially designed to enable the bearings to operate at speeds exceeding 2.3 million DN; or b.2. Manufactured for "use" at operating temperatures below 219 K (54 degrees C) or above 423 K (150 degrees C).	
c. Gas-lubricated foil bearing manufactured for "use" at operating temperatures of 561 K (288 °C) or higher and a unit load capacity exceeding 1 MPa.	
d. Active magnetic bearing systems.	Yes
e. Fabric-lined self-aligning or fabric-lined journal sliding bearings manufactured for "use" at operating temperatures below 219 K(-54 degrees C) or above 423 K (150 degrees C).	
2A992 Piping, fittings and valves made of, or lined with stainless, copper-nickel alloy or other alloy steel containing 10% or more nickel and/or chromium as follows:	
a. Pressure tube, pipe, and fittings of 200 mm (8 in.) or more inside diameter, and suitable for operation at pressures of 3.4 MPa (500 psi) or greater;	
b. Pipe valves having all of the following characteristics that are not controlled by 2B350.g of Annex I of the Dual-Use Regulation; b.1. A pipe size connection of 200 mm (8 in.) or more inside diameter; and b.2. Rated at 10.3 MPa (1,500 psi) or more.	
2A993 Pumps designed to move molten metals by electromagnetic forces.	
2A994 Portable electric generators, weighing 2300 kg or less on wheels or transportable in a 2½ ton truck without a special set up requirement and specially designed components thereof.	
2A999 Specific processing equipment as follows:	
a. Bellows sealed valves;	
TECHNICAL NOTES FOR 2B991 TO 2B999:	
1. Secondary parallel contouring axes, (e.g., the w-axis on horizontal boring mills or a secondary rotary axis the centre line of which is parallel to the primary rotary axis) are not counted in the total number of contouring axes. Rotary axes need not rotate over 360°. A rotary axis can be driven by a linear device (e.g., a screw or a rack-and-pinion).	
2. The number of axes which can be coordinated simultaneously for "contouring control" is the number of axes along or around which, during processing of the workpiece, simultaneous and interrelated motions are performed between the	

Item	*Regulation 53A applies?*
workpiece and a tool. This does not include any additional axes along or around which other relative motions within the machine are performed, such as:	
2.a. Wheel-dressing systems in grinding machines;	Yes
2.b. Parallel rotary axes designed for mounting of separate workpieces;	
2.c. Co-linear rotary axes designed for manipulating the same workpiece by holding it in a chuck from different ends.	
3. Axis nomenclature shall be in accordance with International Standard ISO 841:2001, Industrial automation systems and integration - Numerical control of machines - Coordinate system and motion nomenclature.	Yes
4. A "tilting spindle" is counted as a rotary axis.	Yes
5. 'Stated "unidirectional positioning repeatability"' may be used for each specific machine model as an alternative to individual machine tests, and is determined as follows:	Yes
5.a. Select five machines of a model to be evaluated;	Yes
5.b. Measure the linear axis repeatability (R↑,R↓) according to ISO 230-2:2014 and evaluate "unidirectional positioning repeatability" for each axis of each of the five machines;	Yes
5.c. Determine the arithmetic mean value of the "unidirectional positioning repeatability"-values for each axis of all five machines together. These arithmetic mean values "unidirectional positioning repeatability" ( ) become the stated value of each axis for the model...)(x, y, ...);	Yes
5.d. Since the Category 2 list refers to each linear axis there will be as many 'stated "unidirectional positioning repeatability"' values as there are linear axes;	Yes
5.e. If any axis of a machine model not controlled by 2B001.a. to 2B001.c. has a 'stated "unidirectional positioning repeatability"' equal to or less than the specified "unidirectional positioning repeatability" of each machine tool model plus 0.7 µm, the builder should be required to reaffirm the accuracy level once every eighteen months.	Yes
6. For the purpose of 2B, measurement uncertainty for the "unidirectional positioning repeatability" of machine tools, as defined in the International Standard ISO 230-2:2014, shall not be considered.	Yes
7. For the purpose of 2B, the measurement of axes shall be made according to test procedures in 5.3.2. of ISO 230-2:2014. Tests for axes longer than 2 meters shall be made over 2 m segments. Axes longer than 4 m require multiple tests (e.g., two tests for axes longer than 4 m and up to 8 m, three tests for axes longer than 8 m and up to 12 m), each over 2 m segments and distributed in equal intervals over the axis length. Test segments are equally spaced along the full axis length, with any excess length equally divided at the beginning, in between, and at the end of the test segments. The smallest "unidirectional positioning repeatability"-value of all test segments is to be reported.	Yes
2B991 Numerical control units for machine tools and "numerically controlled" machine tools as follows:	

Item	*Regulation 53A applies?*
a. Numerical control units for machine tools:	
a.1. Having four interpolating axes that can be coordinated simultaneously for "contouring control"; or	
a.2. Having two or more axes that can be coordinated simultaneously for contouring control and a minimum programmable increment better (less) than 0.001 mm;	
a.3. "Numerical control" units for machine tools having two, three or four interpolating axes that can be coordinated simultaneously for contouring control and capable of receiving directly (online) and processing computer aided design (CAD) data for internal preparation of machine instructions; or	
b. Motion control boards specially designed for machine tools and having any of the following characteristics:	
b.1. Interpolation in more than four axes;	
b.2. Capable of "real-time processing" of data to modify tool path, feed rate and spindle data, during the machining operation, by any of the following:	
b.2.a. Automatic calculation and modification of part programme data for machining in two or more axes by means of measuring cycles and access to source data; or	
b.2.b. "Adaptive control" with more than one physical variable measured and processed by means of a computing model (strategy) to change one or more machining instructions to optimise the process.	
b.3. Capable of receiving and processing CAD data for internal preparation of machine instructions; or	
c. "Numerically controlled" machine tools that, according to the manufacturer's technical specifications, can be equipped with electronic devices for simultaneous "contouring control" in two or more axes and that have both of the following characteristics:	
c.1. Two or more axes that can be coordinated simultaneously for contouring control; and	
c.2. Positioning accuracies according to ISO 230/2 (2006), with all compensations available:	
c.2.a. Better than 15 mm along any linear axis (overall positioning) for grinding machines;	
c.2.b. Better than 15 mm along any linear axis (overall positioning) for milling machines; or	
c.2.c. Better than 15 mm along any linear axis (overall positioning) for turning machines; or	
d. Machine tools, as follows, for removing or cutting metals, ceramics or composites, that, according to the manufacturer's technical specifications, can be equipped with electronic devices for simultaneous "contouring control" in two or more axes:	

Item	*Regulation 53A applies?*
d.1. Machine tools for turning, grinding, milling or any combination thereof, having two or more axes that can be coordinated simultaneously for "contouring control" and having any of the following characteristics:	
d.1.a. One or more contouring tilting spindles; *Note: 2B991.d.1.a. applies to machine tools for grinding or milling only.*	
d.1.b. Camming (axial displacement) in one revolution of the spindle less (better) than 0.0006 mm total indicator reading (TIR); *Note: 2B991.d.1.b. applies to machine tools for turning only.*	
d.1.c. Run out (out of true running) in one revolution of the spindle less (better) than 0.0006 mm total indicator reading (TIR);	
d.1.d. The positioning accuracies with all compensations available, are less (better) than: 0.001° on any rotary axis;	
d.2. Electrical discharge machines (EDM) of the wire feed type that have five or more axes that can be coordinated simultaneously for "contouring control".	Yes
2B992 Non "numerically controlled" machine tools for generating optical quality surfaces as follows and specially designed components therefor.	
a. Turning machines using a single point cutting tool and having all of the following characteristics:	
a.1. Slide positioning accuracy less (better) than 0.0005 mm per 300 mm of travel;	
a.2. Bidirectional slide positioning repeatability less (better) than 0.00025 mm per 300 mm of travel;	
a.3. Spindle "run out" and "camming" less (better) than 0.0004 mm total indicator reading (TIR);	
a.4. Angular deviation of the slide movement (yaw, pitch and roll) less (better) than 2 seconds of arc, TIR, over full travel; and	
a.5. Slide perpendicularity less (better) than 0.001 mm per 300 mm of travel; *Technical Note: The bidirectional slide positioning repeatability (R) of an axis is the maximum value of the repeatability of positioning at any position along or around the axis determined using the procedure and under the conditions specified in Part 2.11 of ISO 230/2: 1988.* b. Fly cutting machines having all of the following characteristics:	
b.1. Spindle "run out" and "camming" less (better) than 0.0004 mm TIR; and	
b.2. Angular deviation of slide movement (yaw, pitch and roll) less (better) than 2 seconds of arc, TIR, over full travel.	
2B993 Gearmaking and/or finishing machinery capable of producing gears to a quality level of better than AGMA 11.	Yes
2B996 Dimensional inspection or measuring systems or equipment as follows.	

Item	*Regulation 53A applies?*
a. Manual dimensional inspection machines, having both of the following characteristics: a.1. Two or more axes; and a.2. A measurement uncertainty equal to or less (better) than (3 + L/300) micrometre in any axes (L measured length in mm).	
2B997 “Robots” that are capable of employing feedback information in real-time processing from one or more sensors to generate or modify “programs” or to generate or modify numerical program data.	
2B998 Assemblies, circuit boards or inserts as follows specially designed for machine tools controlled by 2B991, or for equipment controlled by 2B993, 2B996 or 2B997.	Yes
a. Spindle assemblies, consisting of spindles and bearings as a minimal assembly, with radial (“run out”) or axial (“camming”) axis motion in one revolution of the spindle less (better) than 0.0006 mm total indicator reading (TIR);	
b. Single point diamond cutting tool inserts, having all of the following characteristics: b.1. Flawless and chip free cutting edge when magnified 400 times in any direction; b.2. Cutting radius from 0.1 to 5 mm inclusive; and b.3. Cutting radius out of roundness less (better) than 0.002 mm TIR.	
c. Specially designed printed circuit boards with mounted parts or components capable of upgrading, according to the manufacturer’s specifications, “numerical control” units, machine tools or feed-back devices to or above the levels specified in 2B991, 2B993, 2B996, 2B997, or 2B998.	Yes
2B999 Specific processing equipment, as follows:	
a. Isostatic presses;	
b. Bellows manufacturing equipment, including hydraulic forming equipment and bellows forming dies;	
c. Laser welding machines;	
d. MIG welders;	
e. E-beam welders;	
f. Monel equipment, including valves, piping, tanks and vessels;	
g. 304 and 316 stainless steel valves, piping, tanks and vessels; *Note: Fittings are considered part of “piping” for purposes of 2B999.g.*	
h. Mining and drilling equipment, as follows:	

Item	*Regulation 53A applies?*
h.1. Large boring equipment capable of drilling holes greater than 60cm in diameter;	
h.2. Large earth-moving equipment used in the mining industry;	
i. Electroplating equipment designed for coating parts with nickel or aluminium;	
j. Pumps designed for industrial service and for "use" with an electrical motor of 5 HP or greater;	
k. Vacuum valves, piping, flanges, gaskets and related equipment specially designed for use in high-vacuum service;	
l. Spin forming and flow forming machines;	
m. Centrifugal multiplane balancing machines;	
n. Austenitic stainless-steel plate, valves, piping, tanks and vessels. 2D983 "Software" specially designed or modified for the "development", "production" or "use" of equipment controlled by 2A983.	
2D984 "Software" required for the "development", "production" or "use" of concealed object detection equipment controlled by 2A984.	Yes
2D991 "Software" specially designed for the "development", "production" or "use" of equipment controlled by 2B991, 2B993, or 2B996, 2B997, and 2B998.	Yes
2D992 Specific "software", as follows (see List of Items Controlled).	
a.1. For flexible manufacturing units (FMUs) which consist at least of	
(1) A machine tool described in 2B001.c. of Annex I of the Dual-Use Regulation; and	
(2) A dimensional inspection machine described in Category 2 of Annex I of the Dual-Use Regulation, or another digitally controlled measuring machine controlled by an entry in Category 2 of Annex I of the Dual-Use Regulation; and	Yes
a.2. Capable of generating or modifying, in "real-time processing", programs or data by using the signals obtained simultaneously by means of at least two detection techniques, such as:	Yes
a.2.a. Machine vision (optical ranging);	Yes
a.2.b. Infrared imaging;	Yes
a.2.c. Acoustical imaging (acoustical ranging);	Yes
a.2.d. Tactile measurement;	Yes
a.2.e. Inertial positioning;	Yes
a.2.f. Force measurement; and	Yes
a.2.g. Torque measurement.	Yes
Note: 2D992.a. does not control "software" which only provides rescheduling of functionally identical equipment within "flexible manufacturing units" using prestored part programs and a prestored strategy for the distribution of the part programs.	

Item	*Regulation 53A applies?*
2D993 "Software" specially designed or modified for the "development", "production" or "use" of items controlled by 2A992 or 2A993.	
2D994 "Software" specially designed for the "development" or "production" of portable electric generators controlled by 2A994.	
2E984 "Technology" required for the "development", "production" or "use" of equipment controlled by 2A984 or required for the "development" of "software" controlled by 2D984.	Yes
2E991 "Technology" for the use of equipment controlled by 2B991, 2B993, 2B996, or 2B997.	
2E993 "Technology" according to the General Technology Note of Annex I of the Dual-Use Regulation for the "use" of equipment controlled by 2A992 or 2A993.	
2E994 "Technology" for the "use" of portable electric generators controlled by 2A994.]	

PART 2

Electronics

3A991 Electronic devices and components

a. "Microprocessor microcircuits", "microcomputer microcircuits", and microcontroller microcircuits having any of the following:

a.1. A performance speed of 5 GFLOPS or more and an arithmetic logic unit with an access width of 32 bit or more;

a.2. A clock frequency rate exceeding 25 MHz; or

a.3. More than one data or instruction bus or serial communication port that provides a direct external interconnection between parallel "microprocessor microcircuits" with a transfer rate of 2.5 Mbyte/s;

b. Storage integrated circuits, as follows:

b.1. Electrical erasable programmable read-only memories (EEPROMs) with a storage capacity;

b.1.a. Exceeding 16 Mbits per package for flash memory types; or

b.1.b. Exceeding either of the following limits for all other EEPROM types:

b.1.b.1. Exceeding 1 Mbit per package; or

b.1.b.2. Exceeding 256 kbit per package and a maximum access time of less than 80 ns;

c. Analog-to-digital converters having any of the following:

c.1. A resolution of 8 bit or more, but less than 12 bit, with an output rate greater than 200 million words per second;

c.2. A resolution of 12 bit with an output rate greater than 105 million words per second;

c.3. A resolution of more than 12 bit but equal to or less than 14 bit with an output rate greater than 10 million words per second; or

c.4. A resolution of more than 14 bit with an output rate greater than 2.5 million words per second;

d. Field programmable logic devices having a maximum number of single-ended digital input/outputs between 200 and 700;

e. Fast Fourier Transform (FFT) processors having a rated execution time for a 1,024 point complex FFT of less than 1 ms;

f. Custom integrated circuits for which either the function is unknown, or the control status of the equipment in which the integrated circuits will be used is unknown to the manufacturer, having any of the following:

f.1. More than 144 terminals; or

f.2. A typical "basic gate propagation delay time" of less than 0.4 ns;

g. Traveling-wave "vacuum electronic devices," pulsed or continuous wave, as follows:

g.1. Coupled cavity devices, or derivatives thereof;

g.2. Devices based on helix, folded waveguide, or serpentine waveguide circuits, or derivatives thereof, having either of the following:

g.2.a. An "instantaneous bandwidth" of half an octave or more; and

g.2.b. The product of the rated average output power (expressed in kW) and the maximum operating frequency (expressed in GHz) of more than 0.2; or

g.2.c. An "instantaneous bandwidth" of less than half an octave; and

g.2.d. The product of the rated average output power (expressed in kW) and the maximum operating frequency (expressed in GHz) of more than 0.4;

h. Flexible waveguides designed for use at frequencies exceeding 40 GHz;

i. Surface acoustic wave and surface skimming (shallow bulk) acoustic wave devices (i.e., "signal processing" devices employing elastic waves in materials), having either of the following:

i.1. A carrier frequency exceeding 1 GHz; or

i.2. A carrier frequency of 1 GHz or less; and

i.2.a. A frequency side-lobe rejection exceeding 55 dB;

i.2.b. A product of the maximum delay time and bandwidth (time in μs and bandwidth in MHz) of more than 100; or

i.2.c. A dispersive delay of more than 10 μs;

j. Cells as follows:

j.1. Primary cells having an energy density of 550 Wh/kg or less at 293 K (20ºC);

j.2. Secondary cells having an energy density of 350 Wh/kg or less at 293 K (20ºC);

Note:3A991.j does not control batteries, including single cell batteries.

Technical Notes:

1. For the purposes of 3A991.j energy density (Wh/kg) is calculated from the nominal voltage multiplied by the nominal capacity in ampere-hours divided by the mass in kilograms. If the nominal capacity is not stated, energy density is calculated from the nominal voltage squared then multiplied by the discharge duration in hours divided by the discharge load in Ohms and the mass in kilograms.

2. For the purposes of 3A991.j, a 'cell' is defined as an electrochemical device, which has positive and negative electrodes, and electrolyte, and is a source of electrical energy. It is the basic building block of a battery.

3. For the purposes of 3A991.j.1, a 'primary cell' is a 'cell' that is not designed to be charged by any other source.

4. For the purposes of 3A991.j.2, a 'secondary cell' is a 'cell' that is designed to be charged by an external electrical source.

k. "Superconductive" electromagnets or solenoids, specially designed to be fully charged or discharged in less than one minute, having all of the following:

Note: *3A991.k does not control "superconductive" electromagnets or solenoids specially designed for Magnetic Resonance Imaging (MRI) medical equipment.*

k.1. Maximum energy delivered during the discharge divided by the duration of the discharge of more than 500 kJ per minute;

k.2. Inner diameter of the current carrying windings of more than 250 mm; and

k.3. Rated for a magnetic induction of more than 8T or "overall current density" in the winding of more than 300 A/mm^2;

l. Circuits or systems designed for electromagnetic energy storage, containing components manufactured from "superconductive" materials specially designed for operation at temperatures below the "critical temperature" of at least one of their "superconductive" constituents, having all of the following:

l.1. Resonant operating frequencies exceeding 1 MHz;

l.2. A stored energy density of 1 MJ/m^3 or more; and

l.3. A discharge time of less than 1 ms;

m. Hydrogen/hydrogen-isotope thyratrons of ceramic-metal construction and rated for a peak current of 500 A or more;

n. Digital integrated circuits based on any compound semiconductor having an equivalent gate count of more than 300 (2 input gates);

o. "Space qualified" solar cells, cell-interconnect-coverglass (CIC) assemblies, solar panels, and solar arrays.

3A992 General purpose electronic equipment, as follows:

a. Electronic test equipment;

b. Digital instrumentation magnetic tape data recorders having any of the following;

b.1. A maximum digital interface transfer rate exceeding 60 Mbit/s and employing helical scan techniques;

b.2. A maximum digital interface transfer rate exceeding 120 Mbit/s and employing fixed head techniques; or

b.3. "Space qualified";

c. Equipment having a maximum digital interface transfer rate exceeding 60 Mbit/s and designed to convert digital video magnetic tape recorders for use as digital instrumentation data recorders;

d. Non-modular analogue oscilloscopes having a bandwidth of 1 GHz or greater;

e. Modular analogue oscilloscope systems having either of the following:

e.1. A mainframe with a bandwidth of 1 GHz or greater; or

e.2. Plug-in modules with an individual bandwidth of 4 GHz or greater;

f. Analogue sampling oscilloscopes for the analysis of recurring phenomena with an effective bandwidth greater than 4 GHz;

g. Digital oscilloscopes and transient recorders, using analogue-to-digital conversion techniques, capable of storing transients by sequentially sampling single-shot inputs at successive intervals of less than 1 ns (greater than 1 giga-sample per second), digitising to 8 bits or greater resolution and storing 256 or more samples.

Note: This entry controls the following components designed for analogue oscilloscopes:

1. Plug-in units;

2. External amplifiers;

3. Pre-amplifiers;

4. Sampling devices;

5. Cathode ray tubes.

3A999 Specific processing equipment as follows.

a. Frequency changers capable of operating in the frequency range from 300 up to 600 Hz;

b. Mass spectrometers;

c. All flash x-ray machines, and components of pulsed power systems designed therefor, including Marx generators, high power pulse shaping networks, high voltage capacitors, and triggers;

d. Pulse amplifiers;

e. Time delay generation or time interval measurement equipment, as follows:

e.1. Digital time delay generators having a resolution of 50 nanoseconds or less over time intervals of 1ms or greater; *or*

e.2. Multi-channel (three or more) or modular time interval meter and chronometry equipment having a resolution of 50 ns or less over time intervals of 1 ms or greater;

f. Chromatography and spectrometry analytical instruments

3B991 Equipment for the manufacture of electronic components and materials, and specially designed components therefor.

a. Equipment specially designed for the manufacture of electron tubes, optical elements and components controlled by entry 3A001 of Annex I of the Dual-Use Regulation, or entry 3A991;

b. Equipment for the manufacture of semiconductor devices, integrated circuits and "electronic assemblies", as follows, and systems incorporating or having the characteristics of such equipment:

***Note*:** *3B991.b also controls equipment used or modified for use in the manufacture of other devices, such as imaging devices, electro-optical devices, acoustic-wave devices.*

b.1. Equipment for the processing of materials for the manufacture of devices and components, as specified in the heading of 3B991.b, as follows:

***Note*:** *3B991 does not control quartz furnace tubes, furnace liners, paddles, boats (except specially designed caged boats), bubblers, cassettes or crucibles specially designed for the processing equipment*

b.1.a. Equipment specially designed for producing polycrystalline silicon and materials controlled by entry 3A001 of Annex I of the Dual-Use Regulation;

b.1.b. Equipment specially designed for purifying or processing III/V and II/VI semiconductor materials controlled by entries 3C001, 3C002, 3C003, 3C004, or 3C005 of Annex I of the Dual-Use Regulation except crystal pullers, for which see 3B991.b.1.c below;

b.1.c. Crystal pullers and furnaces, as follows:

***Note*:** *3B991.b.1.c does not control diffusion and oxidation furnaces.*

b.1.c.1. Annealing or recrystallising equipment other than constant temperature furnaces employing high rates of energy transfer capable of processing wafers at a rate exceeding 0.005 m^2 per minute;

b.1.c.2. "Stored program controlled" crystal pullers having any of the following:

b.1.c.2.a. Rechargeable without replacing the crucible container;

b.1.c.2.b. Capable of operation at pressures above 2.5 x 10^5 Pa; *or*

b.1.c.2.c. Capable of pulling crystals of a diameter exceeding 100 mm;

b.1.d. "Stored program controlled" equipment for epitaxial growth having any of the following:

b.1.d.1. Capable of producing silicon layer with a thickness uniform to less than ± 2.5% across a distance of 200 mm or more;

b.1.d.2. Capable of producing a layer of any material other than silicon with a thickness uniformity across the wafer of equal to or better than ± 3.5%; or

b.1.d.3. Capable of rotating individual wafers during processing;

b.1.e. Molecular beam epitaxial growth equipment;

b.1.f. Magnetically enhanced 'sputtering' equipment with specially designed integral load locks capable of transferring wafers in an isolated vacuum environment;

Note: 'Sputtering' is an overlay coating process wherein positively charged ions are accelerated by an electric field towards the surface of a target (coating material). The kinetic energy of the impacting ions is sufficient to cause target surface atoms to be released and deposited on the substrate. (Note: Triode, magnetron or radio frequency sputtering to increase adhesion of coating and rate of deposition are ordinary modifications of the process.)

b.1.g. Equipment specially designed for ion implantation, ion-enhanced or photo-enhanced diffusion, having any of the following:

b.1.g.1. Patterning capability;

b.1.g.2. Beam energy (accelerating voltage) exceeding 200 keV;

b.1.g.3 Optimised to operate at a beam energy (accelerating voltage) of less than 10 keV; *or*

b.1.g.4. Capable of high energy oxygen implant into a heated "substrate";

b.1.h. "Stored program controlled" equipment for selective removal (etching) by means of anisotropic dry methods (e.g., plasma), as follows:

b.1.h.1. 'Batch types' having either of the following:

b.1.h.1.a. End-point detection, other than optical emission spectroscopy types; *or*

b.1.h.1.b. Reactor operational (etching) pressure of 26.66 Pa or less;

b.1.h.2. 'Single wafer types' having any of the following:

b.1.h.2.a. End-point detection, other than optical emission spectroscopy types;

b.1.h.2.b. Reactor operational (etching) pressure of 26.66 Pa or less; *or*

b.1.h.2.c. Cassette-to-cassette and load locks wafer handling;

Notes: *1. 'Batch types' refers to machines not specially designed for production processing of single wafers. Such machines can process two or more wafers simultaneously*

with common process parameters, e.g., RF power, temperature, etch gas species, flow rates.

2. 'Single wafer types' refers to machines specially designed for production processing of single wafers. These machines may use automatic wafer handling techniques to load a single wafer into the equipment for processing. The definition includes equipment that can load and process several wafers but where the etching parameters, e.g., RF power or end point, can be independently determined for each individual wafer.

b.1.i. "Chemical vapor deposition" (CVD) equipment, e.g., plasma-enhanced CVD (PECVD) or photo-enhanced CVD, for semiconductor device manufacturing, having either of the following capabilities, for deposition of oxides, nitrides, metals or polysilicon:

b.1.i.1. "Chemical vapor deposition" equipment operating below 10^5 Pa; or

b.1.i.2. PECVD equipment operating either below 60 Pa (450 millitorr) or having automatic cassette-to-cassette and load lock wafer handling;

Note: *3B991.b.1.i does not control low pressure "chemical vapor deposition" (LPCVD) systems or reactive 'sputtering' equipment.*

b.1.j. Electron beam systems specially designed or modified for mask making or semiconductor device processing having any of the following:

b.1.j.1. Electrostatic beam deflection;

b.1.j.2. Shaped, non-Gaussian beam profile;

b.1.j.3. Digital-to-analogue conversion rate exceeding 3 MHz;

b.1.j.4. Digital-to-analogue conversion accuracy exceeding 12 bit; *or*

b.1.j.5. Target-to-beam position feedback control precision of 1 μm or finer;

Note: *3B991.b.1.j does not control electron beam deposition systems or general purpose scanning electron microscopes.*

b.1.k. Surface finishing equipment for the processing of semiconductor wafers as follows:

b.1.k.1. Specially designed equipment for backside processing of wafers thinner than 100 μm and the subsequent separation thereof; *or*

b.1.k.2. Specially designed equipment for achieving a surface roughness of the active surface of a processed wafer with a two-sigma value of 2 μm or less, total indicator reading (TIR);

Note*:3B991.b.1.k does not control single-side lapping and polishing equipment for wafer surface finishing.*

b.1.l. Interconnection equipment which includes common single or multiple vacuum chambers specially designed to permit the integration of any equipment controlled by 3B991 into a complete system;

b.1.m. "Stored program controlled" equipment using "lasers" for the repair or trimming of "monolithic integrated circuits" with either of the following:

b.1.m.1. Positioning accuracy less than ± 1 μm; or

b.1.m.2. Spot size (kerf width) less than 3 μm.

b.2. 'Masks', 'mask' "substrates," mask-making equipment and image transfer equipment for the manufacture of devices and components as specified in the heading of 3B991, as follows:

Note: *The term 'masks' or 'mask' refers to those used in electron beam lithography, X-ray lithography, and ultraviolet lithography, as well as the usual ultraviolet and visible photo-lithography.*

b.2.a. Finished masks, reticles and designs therefor, except:

b.2.a.1. Finished masks or reticles for the production of integrated circuits not controlled by entry 3A001 of Annex I of the Dual-Use Regulation; *or*

b.2.a.2. Masks or reticles, having both of the following:

b.2.a.2.a. Their design is based on geometries of 2.5 μm or more; and

b.2.a.2.b. The design does not include special features to alter the intended use by means of production equipment or "software";

b.2.b. Mask "substrates" as follows:

b.2.b.1. Hard surface (e.g., chromium, silicon, molybdenum) coated "substrates" (e.g., glass, quartz, sapphire) for the preparation of masks having dimensions exceeding 125 mm x 125 mm; *or*

b.2.b.2. "Substrates" specially designed for X-ray masks;

b.2.c. Equipment, other than general purpose computers, specially designed for computer aided design (CAD) of semiconductor devices or integrated circuits;

b.2.d. Equipment or machines, as follows, for mask or reticle fabrication:

Note*:3B991.b.2.d.1 and b.2.d.2 do not control mask fabrication equipment using photo-optical methods which was either commercially available before the 1st January, 1980, or has a performance no better than such equipment.*

b.2.d.1. Photo-optical step and repeat cameras capable of producing arrays larger than 100 mm x 100 mm, or capable of producing a single exposure larger than 6 mm x 6 mm in the image (i.e., focal) plane, or capable of producing line widths of less than 2.5 μm in the photoresist on the "substrate";

b.2.d.2. Mask or reticle fabrication equipment using ion or "laser" beam lithography capable of producing line widths of less than 2.5 μm; or

b.2.d.3. Equipment or holders for altering masks or reticles or adding pellicles to remove defects;

b.2.e. "Stored program controlled" equipment for the inspection of masks, reticles or pellicles with:

b.2.e.1. A resolution of 0.25 μm or finer; and

b.2.e.2. A precision of 0.75 μm or finer over a distance in one or two coordinates of 63.5 mm or more;

Note: *3B991.b.2.e does not control general purpose scanning electron microscopes except when specially designed and instrumented for automatic pattern inspection.*

b.2.f. Align and expose equipment for wafer production using photo-optical or X-ray methods, e.g., lithography equipment, including both projection image transfer equipment and step and repeat (direct step on wafer) or step and scan (scanner) equipment, capable of performing any of the following:

Note*:3B991.b.2.f does not control photo-optical contact and proximity mask align and expose equipment or contact image transfer equipment.*

b.2.f.1. Production of a pattern size of less than 2.5 μm;

b.2.f.2. Alignment with a precision finer than ± 0.25 μm (3 sigma);

b.2.f.3. Machine-to-machine overlay no better than ± 0.3 μm; or

b.2.f.4. A light source wavelength shorter than 400 nm;

b.2.g. Electron beam, ion beam or X-ray equipment for projection image transfer capable of producing patterns less than 2.5 μm;

Note*:For focused, deflected-beam systems (direct write systems), see 3B991.b.1.j or b.10.*

b.2.h. Equipment using "lasers" for direct write on wafers capable of producing patterns less than 2.5 μm.

b.3. Equipment for the assembly of integrated circuits, as follows:

b.3.a. "Stored program controlled" die bonders having all of the following:

b.3.a.1. Specially designed for "hybrid integrated circuits";

b.3.a.2. X-Y stage positioning travel exceeding 37.5 x 37.5 mm; *and*

b.3.a.3. Placement accuracy in the X-Y plane of finer than ± 10 μm;

b.3.b. "Stored program controlled" equipment for producing multiple bonds in a single operation (e.g., beam lead bonders, chip carrier bonders, tape bonders);

b.3.c. Semi-automatic or automatic hot cap sealers, in which the cap is heated locally to a higher temperature than the body of the package, specially designed for ceramic microcircuit packages controlled by entry

3A001 of Annex I of the Dual-Use Regulation and that have a throughput equal to or more than one package per minute.

b.4. Filters for clean rooms capable of providing an air environment of 10 or less particles of 0.3 μm or smaller per 0.02832 m^3 and filter materials therefor.

3B992 Equipment for the inspection or testing of electronic components and materials, and specially designed components therefor.

a. Equipment specially designed for the inspection or testing of electron tubes, optical elements and specially designed components therefor, controlled by entry 3A001 of Annex I of the Dual-Use Regulation or 3A991;

b. Equipment specially designed for the inspection or testing of semiconductor devices, integrated circuits and "electronic assemblies", as follows, and systems incorporating or having the characteristics of such equipment:

Note: *3B992.b also controls equipment used or modified for use in the inspection or testing of other devices, such as imaging devices, electro-optical devices, acoustic-wave devices.*

b.1. "Stored program controlled" inspection equipment for the automatic detection of defects, errors or contaminants of 0.6 μm or less in or on processed wafers, "substrates", other than printed circuit boards or integrated circuits, using optical image acquisition techniques for pattern comparison;

Note: *3B992.b.1 does not control general purpose scanning electron microscopes, except when specially designed and instrumented for automatic pattern inspection.*

b.2. Specially designed "stored program controlled" measuring and analysis equipment, as follows:

b.2.a. Specially designed for the measurement of oxygen or carbon content in semiconductor materials;

b.2.b. Equipment for line width measurement with a resolution of 1 μm or finer;

b.2.c. Specially designed flatness measurement instruments capable of measuring deviations from flatness of 10 μm or less with a resolution of 1 μm or finer.

b.3. "Stored program controlled" wafer probing equipment having any of the following:

b.3.a. Positioning accuracy finer than 3.5 μm;

b.3.b. Capable of testing devices having more than 68 terminals; *or*

b.3.c. Capable of testing at a frequency exceeding 1 GHz;

b.4. Test equipment as follows:

b.4.a. "Stored program controlled" equipment, specially designed for testing discrete semiconductor devices and unencapsulated dice, capable of testing at frequencies exceeding 18 GHz;

Technical Note: *Discrete semiconductor devices include photocells and solar cells.*

b.4.b. "Stored program controlled" equipment specially designed for testing integrated circuits and "electronic assemblies" thereof, capable of functional testing:

b.4.b.1. At a 'pattern rate' exceeding 20 MHz; *or*

b.4.b.2. At a 'pattern rate' exceeding 10 MHz but not exceeding 20 MHz and capable of testing packages of more than 68 terminals.

Notes: 3B992.b.4.b does not control test equipment specially designed for testing:

1. Memory;

2. "Electronic assemblies" for home and entertainment applications; and

3. Electronic components, and integrated circuits not controlled by entry 3A001 of Annex I of the Dual-Use Regulation or 3A991 provided such test equipment does not incorporate computing facilities with "user accessible programmability".

Technical Note: For purposes of 3B992.b.4.b, '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 non-multiplexed mode. It is also referred to as test speed, maximum digital frequency or maximum digital speed.

b.4.c. Equipment specially designed for determining the performance of focal-plane arrays at wavelengths of more than 1,200 nm, using "stored program controlled" measurements or computer aided evaluation and having any of the following:

b.4.c.1. Using scanning light spot diameters of less than 0.12 mm;

b.4.c.2. Designed for measuring photosensitive performance parameters and for evaluating frequency response, modulation transfer function, uniformity of responsivity or noise; *or*

b.4.c.3. Designed for evaluating arrays capable of creating images with more than 32 x 32 line elements;

b.5. Electron beam test systems designed for operation at 3 keV or below, or "laser" beam systems, for non-contact probing of powered-up semiconductor devices having any of the following:

b.5.a. Stroboscopic capability with either beam blanking or detector strobing;

b.5.b. An electron spectrometer for voltage measurements with a resolution of less than 0.5 V; *or*

b.5.c. Electrical tests fixtures for performance analysis of integrated circuits;

***Note*:** *3B992.b.5 does not control scanning electron microscopes, except when specially designed and instrumented for non-contact probing of a powered-up semiconductor device.*

b.6. "Stored program controlled" multifunctional focused ion beam systems specially designed for manufacturing, repairing, physical layout analysis and testing of masks or semiconductor devices and having either of the following:

b.6.a. Target-to-beam position feedback control precision of 1 μm or finer; *or*

b.6.b. Digital-to-analogue conversion accuracy exceeding 12 bit;

b.7. Particle measuring systems employing "lasers" designed for measuring particle size and concentration in air having both of the following:

b.7.a. Capable of measuring particle sizes of 0.2 μm or less at a flow rate of 0.02832 m^3 per minute or more; *and*

b.7.b. Capable of characterising Class 10 clean air or better.

3C992 Positive resists designed for semiconductor lithography specially adjusted (optimised) for use at wavelengths between 370 and 193 nm.
3D991 "Software" specially designed for the "development", "production", or "use" of electronic devices, or components controlled by entry 3A991 of Annex I of the Dual-Use Regulation, general purpose electronic equipment controlled by 3A992, or manufacturing and test equipment controlled by 3B991 and 3B992; or "software" specially designed for the "use" of equipment controlled by entry 3B001.g and h of Annex I of the Dual-Use Regulation.
3E991 "Technology" for the "development," "production" or "use" of electronic devices or components controlled by entry 3A991 of Annex I of the Dual-Use Regulation, general purpose electronic equipment controlled by 3A992, or manufacturing and test equipment controlled by 3B991 or 3B992, or materials controlled by 3C992.

PART 3

Computers

4A994 Computers, "electronic assemblies" and related equipment, and specially designed components therefor.

Note 1: The control status of the "digital computers" and related equipment described in 4A994 is determined by the control status of other equipment or systems provided:

a. The "digital computers" or related equipment are essential for the operation of the other equipment or systems;

b. The "digital computers" or related equipment are not a "principal element" of the other equipment or systems; and

N.b. 1: The control status of "signal processing" or "image enhancement" equipment specially designed for other equipment with functions limited to those required for the other equipment is determined by the control status of the other equipment even if it exceeds the "principal element" criterion.

N.b. 2: For the control status of "digital computers" or related equipment for telecommunications equipment, see Category 5, Part 1 (Telecommunications) of Annex I of the Dual-Use Regulation.

c. The "technology" for the "digital computers" and related equipment is determined by Category 4E of Annex I of the Dual-Use Regulation.

a. Electronic computers and related equipment, and "electronic assemblies" and specially designed components therefor, rated for operation at an ambient temperature above 343 K (70°C);

b. "Digital computers", including "signal processing" or "image enhancement" equipment, having an "Adjusted Peak Performance" ("APP") equal to or greater than 0.0128 Weighted TeraFLOPS (WT);

c. "Electronic assemblies" that are specially designed or modified to enhance performance by aggregation of processors, as follows:

c.1. Designed to be capable of aggregation in configurations of 16 or more processors;

c.2. Not used.

Note 1: 4A994.c applies only to "electronic assemblies" and programmable interconnections with a "APP" not exceeding the limits in 4A994.b, when shipped as unintegrated "electronic assemblies". It does not apply to "electronic assemblies" inherently limited by nature of their design for use as related equipment controlled by 4A994.k.

Note 2: 4A994.c does not control any "electronic assembly" specially designed for a product or family of products whose maximum configuration does not exceed the limits of 4A994.b.

d. Not used;

e. Not used;

f. Equipment for "signal processing" or "image enhancement" having an "Adjusted Peak Performance" ("APP") equal to or greater than 0.0128 Weighted TeraFLOPS WT;

g. Not used;

h. Not used;

i. Equipment containing "terminal interface equipment" exceeding the limits in 5A991;

j. Equipment specially designed to provide external interconnection of "digital computers" or associated equipment that allows communications at data rates exceeding 80 Mbyte/s;

Note:*4A994.j does not control internal interconnection equipment (e.g., backplanes, buses) passive interconnection equipment, "network access controllers" or "communication channel controllers".*

k. "Hybrid computers" and "electronic assemblies" and specially designed components therefor containing analogue-to-digital converters having all of the following:

k.1. 32 channels or more; and

k.2. A resolution of 14 bit (plus sign bit) or more with a conversion rate of 200,000 conversions/s or more.

4D993 "Program" proof and validation "software," "software" allowing the automatic generation of "source codes," and operating system "software" that are specially designed for "real-time processing" equipment.

a. "Program" proof and validation "software" using mathematical and analytical techniques and designed or modified for "programs" having more than 500,000 "source code" instructions;

b. "Software" allowing the automatic generation of "source codes" from data acquired on line from external sensors described in Annex I of the Dual-Use Regulation;

c. Operating system "software" specially designed for "real-time processing" equipment that guarantees a "global interrupt latency time" of less than 20 μs.

Note: "Global interrupt latency time" is the time taken by the computer system to recognise an interrupt due to the event, service the interrupt and perform a context switch to an alternate memory-resident task waiting on the interrupt.

4D994 Software" other than that controlled in entry 4D001 of Annex I of the Dual-Use Regulation specially designed or modified for the "development", "production", or "use" of equipment controlled by entry 4A101 of Annex I of the Dual-Use Regulation, or 4A994.
4E992 "Technology" for the "development," "production," or "use" of equipment controlled by 4A994, or "software" controlled by 4D993 or 4D994.
4E993 "Technology" for the "development" or "production" of equipment designed for "multi-data-stream processing."

PART 4

Telecommunications and information security

CHAPTER 1

Telecommunication equipment

5A991 Telecommunication equipment.

Note:

1. 'Asynchronous transfer mode' ('ATM') is a transfer mode in which the information is organised into cells; it is asynchronous in the sense that the recurrence of cells depends on the required or instantaneous bit rate.

2. 'Bandwidth of one voice channel' is data communication equipment designed to operate in one voice channel of 3,100 Hz, as defined in CCITT Recommendation G.151.

3. 'Communications channel controller' is the physical interface that controls the flow of synchronous or asynchronous digital information. It is an assembly that can be integrated into computer or telecommunications equipment to provide communications access.

4. 'Datagram' is a self-contained, independent entity of data carrying sufficient information to be routed from the source to the destination data terminal equipment without reliance on earlier exchanges between this source and destination data terminal equipment and the transporting network.

5. 'Gateway' is the function, realised by any combination of equipment and "software", to carry out the conversion of conventions for representing, processing or communicating information used on one system into the corresponding, but different conventions used in another system.

6. 'Packet' is a group of binary digits including data and call control signals that is switched as a composite whole. The data, call control signals, and possible error control information are arranged in a specified format.

a. Any type of telecommunications equipment, not controlled by 5A001.a, specially designed to operate outside the temperature range from 219 K (-54 °C) to 397 K (124 °C).

b. Telecommunication transmission equipment and systems, and specially designed components therefor, having any of the following characteristics, functions or features:

a. Categorised as follows, or combinations thereof:

1. Radio equipment (e.g., transmitters, receivers and transceivers);

2. Line terminating equipment;

3. Intermediate amplifier equipment;

4. Repeater equipment;

5. Regenerator equipment;

6. Translation encoders (transcoders);

7. Multiplex equipment (statistical mutiplex included);

8. Modulators/demodulators (modems);

9. Transmultiplex equipment (see CCITT Rec. G701);

10. "Stored program controlled" digital cross-connection equipment;

11. 'Gateways' and bridges;

12. "Media access units"; and

b. Designed for use in single or multi-channel communication via any of the following:

1. Wire (line);

2. Coaxial cable;

3. Optical fibre cable;

4. Electromagnetic radiation; or

5. Underwater acoustic wave propagation.

b.1. Employing digital techniques, including digital processing of analogue signals, and designed to operate at a "digital transfer rate" at the highest multiplex level exceeding 45 Mbit/s or a "total digital transfer rate" exceeding 90 Mbit/s;

Note: 5A991.b.1 does not control equipment specially designed to be integrated and operated in any satellite system for civil use.

b.2. Modems using the 'bandwidth of one voice channel' with a "data signalling rate" exceeding 9,600 bits per second;

b.3. Being "stored program controlled" digital cross-connect equipment with "digital transfer rate" exceeding 8.5 Mbit/s per port.

b.4. Being equipment containing any of the following:

b.4.a. 'Network access controllers' and their related common medium having a "digital transfer rate" exceeding 33 Mbit/s; *or*

b.4.b. "Communication channel controllers" with a digital output having a "data signalling rate" exceeding 64,000 bit/s per channel;

Note: If any uncontrolled equipment contains a "network access controller", it cannot have any type of telecommunications interface, except those described in, but not controlled by 5A991.b.4.

b.5. Employing a "laser" and having any of the following:

b.5.a. A transmission wavelength exceeding 1,000 nm; *or*

b.5.b. Employing analogue techniques and having a bandwidth exceeding 45 MHz;

Note: *5A991.b.5.b does not control commercial TV systems.*

b.5.c. Employing coherent optical transmission or coherent optical detection techniques (also called optical heterodyne or homodyne techniques);

b.5.d. Employing wavelength division multiplexing techniques; or

b.5.e. Performing optical amplification;

b.6. Radio equipment operating at input or output frequencies exceeding:

b.6.a. 31 GHz for satellite-earth station applications; or

b.6.b. 26.5 GHz for other applications;

Note: *5A991.b.6. does not control equipment for civil use when conforming with an International Telecommunications Union (ITU) allocated band between 26.5 GHz and 31 GHz.*

b.7. Being radio equipment employing any of the following:

b.7.a. Quadrature-amplitude-modulation (QAM) techniques above level 4 if the "total digital transfer rate" exceeds 8.5 Mbit/s;

b.7.b. QAM techniques above level 16 if the "total digital transfer rate" is equal to or less than 8.5 Mbit/s;

b.7.c. Other digital modulation techniques and having a "spectral efficiency" exceeding 3 bit/s/Hz; or

b.7.d. Operating in the 1.5 MHz to 87.5 MHz band and incorporating adaptive techniques providing more than 15 dB suppression of an interfering signal.

Notes:

1. 5A991.b.7 does not control equipment specially designed to be integrated and operated in any satellite system for civil use.

2. 5A991.b.7 does not control radio relay equipment for operation in an ITU allocated band:

a. Having any of the following:

a.1. Not exceeding 960 MHz; or

a.2. With a "total digital transfer rate" not exceeding 8.5 Mbit/s; and

b. Having a "spectral efficiency" not exceeding 4 bit/s/Hz.

c. "Stored program controlled" switching equipment and related signalling systems, having any of the following characteristics, functions or features, and specially designed components therefor:

Note: Statistical multiplexers with digital input and digital output which provide switching are treated as "stored program controlled" switches.

c.1. Data (message) switching equipment or systems designed for "packet-mode operation" and electronic assemblies and components therefor,

c.2. Not used;

c.3. Routing or switching of 'datagram' packets;

Note: The restrictions in 5A991.c.3 do not apply to networks restricted to using only 'network access controllers' or to 'network access controllers' themselves.

c.4. Not used.

c.5. Multi-level priority and pre-emption for circuit switching;

Note: 5A991.c.5 does not control single-level call pre-emption.

c.6. Designed for automatic hand-off of cellular radio calls to other cellular switches or automatic connection to a centralised subscriber data base common to more than one switch;

c.7. Containing "stored program controlled" digital cross connect equipment with "digital transfer rate" exceeding 8.5 Mbit/s per port.

c.8. "Common channel signalling" operating in either non-associated or quasi-associated mode of operation;

c.9. "Dynamic adaptive routing";

c.10. Being packet switches, circuit switches and routers with ports or lines exceeding any of the following:

c.10.a. A "data signalling rate" of 64,000 bit/s per channel for a 'communications channel controller'; or

Note: 5A991.c.10.a does not control multiplex composite links composed only of communication channels not individually controlled by 5A991.b.1.

c.10.b. A "digital transfer rate" of 33 Mbit/s for a 'network access controller' and related common media;

Note: 5A991.c.10 does not control packet switches or routers with ports or lines not exceeding the limits in 5A991.c.10.

c.11. "Optical switching";

c.12. Employing 'Asynchronous Transfer Mode' ('ATM') techniques;

d. Optical fibres and optical fibre cables of more than 50 m in length designed for single mode operation;

e. Centralised network control having all of the following:

e.1. Receives data from the nodes; and

e.2. Process these data in order to provide control of traffic not requiring operator decisions, and thereby performing "dynamic adaptive routing";

Note: 5A991.e does not preclude control of traffic as a function of predictable statistical traffic conditions.

f. Phased array antennas, operating above 10.5 GHz, containing active elements and distributed components, and designed to permit electronic control of beam shaping and pointing, except for landing systems with instruments meeting International Civil Aviation Organisation (ICAO) standards (microwave landing systems (MLS));

g. Mobile communications equipment and electronic assemblies and components therefor;

h. Radio relay communications equipment designed for use at frequencies equal to or exceeding 19.7 GHz and components therefor.

5B991 Telecommunications test equipment.

5C991 Preforms of glass or of any other material optimised for the manufacture of optical fibres controlled by 5A991.

5D991 "Software" specially designed or modified for the "development," "production" or "use" of equipment controlled by 5A991 and 5B991, and dynamic adaptive routing software, as follows:

a. "Software", other than in machine-executable form, specially designed for "dynamic adaptive routing";

b. Not used.

5E991 "Technology" for the "development", "production" or "use" of equipment controlled by 5A991 or 5B991, or "software" controlled by 5D991, and other "technologies" as follows:

Note:

1. 'Synchronous digital hierarchy' (SDH) is a digital hierarchy providing a means to manage, multiplex, and access various forms of digital traffic using a synchronous transmission format on different types of media. The format is based on the Synchronous Transport Module (STM) that is defined by CCITT Recommendation G.703, G.707, G.708, G.709 and others yet to be published. The first level rate of 'SDH' is 155.52 Mbits/s.

2. 'Synchronous optical network' (SONET) is a network providing a means to manage, multiplex and access various forms of digital traffic using a synchronous transmission format on fiber optics. The format is the North America version of 'SDH' and also uses the Synchronous Transport Module (STM). However, it uses the Synchronous Transport Signal (STS) as the basic transport module with a first level rate of 51.81 Mbits/s. The SONET standards are being integrated into those of 'SDH'.

a. Specific "technologies" as follows:

a.1. "Technology" for the processing and application of coatings to optical fibre specially designed to make it suitable for underwater use;

a.2. "Technology" for the "development" of equipment employing 'Synchronous Digital Hierarchy' ('SDH') or 'Synchronous Optical Network' ('SONET') techniques.

CHAPTER 2

Information security

5A992 "Information security" systems, equipment and components, described by entry 5A002 of Annex I of the Dual-Use Regulation and classified under Note 3 to Category 5, Part 2 of Annex I of the Dual-Use Regulation (Cryptography Note).
5D992 "Information Security" "software" described by entry 5D002 to Category 5, Part 2 in Annex I of the Dual-Use Regulation and classified under Note 3 to Category 5, Part 2 of Annex I of the Dual-Use Regulation (Cryptography Note).

Note: This entry does not control "software" designed or modified to protect against malicious computer damage, e.g., viruses, where the use of "cryptography" is limited to authentication, digital signature and/or the decryption of data or files.

5E992 "Information Security" "technology" as follows:

a. "Technology" for the "use" of items controlled by 5A992 or "software" controlled by 5D992.

PART 5

Sensors and lasers

6A991 Marine or terrestrial acoustic equipment capable of detecting or locating underwater objects or features or positioning surface vessels or underwater vehicles; and specially designed components therefor.
6A992 Optical Sensors as follows

a. Image intensifier tubes and specially designed components therefor, as follows:

a.1. Image intensifier tubes having all the following:

a.1.a. A peak response in wavelength range exceeding 400 nm, but not exceeding 1,050 nm;

a.1.b. A microchannel plate for electron image amplification with a hole pitch (centre-to-centre spacing) of less than 25 μm; *and*

a.1.c. Having any of the following:

a.1.c.1. An S-20, S-25 or multialkali photocathode; *or*

a.1.c.2. A GaAs or GaInAs photocathode;

a.2. Specially designed microchannel plates having both of the following:

a.2.a. 15,000 or more hollow tubes per plate; *and*

a.2.b. Hole pitch (centre-to-centre spacing) of less than 25 μm.

b. Direct view imaging equipment operating in the visible or infrared spectrum, incorporating image intensifier tubes having the characteristics listed in 6A992.a.1.

6A993 Cameras as follows:

a. Cameras that meet the criteria of Note 3 to entry 6A003.b.4. of Annex I of the Dual-Use Regulation.

6A994 Optics as follows:

a. Optical filters:

a.1. For wavelengths longer than 250 nm, comprised of multi-layer optical coatings and having either of the following:

a.1.a. Bandwidths equal to or less than 1 nm Full Width Half Intensity (FWHI) and peak transmission of 90% or more; or

a.1.b. Bandwidths equal to or less than 0.1 nm FWHI and peak transmission of 50% or more;

Note: *6A994 does not control optical filters with fixed air gaps or Lyot -type filters.*

a.2. For wavelengths longer than 250 nm, and having all of the following:

a.2.a. Tunable over a spectral range of 500 nm or more;

a.2.b. Instantaneous optical bandpass of 1.25 nm or less;

a.2.c. Wavelength resettable within 0.1 ms to an accuracy of 1 nm or better within the tunable spectral range; and

a.2.d. A single peak transmission of 91% or more;

a.3. Optical opacity switches (filters) with a field of view of 30 degrees or wider and a response time equal to or less than 1 ns;

b. “Fluoride fibre” cable, or optical fibres therefor, having an attenuation of less than 4 dB/km in the wavelength range exceeding 1,000 nm but not exceeding 3,000 nm.

6A995 “Lasers” as follows:

a. Carbon dioxide (CO_2) “lasers” having any of the following:

a.1. A CW output power exceeding 10 kW;

a.2. A pulsed output with a “pulse duration” exceeding 10 μs; and

a.2.a. An average output power exceeding 10 kW; or

a.2.b. A pulsed “peak power” exceeding 100 kW; or

a.3. A pulsed output with a “pulse duration” equal to or less than 10 μs; *and*

a.3.a. A pulse energy exceeding 5 J per pulse and “peak power” exceeding 2.5 kW; *or*

a.3.b. An average output power exceeding 2.5 kW;

b. Semiconductor lasers, as follows

b.1. Individual, single-transverse mode semiconductor “lasers” having:

b.1.a. An average output power exceeding 100 mW; *or*

b.1.b. A wavelength exceeding 1,050 nm;

b.2. Individual, multiple-transverse mode semiconductor “lasers”, or arrays of individual semiconductor “lasers”, having a wavelength exceeding 1,050 nm;

c. Ruby “lasers” having an output energy exceeding 20 J per pulse;

d. Non-"tunable" "pulsed lasers" having an output wavelength exceeding 975 nm but not exceeding 1,150 nm and having any of the following:

d.1. A "pulse duration" equal to or exceeding

1 ns but not exceeding 1 μs, and having any of the following:

d.1.a. A single transverse mode output and having any of the following:

d.1.a.1. A 'wall-plug efficiency' exceeding 12% and an "average output power" exceeding 10 W and capable of operating at a pulse repetition frequency greater than 1kHz; *or*

d.1.a.2. An "average output power" exceeding 20 W; or

d.1.b. A multiple transverse mode output and having any of the following:

d.1.b.1. A 'wall-plug efficiency' exceeding 18% and an "average output power" exceeding 30W;

d.1.b.2. A "peak power" exceeding 200 MW; or

d.1.b.3. An "average output power" exceeding 50 W; or

d.2. A "pulse duration" exceeding 1 μs and having any of the following:

d.2.a. A single transverse mode output and having any of the following:

d.2.a.1. A 'wall-plug efficiency' exceeding 12% and an "average output power" exceeding 10 W and capable of operating at a pulse repetition frequency greater than 1 kHz; or

d.2.a.2. An "average output power" exceeding 20 W; or

d.2.b. A multiple transverse mode output and having any of the following:

d.2.b.1. A 'wall-plug efficiency' exceeding 18% and an "average output power" exceeding 30 W; or

d.2.b.2. An "average output power" exceeding 500 W;

e. Non-"tunable" continuous wave "(CW) lasers", having an output wavelength exceeding 975 nm but not exceeding 1,150nm and having any of the following:

e.1. A single transverse mode output and having any of the following:

e.1.a. A 'wall-plug efficiency' exceeding 12% and an "average output power" exceeding 10 W and capable of operating at a pulse repetition frequency greater than 1 kHz; or

e.1.b. An "average output power" exceeding 50 W; or

e.2. A multiple transverse mode output and having any of the following:

e.2.a. A 'wall-plug efficiency' exceeding 18% and an "average output power" exceeding 30 W; or

e.2.b. An "average output power" exceeding 500 W;

Note: *6A995.e.2.b does not control multiple transverse mode, industrial "lasers" with output power less than or equal to 2kW with a total mass greater than 1,200kg. For the purpose of this note, total mass includes all components required to operate the "laser," e.g., "laser," power supply,*

heat exchanger, but excludes external optics for beam conditioning and/or delivery.

f. Non-"tunable" "lasers", having a wavelength exceeding 1,400 nm, but not exceeding 1555 nm *and* having any of the following:

f.1. An output energy exceeding 100 mJ per pulse and a pulsed "peak power" exceeding 1 W; or

f.2. An average or CW output power exceeding 1 W;

g. Free electron "lasers".

6A996 "Magnetometers", "Superconductive" electromagnetic sensors, and specially designed components therefor, as follows

a. "Magnetometers", having a 'sensitivity' lower (better) than 1.0 nT (rms) per square root Hz.

Technical Note: *For the purposes of 6A996, 'sensitivity' (noise level) is the root mean square of the device -limited noise floor which is the lowest signal that can be measured*.

b. "Superconductive" electromagnetic sensors and components manufactured from "superconductive" materials, having all of the following:

b.1. Designed for operation at temperatures below the "critical temperature" of at least one of their "superconductive" constituents (including Josephson effect devices or "superconductive" quantum interference devices (SQUIDS));

b.2. Designed for sensing electromagnetic field variations at frequencies of 1 KHz or less; *and*

b.3. Having any of the following:

b.3.a. Incorporating thin-film SQUIDS with a minimum feature size of less than 2 μm and with associated input and output coupling circuits;

b.3.b. Designed to operate with a magnetic field slew rate exceeding 1 x 10^6 magnetic flux quanta per second;

b.3.c. Designed to function without magnetic shielding in the earth's ambient magnetic field; *or*

b.3.d. Having a temperature coefficient less (smaller) than 0.1 magnetic flux quantum/K.

6A997 Gravity meters (gravimeters) for ground use as follows:

a. Having a static accuracy of less (better) than 100 microgal; *or*

b. Being of the quartz element (Worden) type.

6A998 Radar systems, equipment and specially designed components therefor, as follows:

a. Airborne radar equipment and specially designed components therefor.

b. "Space-qualified" "laser" radar or Light Detection and Ranging (LIDAR) equipment specially designed for surveying or for meteorological observation.

c. Millimetre wave enhanced vision radar imaging systems specially designed for rotary wing aircraft and having all of the following:

c.1. Operates at a frequency of 94 GHz;

c.2. An average output power of less than 20 mW;

c.3. Radar beam width of 1 degree; and

c.4. Operating range equal to or greater than 1500 m.

6A999 Specific processing equipment, as follows:

a. Seismic detection equipment not controlled in paragraph c.

b. Radiation hardened TV cameras,

c. Seismic intrusion detection systems that detect, classify and determine the bearing on the source of a detected signal.

6B995 Equipment, including tools, dies, fixtures or gauges, and other specially designed components therefor, specially designed or modified for any of the following:

a. For the manufacture or inspection of:

a.1. Free electron "laser" magnet wigglers;

a.2. Free electron "laser" photo injectors;

b. For the adjustment, to required tolerances, of the longitudinal magnetic field of free electron "lasers".

6C992 Optical sensing fibres that are modified structurally to have a 'beat length' of less than 500 mm (high birefringence) or optical sensor materials not described in entry 6C002.b. of Annex I of the Dual-Use Regulation and having a zinc content of equal to or more than 6% by 'mole fraction.'

Note: 'Mole fraction' is defined as the ratio of moles of ZnTe to the sum of the moles of CdTe and ZnTe present in the crystal. 2) 'Beat length' is the distance over which two orthogonally polarised signals, initially in phase, must pass in order to achieve a 2 Pi radian(s) phase difference.

6C994 Optical materials.

a. Low optical absorption materials, as follows:

a.1. Bulk fluoride compounds containing ingredients with a purity of 99.999% or better; *or*

Note: *6C994.a.1 controls fluorides of zirconium or aluminium and variants.*

a.2. Bulk fluoride glass made from compounds controlled by entry 6C004.e.1 of Annex I of the Dual-Use Regulation;

b. 'Optical fibre preforms' made from bulk fluoride compounds containing ingredients with a purity of 99.999% or better, specially designed for the manufacture of "fluoride fibres" controlled by 6A994.b.

6D991 "Software," specially designed for the "development", "production", or "use" of items controlled by entries 6A002 and 6A003 of Annex I of the Dual-Use Regulation, 6A991, 6A996, 6A997, or 6A998.

6D992 "Software" specially designed for the "development" or "production" of equipment controlled by 6A992, 6A994, or 6A995.

6D993 Other "software".

a. Air Traffic Control (ATC) "software" application "programs" hosted on general purpose computers located at Air Traffic Control centres, and capable of automatically handing over primary radar target data (if not correlated with secondary surveillance radar (SSR) data) from the host ATC centre to another ATC centre.

b. "Software" specially designed for seismic intrusion detection systems in 6A999.c.

c. "Source Code" specially designed for seismic intrusion detection systems in 6A999.c.

6E991 "Technology" for the "development", "production" or "use" of equipment controlled by 6A991, 6A996, 6A997, 6A998 or 6A99.c.

6E992 "Technology" for the "development" or "production" of equipment, materials or "software" controlled by 6A992, 6A994, or 6A995, 6B995, 6C992, 6C994, or 6D993.

6E993 Other "technology" as follows.

a. Optical fabrication technologies for serially producing optical components at a rate exceeding 10 m2 of surface area per year on any single spindle and having all of the following:

a.1. Area exceeding 1 m2, and

a.2. Surface figure exceeding λ/10 (rms) at the designed wavelength;

b. "Technology" for optical filters with a bandwidth equal to or less than 10 nm, a field of view (FOV) exceeding 40° and a resolution exceeding 0.75 line pairs per milliradian;

c. "Technology" for the "development" or "production" of cameras controlled by 6A993;

d. "Technology" "required" for the "development" or "production" of non-triaxial fluxgate "magnetometers" or non-triaxial fluxgate "magnetometer" systems, having any of the following:

d.1. 'Sensitivity' lower (better) than 0.05 nT (rms) per square root Hz at frequencies of less than 1 Hz; or

d.2. 'Sensitivity' lower (better) than 1 x 10-3 nT (rms) per square root Hz at frequencies of 1 Hz or more;

e. "Technology" "required" for the "development" or "production" of infrared up-conversion devices having all of the following:

e.1. A response in the wavelength range exceeding 700 nm but not exceeding 1500 nm; and

e.2. A combination of an infrared photodetector, light emitting diode (LED), and nanocrystal to convert infrared light into visible light.

Technical Note: For the purposes of entry 6E993, 'sensitivity' (or noise level) is the root mean square of the device-limited noise floor which is the lowest signal that can be measured.

PART 6

Navigation and avionics

7A994 Navigation direction finding equipment, airborne communication equipment, all aircraft inertial navigation systems, and other avionic equipment, including components,

7B994 Other equipment for the test, inspection, or "production" of navigation and avionics equipment.

7D994 "Software" for the "development", "production", or "use" of navigation, airborne communication and other avionics.

7E994 "Technology" for the "development," "production" or "use" of navigation, airborne communication, and other avionics equipment.

PART 7

Marine

8A992 Vessels, marine systems or equipment, and specially designed components therefor, and marine boilers and components therefor.

a. Underwater vision systems, as follows:

a.1. Television systems (comprising camera, lights, monitoring and signal transmission equipment) having a limiting resolution when measured in air of more than 500 lines and specially designed or modified for remote operation with a submersible vehicle; *or*

a.2. Underwater television cameras having a limiting resolution when measured in air of more than 700 lines;

Technical Note: Limiting resolution in television is a measure of horizontal resolution usually expressed in terms of the maximum number of lines per picture height discriminated on a test chart, using IEEE Standard 208/1960 or any equivalent standard.

b. Photographic still cameras specially designed or modified for underwater use, having a film format of 35 mm or larger, and having autofocusing or remote focusing specially designed for underwater use;

c. Stroboscopic light systems, specially designed or modified for underwater use, capable of a light output energy of more than 300 J per flash;

d. Other underwater camera equipment;

e. Other submersible systems;

f. Vessels, including inflatable boats, and specially designed components therefor, ;

g. Marine engines (both inboard and outboard), and specially designed components therefor, ;

h. Other self-contained underwater breathing apparatus (scuba gear) and related equipment, ;

i. Life jackets, inflation cartridges, compasses, wetsuits, masks, fins, weight belts, and dive computers;

j. Underwater lights and propulsion equipment;

k. Air compressors and filtration systems, specially designed for filling air cylinders.

l. Marine boilers designed to have any of the following:

l.1. Heat release rate (at maximum rating) equal to or in excess of 190,000 BTU per hour per cubic foot of furnace volume; *or*

l.2. Ratio of steam generated in kg per hour (at maximum rating) to the dry weight of the boiler in kg equal to or in excess of 0.83.

m. Components for marine boilers described in 8A992.l.

8D992 “Software” specially designed or modified for the “development”, “production” or “use” of equipment controlled by 8A992.

8D999 “Software” specially designed for the operation of unmanned submersible vehicles.

8E992 “Technology” for the “development”, “production” or “use” of equipment controlled by 8A992.

[F4maritime goods and maritime technology within the meaning in regulation 21 (interpretation of Part 5).]

Textual Amendments

F4 Words in Sch. 2A Pt. 7 inserted (15.7.2022) by The Russia (Sanctions) (EU Exit) (Amendment) (No. 11) Regulations 2022 (S.I. 2022/792), regs. 1(2), **12(4)** (with reg. 13)

PART 8

Aerospace and Propulsion

9A990 Diesel engines and tractor units, and specially designed components therefor.

a. Diesel engines for trucks, tractor units, and automotive applications of continuous power output of 400 BHP (298 kW) or greater (performance based on Society of Automotive Engineers J1349 standard conditions of 100 kPa and 25°C);

b. Off-road semi-trailer wheeled tractor units of carriage capacity 9 t or more and specially designed components therefor;

c. On-road semi-trailer tractor units, with single or tandem rear axles rated for 9 t per axel or greater and specially designed components therefor.

9A991 "Aircraft" and gas turbine engines and components

a. Not used;

[F5b. Not used**]**;

c. Aero gas turbine engines and specially designed components therefor;

[F6d. Not used**]**;

e. Pressurised aircraft breathing equipment and specially designed components therefor.

F7

...

9B990 Vibration test equipment and specially designed components therefor.

9B991 "Equipment," tooling or fixtures specially designed for manufacturing or measuring gas turbine blades, vanes or tip shroud castings, as follows:

a. Automated equipment using non-mechanical methods for measuring aerofoil wall thickness;

b. Tooling, fixtures or measuring equipment for the "laser", water jet or ECM/EDM hole drilling processes controlled by entry 9E003.c of Annex I of the Dual-Use Regulation;

c. Ceramic core leaching equipment;

d. Ceramic core manufacturing equipment or tools;

e. Ceramic shell wax pattern preparation equipment;

f. Ceramic shell burn out or firing equipment.

9D990 "Software", for the "development" or "production" of equipment controlled by 9A990 or 9B990.

9D991 "Software", for the "development" or "production" of equipment controlled by 9A991 or 9B991.

9E990 "Technology", for the "development" or "production" or "use" of equipment controlled by 9A990 or 9B990.

9E991 "Technology", for the "development", "production" or "use" of equipment controlled by 9A991 or 9B991.
9E993 Other "technology", not described by entry 9E003 of Annex I of the Dual-Use Regulation, as follows:

a. Rotor blade tip clearance control systems employing active compensating casing "technology" limited to a design and development data base;

b. Gas bearing for turbine engine rotor assemblies.**]**

Textual Amendments

F5 Words in Sch. 2A Pt. 8 substituted (8.3.2022 at 5.00 p.m.) by The Russia (Sanctions) (EU Exit) (Amendment) (No. 6) Regulations 2022 (S.I. 2022/241), regs. 1(2), **14(a)(i)**

F6 Words in Sch. 2A Pt. 8 substituted (8.3.2022 at 5.00 p.m.) by The Russia (Sanctions) (EU Exit) (Amendment) (No. 6) Regulations 2022 (S.I. 2022/241), regs. 1(2), **14(a)(ii)**

F7 Words in Sch. 2A Pt. 8 omitted (8.3.2022 at 5.00 p.m.) by virtue of The Russia (Sanctions) (EU Exit) (Amendment) (No. 6) Regulations 2022 (S.I. 2022/241), regs. 1(2), **14(b)**

[F8Jet fuel and fuel additives

Any thing falling within a commodity code mentioned in column 1 of the following table.

Textual Amendments

F8 Words and Table in Sch. 2A Pt. 8 inserted (15.7.2022) by The Russia (Sanctions) (EU Exit) (Amendment) (No. 11) Regulations 2022 (S.I. 2022/792), reg. 1(2), **Sch. 2** (with reg. 13)

Commodity code (1)	*Item (2)*
	Jet fuel (other than kerosene):
2710 12 70	—spirit type jet fuel (light oils)
2710 19 29	—other than kerosene (medium oils)
2710 19 21	—kerosene type jet fuel (medium oils)
2710 20 90	—kerosene type jet fuel blended with biodiesel
	Oxidation inhibitors Oxidation inhibitors used in additives for lubricating oils:
3811 21 00	— oxidation inhibitors containing petroleum oils
3811 29 00	— other oxidation inhibitors
3811 90 00	Oxidation inhibitors used for other liquids used for the same purpose as mineral oils
	Static dissipater additives Static dissipater additives for lubricating oils:

Commodity code (1)	*Item (2)*
3811 21 00	— containing petroleum oils
3811 29 00	— other
3811 90 00	Static dissipater additives for other liquids used for the same purpose as mineral oils
	Corrosion inhibitors Corrosion inhibitors for lubricating oils:
3811 21 00	— containing petroleum oils
3811 29 00	— other
3811 90 00	Corrosion inhibitors for other liquids used for the same purpose as mineral oils
	Fuel system icing inhibitors (anti-icing additives) Fuel system icing inhibitors for lubricating oils:
3811 21 00	— containing petroleum oils
3811 29 00	— other
3811 90 00	Fuel system icing inhibitors for other liquids used for the same purpose as mineral oils
	Metal de-activators Metal de-activators for lubricating oils:
3811 21 00	—containing petroleum oils
3811 29 00	— other
3811 90 00	Metal de-activator for other liquids used for the same purpose as mineral oils
	Biocide additives Biocide additives for lubricating oils:
3811 21 00	— containing petroleum oils
3811 29 00	— other
3811 90 00	Biocide additives for other liquids used for the same purpose as mineral oils
	Thermal stability improver additives Thermal stability improver for lubricating oils:
3811 21 00	— containing petroleum oils
3811 29 00	— other

Commodity code (1)	*Item (2)*
3811 90 00	Thermal stability improver for other liquids used for the same purposes as mineral oils**]**

[F9SCHEDULE 2B

Regulation 60B

Consumer communication devices

Textual Amendments

F9 Sch. 2B inserted (1.3.2022) by The Russia (Sanctions) (EU Exit) (Amendment) (No. 3) Regulations 2022 (S.I. 2022/195), reg. 1(2), **Sch.** (with reg. 11)

1. In regulation 60B, "consumer communication device" means any of the following, of a type which is generally available to the public—

(a) computers falling within entries 5A992 and 4A994.b of Schedule 2A ;

(b) disk drives and solid-state storage equipment falling within entry 5A992 of Schedule 2A;

(c) input/output control units (other than industrial controllers designed for chemical processing);

(d) graphics accelerators and graphics coprocessors;

(e) monitors falling within entry 5A992 of Schedule 2A;

(f) printers falling within entry 5A992 of Schedule 2A;

(g) modems falling within entries 5A991.b.2, 5A991.b.4 or 5A992 of Schedule 2A;

(h) network access controllers and communications channel controllers falling within entry 5A991.b.4 of Schedule 2A;

(i) keyboards, mice and similar devices specified in entry 5A992 of Schedule 2A;

(j) mobile phones, including cellular and satellite telephones, personal digital assistants, and subscriber information module (SIM) cards and similar devices falling within entries 5A992 or 5A991 of Schedule 2A;

(k) memory devices falling within entry 5A992 of Schedule 2A;

(l) information security equipment, software (except encryption source code) and peripherals falling within entries 5A992 or 5D992 of Schedule 2A;

(m) digital cameras and memory cards falling within entry 6A993 or 5A992 of Schedule 2A;

(n) television and radio receivers falling within entry 5A992 of Schedule 2A;

(o) recording devices falling within entry 5A992 of Schedule 2A;

(p) batteries, chargers, carrying cases and accessories for the goods falling within paragraphs (a) to (o) above;

(q) software (except encryption source code) falling within entries 4D994, 5D991 and 5D992 of Schedule 2A, which is for use with equipment described in paragraphs (a) to (p) above.

2. For the purposes of paragraph 1, goods and technology are generally available to the public if they are —

(a) sold from stock at retail selling points without restriction, by means of—

(i) over the counter transactions,

(ii) mail order transactions,

(iii) electronic transactions, or

(iv) telephone order transactions, and

(b) designed for installation by the user without further substantial support by the supplier.**]**

[F10SCHEDULE 2C

Regulation 21

Aviation and space goods and technology

Textual Amendments

F10 Sch. 2C inserted (8.3.2022 at 5.00 p.m.) by The Russia (Sanctions) (EU Exit) (Amendment) (No. 6) Regulations 2022 (S.I. 2022/241), reg. 1(2), **Sch.**

PART 1

General

Interpretation

1. For the purposes of this Schedule, whether a thing "falls within chapter 88 of the Goods Classification Table" is to be interpreted in accordance with paragraph 1 of Schedule 3.

2. Terms printed in quotation marks and not defined in this Schedule have the meaning given to them in—

(a) Schedules 2 and 3 of the Export Control Order 2008, or

(b) Annex I of the Dual-Use Regulation,

as applicable.

PART 2

Aviation and space goods

3. Any thing falling within chapter 88 of the Goods Classification Table.

PART 3

Aviation and space technology

4. "Technology" for the "development", "production" or "use" of things falling within chapter 88 of the Goods Classification Table.

5. "Software" for the "development", "production" or "use" of things falling within chapter 88 of the Goods Classification Table.**]**

[F11SCHEDULE 2D

Regulation 21

Oil refining goods and technology

Textual Amendments

F11 Sch. 2D inserted (14.4.2022 at 5.00 p.m.) by The Russia (Sanctions) (EU Exit) (Amendment) (No. 8) Regulations 2022 (S.I. 2022/452), reg. 1(2), **Sch. Pt. 1**

PART 1

Interpretation

1.—(1) Paragraph 1 of Schedule 3 applies for the purposes of interpreting Part 2.

(2) Terms printed in quotation marks and not defined in this Schedule have the meaning given to them in—

(a) Schedules 2 and 3 to the Export Control Order 2008, or

(b) Annex I of the Dual-Use Regulation,

as applicable.

PART 2

Oil refining goods

2. Any thing falling within—

(a) a commodity code mentioned in column 1 of the following table, and

(b) the description in column 2 corresponding to that code.

Commodity code	*Description*
ex 8479 89 97 ex 8543 70 90	Alkylation and isomerization units
ex 8479 89 97 ex 8543 70 90	Aromatic hydrocarbon production units
ex 8419 40 00	Atmospheric-vacuum crude distillation units (CDU)
ex 8479 89 97 ex 8543 70 90	Catalytic reforming / cracker units
[F12 ex 8419 50 20, 8419 50 80	Cold boxes in the LNG-process]
[F12ex 8419 50 20 or 8419 50 80	Cryogenic exchangers in the LNG-process]

Commodity code	*Description*
[[F12]ex 8414 10 81	Cryogenic pumps in the LNG-process**]**
ex 8419 89 98 ex 8419 89 30 ex 8419 89 10	Delayed cokers
ex 8419 89 98 ex 8419 89 30 ex 8419 89 10	Flexicoking units
ex 8479 89 97	Hydrocracking reactors
ex 8419 89 98 ex 8419 89 30 ex 8419 89 10 ex 8479 89 97	Hydrocracking reactor vessels
ex 8479 89 97 ex 8543 70 90	Hydrogen generation equipment
ex 8421 39 15 ex 8421 39 25 ex 8421 39 35 ex 8421 39 85 ex 8479 89 97 ex 8543 70 90	Hydrogen recovery and purification equipment
ex 8479 89 97 ex 8543 70 90	Hydrotreatment equipment/units
ex 8479 89 97 ex 8543 70 90	Naphtha isomerisation units
ex 8479 89 97 ex 8543 70 90	Polymerisation units
[[F12]ex 8418 69 00	Process units for gas cooling in the LNG-process**]**
[[F12]ex 8418 60 00	Process units for the liquefaction of the natural gas**]**

Commodity code	*Description*
[F12ex 8419 40 00	Process units for the separation and fractionation of the hydrocarbons in the LNG-process]
ex 8419 89 10 ex 8419 89 30 ex 8419 89 98 ex 8479 89 97 ex 8543 70 90	Refinery fuel gas treatment and sulphur recovery equipment (including amine scrubbing units, sulphur recovery units, tail gas treatment units)
ex 8456 90 00 ex 8479 89 97 ex 8543 70 90	Solvent de-asphalting units
ex 8479 89 97 ex 8543 70 90	Sulphur production units
ex 8479 89 97 ex 8543 70 90	Sulphuric acid alkylation and sulphuric acid regeneration units
ex 8419 89 10 ex 8419 89 30 ex 8419 89 98 ex 8479 89 97 ex 8543 70 90	Thermal cracking units
ex 8479 89 97 ex 8543 70 90	Toluene and heavy aromatics: Transalkylation units
ex 8479 89 97 ex 8543 70 90	Visbreakers
ex 8479 89 97 ex 8543 70 90	Vacuum gas oil hydrocracking units

Textual Amendments

F12 Words in Sch. 2D para. 2 Table inserted (15.7.2022) by The Russia (Sanctions) (EU Exit) (Amendment) (No. 11) Regulations 2022 (S.I. 2022/792), regs. 1(2), **12(6)** (with reg. 13)

3. Catalysts used in the following processes for the refining of crude oil to produce petroleum products—

(a) fluid catalytic cracking;

(b) hydroprocessing, including hydrotreating and hydrocracking,

(c) alkylation;

(d) catalytic reforming.

Textual Amendments

F12 Words in Sch. 2D para. 2 Table inserted (15.7.2022) by The Russia (Sanctions) (EU Exit) (Amendment) (No. 11) Regulations 2022 (S.I. 2022/792), regs. 1(2), **12(6)** (with reg. 13)

Oil refining technology

4. "Software" for the "development", "production" or "use" of any thing falling within paragraphs 2 and 3.

5. "Technology" for the "development", "production" or "use" of any thing falling within paragraphs 2 to 4.**]**

[F13SCHEDULE 2E

Regulation 21

Quantum computing and advanced materials goods and technology PART 1

Textual Amendments

F13 Sch. 2E inserted (14.4.2022 at 5.00 p.m.) by The Russia (Sanctions) (EU Exit) (Amendment) (No. 8) Regulations 2022 (S.I. 2022/452), reg. 1(2), **Sch. Pt. 1**

Interpretation

1.—(1) Terms printed in quotation marks and not defined or interpreted in this Schedule have the meaning given to them in—

(a) Schedules 2 and 3 to the Export Control Order 2008, or

(b) Annex I of the Dual-Use Regulation,

as applicable.

(2) For the purposes of this Schedule, the interpretative notes in Part 2 apply.

PART 2

Quantum computing and advanced materials goods

2. Equipment, "electronic assemblies" and components, specially designed for "quantum computers", quantum electronics, quantum sensors, quantum processing units, qubit circuits, qubit devices or quantum radar systems.

Note 1: "Quantum computers" perform computations that harness the collective properties of quantum states, such as superposition, interference and entanglement.

Note 2: Units, circuits and devices include but are not limited to superconducting circuits, quantum annealing, ion trap, photonic interaction, silicon/spin and cold atoms.

3. "Cryogenic refrigeration systems" designed to maintain temperatures below 1.1 kelvin for 48 hours or more and related cryogenic refrigeration equipment and components as follows:

(a) pulse tubes;

(b) cryostats;

(c) dewars;

(d) gas handling systems (GHS);

(e) compressors;

(f) control units.

Note: "Cryogenic refrigeration systems" include but are not limited to dilution refrigeration, a diabatic demagnisation refrigerators and laser cooling systems.

4. Ultra-High vacuum ("UHV") equipment as follows—

(a) UHV pumps (sublimation, turbomolecular, diffusion, cryogenic, ion-getter);

(b) UHV pressure gauges.

Note: UHV means 100 nanoPascals (nPa) or lower

5. High quantum efficiency ("QE") photodetectors and sources with a QE greater than 80% in the wavelength range exceeding 300 nanometers but not exceeding 1700 nanometers.

6. Manufacturing equipment as follows—

(a) additive manufacturing equipment for the production of metal parts;

(b) additive manufacturing equipment for "energetic materials", including equipment using ultrasonic extrusion;

(c) vat photopolymerisation additive manufacturing equipment using stereo lithography (SLA) or direct light processing (DLP).

Note: Paragraph 6(a) only applies to the following systems—

(i) *i) powder-bed systems using selective laser melting (SLM), laser cladding, direct metal laser sintering (DMLS) or electron beam melting (ELB), or*

(ii) *powder-fed systems using laser cladding, direct energy deposition or laser metal deposition.*

7. Metal powders and metal alloy powders specially designed for the additive manufacturing equipment specified in paragraph 6(a).

8. Microscopes, related equipment and detectors, as follows—

(a) scanning electron microscopes (SEM);

(b) scanning auger microscopes;

(c) transmission electron microscopes (TEM);

(d) atomic force microscopes (AFM);

(e) scanning force microscopes (SFM);

(f) equipment and detectors specially designed for use with the microscopes specified in sub-paragraphs (a) to (e), employing any of the following—

(i) X-ray photo spectroscopy (XPS);

(ii) energy-dispersive X-ray spectroscopy (EDX, EDS);

(iii) electron back scatter detector (EBSD) systems;

(iv) electron spectroscopy for chemical analysis (ESCA).

9. "Decapsulation" equipment for semiconductor devices.

Note: "Decapsulation" means the removal of a cap, lid, or encapsulating material from a packaged integrated circuit by mechanical, thermal, or chemical methods.

Quantum computing and advanced materials technology

10. "Software" specially designed or modified for the "development", "production" or "use" of the systems, equipment and components specified in paragraphs 2 to 9.

11. "Software" for digital twins (DT) of additive manufactured products or for the determination of the reliability of additive manufactured products.

12. "Technology" "required" for the "development", "production" or "use" of the systems, equipment, components and software specified in paragraphs 2 to 11.**]**

SCHEDULE 3 Regulation 21

Energy-related goods and infrastructure-related goods

PART 1

General

Interpretation

1.—(1) For the purposes of this Schedule—

(a) a thing "falls within" a commodity code if it is, or would be, classified under that commodity code, as set out in the Goods Classification Table;

(b) a thing "falls within" a chapter if it is, or would be, classified under that chapter, as set out in the Goods Classification Table;

(c) where a commodity code or chapter is preceded by "ex", the goods specified in this Schedule constitute only a part of the scope of the commodity code or chapter and must fall within both the description given to that code or chapter in this Schedule and the scope of the code or chapter in the Goods Classification Table.

(2) For the purposes of determining whether or not a thing is, or would be, "classified" in accordance with sub-paragraph (1), the rules of interpretation contained in the following have effect—

(a) Part Two (Goods Classification Table Rules of Interpretation) of the Tariff of the United Kingdom;

(b) notes to a section or chapter of the Goods Classification Table.

(3) For the purposes of this paragraph—

"commodity code" includes a code denoting a heading or sub-heading;

"the Goods Classification Table" means the table so named in Annex # in Part Three of the Tariff of the United Kingdom;

"the Tariff of the United Kingdom" means the document containing the legal classification and import rate for products being imported into the United Kingdom, entitled "The Tariff of the United Kingdom", as revised or re-issued from time to time[M3]**[**[F14], including by any document published under regulations made under section 8(1) of the Taxation (Cross-border Trade) Act 2018 replacing the same in whole or in part**]**.

Textual Amendments

F14 Words in Sch. 3 para. 1(3) inserted (31.12.2020 immediately after IP completion day) by The Sanctions (EU Exit) (Miscellaneous Amendments) (No. 2) Regulations 2020 (S.I. 2020/590), regs. 1(2), **10(14)**; S.I. 2020/1514, reg. 4

Commencement Information

I26 Sch. 3 para. 1 in force at 31.12.2020 on IP completion day (in accordance with 2020 c. 1, **Sch. 5 para. 1(1)**), see reg. 1(2)

Marginal Citations

M3 The Tariff of the United Kingdom, Version 1.0, is available electronically from: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/785939/Tariff_Reference_Document_13_March_2019.pdf. A hard copy is available for inspection free of charge at the offices of HMRC at 100 Parliament Street, London, SW1A 2BQ.

PART 2

Energy-related goods

2. Any thing falling within the following commodity codes—

7304 11 00

7304 19 10

7304 19 30

7304 19 90

7304 22 00

7304 23 00

7304 29 10

7304 29 30

7304 29 90

7305 11 00

7305 12 00

7305 19 00

7305 20 00

7306 11

7306 19

7306 21 00

7306 29 00
8207 13 00
8207 19 10
8413 82 00
8413 92 00
8430 49 00
8705 20 00
8905 20 00
8905 90 10

Commencement Information

I27 Sch. 3 para. 2 in force at 31.12.2020 on IP completion day (in accordance with 2020 c. 1, **Sch. 5 para. 1(1)**), see reg. 1(2)

3. Any thing falling—

(a) within a commodity code mentioned in column 1 of the following table; and

(b) within the description in column 2 beside that code.

Code	Description
ex 8413 50	Reciprocating positive displacement pumps for liquids, power-driven with a maximum flow-rate greater than 18 m 3 /hour and a maximum outlet pressure greater than 40 bar, specially designed to pump drilling muds and/or cement into oil wells
ex 8413 60	Rotary positive displacement pumps for liquids, power-driven with a maximum flow-rate greater than 18 m 3 /hour and a maximum outlet pressure greater than 40 bar, specially designed to pump drilling muds and/or cement into oil wells
ex 8431 39 00	Parts suitable for use solely or principally with the oil field machinery of heading 8428
ex 8431 43 00	Parts suitable for use solely or principally with the oil field machinery of subheadings 8430 41 or 8430 49
ex 8431 49	Parts suitable for use solely or principally with the oil field machinery of heading 8426, 8429 and 8430

Commencement Information

I28 Sch. 3 para. 3 in force at 31.12.2020 on IP completion day (in accordance with 2020 c. 1, **Sch. 5 para. 1(1)**), see reg. 1(2)

[F15 3A. Any thing falling within the first column of the following table.

Item	*Regulation 53A applies?*
a. Oil and gas exploration data, e.g., seismic analysis data.	
b. Hydraulic fracturing items, as follows:	
b.1. Hydraulic fracturing design and analysis software and data.	
b.2. Hydraulic fracturing proppant, fracking fluid, and chemical additives therefor.	Yes
b.3. High pressure pumps.	Yes]

Textual Amendments

F15 Sch. 3 para. 3A inserted (15.7.2022) by The Russia (Sanctions) (EU Exit) (Amendment) (No. 11) Regulations 2022 (S.I. 2022/792), regs. 1(2), **12(7)** (with reg. 13)

PART 3

Infrastructure-related goods

4. Any thing falling within the following chapters—

(a) chapters 25 to 29;

(b) chapters 72 to 76;

(c) chapters 78 to 81;

(d) chapter 86;

(e) chapters 88 and 89; and

(f) chapter 98.

Commencement Information

I29 Sch. 3 para. 4 in force at 31.12.2020 on IP completion day (in accordance with 2020 c. 1, **Sch. 5 para. 1(1)**), see reg. 1(2)

5. Any thing falling within the following commodity codes—

3824

3826 00

8207 13 00

8207 19 10

8401 to 8418

8420 to 8432

8435 to 8437

8439 to 8443

8444 00

8445

8447

8448
8449 00 00
8450
8452 to 8468
8470 to 8484
8486
8487
8501 to 8505
8507
8511
8514
8515
8525 to 8548
8701
8702
8704
8705
8706 00
8709
8710 00 00
8716
7106 to 7112
9013 to 9015
9025 to 9033

Commencement Information

I30 Sch. 3 para. 5 in force at 31.12.2020 on IP completion day (in accordance with 2020 c. 1, **Sch. 5 para. 1(1)**), see reg. 1(2)

[F16SCHEDULE 3A

Regulation 21

Luxury goods

Textual Amendments

F16 Sch. 3A inserted (14.4.2022 at 5.00 p.m.) by The Russia (Sanctions) (EU Exit) (Amendment) (No. 8) Regulations 2022 (S.I. 2022/452), reg. 1(2), **Sch. Pt. 2**

PART 1

Interpretation

1.—(1) Paragraph 1 of Schedule 3 applies for the purposes of interpreting Part 2.

(2) In Part 2, "sales price" means the sales price of the item or quantity specified excluding value added taxes.

(3) For the purposes of this Schedule, where a sales price is specified per item, "item" is to be construed as the unit usually packaged for retail sale (where applicable), whether a singular good or a number of goods if packaged to be sold together.

PART 2

Luxury items

2. Horses, meaning any thing which falls within the commodity codes set out in the following table, provided that the sales price exceeds £250 per animal—

Commodity code	*Description*
0101 21 00	Pure-bred breeding animals
0101 29 90	Other

3. Caviar and caviar substitutes, meaning any thing which falls within the commodity codes set out in the following table, provided that the sales price exceeds £250 per 1.5kg, or equivalent per item—

Commodity code	*Description*
1604 31 00	Caviar
1604 32 00	Caviar substitutes

4. Truffles and preparations thereof falling within the commodity codes set out in the following table, provided that the sales price exceeds £250 per 1.5kg, or equivalent per item—

Commodity code	*Description*
0709 56 00	Truffles
0710 80 69	Other
0711 59 00	Other
0712 39 00	Other
2001 90 97	Other
2003 90 10	Truffles
2103 90 90	Other
2104 10 00	Soups and broths and preparations therefor
2104 20 00	Homogenised composite food preparations

Commodity code	*Description*
2106 00 00	Food preparations not elsewhere specified or included

5. Wines (including sparkling wines), beers, spirits and spirituous beverages, meaning any thing which falls within the commodity codes set out in the following table, provided that the sales price per item exceeds £250—

Commodity code	*Description*
2203 00 00	Beer made from malt
2204 10 11	Champagne
2204 10 91	Asti spumante
2204 10 93	Other
2204 10 94	With a protected geographical indication (PGI)
2204 10 96	Other varietal wines
2204 10 98	Other
2204 21 00	In containers holding 2 litres or less
2204 29 00	Other
2205 00 00	Vermouth and other wine of fresh grapes flavoured with plants or aromatic substances
2206 00 00	Other fermented beverages (for example, cider, perry, mead, saké); mixtures of fermented beverages and mixtures of fermented beverages with non-alcoholic beverages, not elsewhere specified or included
2207 10 00	Undenatured ethyl alcohol of an alcoholic strength by volume of 80 % vol or higher
2208 00 00	Undenatured ethyl alcohol of an alcoholic strength by volume of less than 80 % vol; spirits, liqueurs and other spirituous beverages

6. Cigars or cigarillos falling within the commodity codes set out in the table below, provided that the sales price per item exceeds £10—

Commodity code	*Description*
2402 10 00	Cigars, cheroots and cigarillos, containing tobacco
2402 90 00	Other

7. Perfumes, toilet waters and cosmetics, including beauty and make-up products, meaning any thing which falls within the following commodity codes, provided that the sales price exceeds the price corresponding to that code set out in the third column of the table—

Commodity code	*Description*	*Sales price*
3303	Perfumes and toilet waters	£250 per 6.25 litres
3304 00 00	Beauty or make-up preparations and preparations for the care of the skin (other than medicaments), including	£250 per item or 6.25 litres if liquid

Commodity code	*Description*	*Sales price*
	sunscreen or suntan preparations; manicure or pedicure preparations	
3305 00 00	Preparations for use on the hair	£250 per item or 6.25 litres if liquid
3307 00 00	Pre-shave, shaving or aftershave preparations, personal deodorants, bath preparations, depilatories and other perfumery, cosmetic or toilet preparations, not elsewhere specified or included; prepared room deodorisers, whether or not perfumed or having disinfectant properties	£250 per item or 6.25 litres if liquid
6704 00 00	Wigs, false beards, eyebrows and eyelashes, switches and the like, of human or animal hair or of textile materials; articles of human hair not elsewhere specified or included	£250 per item

8. Leather, saddlery, travel goods, handbags or similar articles, meaning any thing which falls within the commodity codes set out in the following table, provided that the sales price per item exceeds £250—

Commodity code	*Description*
4201 00 00	Saddlery and harness for any animal (including traces, leads, knee pads, muzzles, saddle-cloths, saddlebags, dog coats and the like), of any material
4202 00 00	Trunks, suitcases, vanity cases, executive-cases, briefcases, school satchels, spectacle cases, binocular cases, camera cases, musical instrument cases, gun cases, holsters and similar containers; travelling-bags, insulated food or beverages bags, toilet bags, rucksacks, handbags, shopping-bags, wallets, purses, map-cases, cigarette-cases, tobacco-pouches, tool bags, sports bags, bottle-cases, jewellery boxes, powder boxes, cutlery cases and similar containers, of leather or of composition leather, of sheeting of plastics, of textile materials, of vulcanised fibre or of paperboard, or wholly or mainly covered with such materials or with paper
4205 00 90	Other
9605 00 00	Travel sets for personal toilet, sewing or shoe or clothes cleaning

9. Garments, clothing, accessories or shoes, meaning any thing which falls within the following commodity codes or chapters, provided that the sales price per item exceeds £250 —

Commodity code	*Description*
4203 00 00	Articles of apparel and clothing accessories, of leather or of composition leather
4303 00 00	Articles of apparel, clothing accessories and other articles of furskin

Commodity code	*Description*
6101 00 00	Men's or boys' overcoats, car coats, capes, cloaks, anoraks (including ski jackets), windcheaters, wind-jackets and similar articles, knitted or crocheted, other than those of heading 6103
6102 00 00	Women's or girls' overcoats, car coats, capes, cloaks, anoraks (including ski jackets), windcheaters, wind-jackets and similar articles, knitted or crocheted, other than those of heading 6104
6103 00 00	Men's or boys suits, ensembles, jackets, blazers, trousers, bib and brace overalls, breeches and shorts (other than swimwear), knitted or crocheted
6104 00 00	Women's or girls' suits, ensembles, jackets, blazers, dresses, skirts, divided skirts, trousers, bib and brace overalls, breeches and shorts (other than swimwear), knitted or crocheted
6105 00 00	Men's or boys' shirts, knitted or crocheted
6106 00 00	Women's or girls' blouses, shirts and shirt-blouses, knitted or crocheted
6107 00 00	Men's or boys' underpants, briefs, nightshirts, pyjamas, bathrobes, dressing gowns and similar articles, knitted or crocheted
6108 00 00	Women's or girls' slips, petticoats, briefs, panties, nightdresses, pyjamas, négligés, bathrobes, dressing gowns and similar articles, knitted or crocheted
6109 00 00	T-shirts, singlets and other vests, knitted or crocheted
6110 00 00	Jerseys, pullovers, cardigans, waistcoats and similar articles, knitted or crocheted
6111 00 00	Babies' garments and clothing accessories, knitted or crocheted
6112 11 00	Of cotton
6112 12 00	Of synthetic fibres
6112 19 00	Of other textile materials
6112 20 00	Ski suits
6112 31 00	Of synthetic fibres
6112 39 00	Of other textile materials
6112 41 00	Of synthetic fibres
6112 49 00	Of other textile materials
6113 00 10	Of knitted or crocheted fabrics of heading 5906
6113 00 90	Other
6114 00 00	Other garments, knitted or crocheted
6115 00 00	Pantyhose, tights, stockings, socks and other hosiery, including graduated compression hosiery (for example, stockings for varicose veins) and footwear without applied soles, knitted or crocheted
6116 00 00	Gloves, mittens and mitts, knitted or crocheted

Commodity code	*Description*
6117 00 00	Other made-up clothing accessories, knitted or crocheted; knitted or crocheted parts of garments or of clothing accessories
6201 00 00	Men's or boys' overcoats, car coats, capes, cloaks, anoraks (including ski jackets), windcheaters, wind-jackets and similar articles, other than those of heading 6203
6202 00 00	Women's or girls overcoats, car coats, capes, cloaks, anoraks (including ski jackets), windcheaters, wind-jackets and similar articles, other than those of heading 6204
6203 00 00	Men's or boys' suits, ensembles, jackets, blazers, trousers, bib and brace overalls, breeches and shorts (other than swimwear)
6204 00 00	Women's or girls' suits, ensembles, jackets, blazers, dresses, skirts, divided skirts, trousers, bib and brace overalls, breeches and shorts (other than swimwear)
6205 00 00	Men's or boys' shirts
6206 00 00	Women's or girls' blouses, shirts and shirt-blouses
6207 00 00	Men's or boys singlets and other vests, underpants, briefs, nightshirts, pyjamas, bathrobes, dressing gowns and similar articles
6208 00 00	Women's or girls' singlets and other vests, slips, petticoats, briefs, panties, nightdresses, pyjamas, négligés, bathrobes, dressing gowns and similar articles
6209 00 00	Babies' garments and clothing accessories
6210 10 00	Of fabrics of heading 5602 or 5603
6210 20 00	Other garments, of the type described in subheadings 6201 11 to 6201 19
6210 30 00	Other garments, of the type described in subheadings 6202 11 to 6202 19
6210 40 00	Other men's or boys' garments
6210 50 00	Other women's or girls' garments
6211 11 00	Men's or boys'
6211 12 00	Women's or girls'
6211 20 00	Ski suits
6211 32 00	Of cotton
6211 33 00	Of man-made fibres
6211 39 00	Of other textile materials
6211 42 00	Of cotton
6211 43 00	Of man-made fibres
6211 49 00	Of other textile materials
6212 00 00	Brassières, girdles, corsets, braces, suspenders, garters and similar articles and parts thereof, whether or not knitted or crocheted
6213 00 00	Handkerchiefs

Commodity code	*Description*
6214 00 00	Shawls, scarves, mufflers, mantillas, veils and the like
6215 00 00	Ties, bow ties and cravats
6216 00 00	Gloves, mittens and mitts
6217 00 00	Other made-up clothing accessories; parts of garments or of clothing accessories, other than those of heading 6212
6401 00 00	Waterproof footwear with outer soles and uppers of rubber or of plastics, the uppers of which are neither fixed to the sole nor assembled by stitching, riveting, nailing, screwing, plugging or similar processes
6402 20 00	Footwear with upper straps or thongs assembled to the sole by means of plugs
6402 91 00	Covering the ankle
6402 99 00	Other
6403 19 00	Other
6403 20 00	Footwear with outer soles of leather, and uppers which consist of leather straps across the instep and around the big toe
6403 40 00	Other footwear, incorporating a protective metal toecap
6403 51 00	Covering the ankle
6403 59 00	Other
6403 91 00	Covering the ankle
6403 99 00	Other
6404 19 10	Slippers and other indoor footwear
6404 20 00	Footwear with outer soles of leather or composition leather
6405 00 00	Other footwear
6504 00 00	Hats and other headgear, plaited or made by assembling strips of any material, whether or not lined or trimmed
6505 00 10	Of fur felt or of felt of wool and fur, made from the hat bodies, hoods or plateaux of heading 6501 00 00
6505 00 30	Peaked caps
6505 00 90	Other
6506 99 00	Of other materials
6601 91 00	Having a telescopic shaft
6601 99 00	Other
6602 00 00	Walking sticks, seat-sticks, whips, riding-crops and the like
9619 00 81	Napkins and napkin liners for babies

10. Carpets, rugs and tapestries, hand-made or not, meaning any thing which falls within the commodity codes set out in the following table, provided that the sales price per item exceeds £250—

Commodity code	*Description*
5701 00 00	Carpets and other textile floor coverings, knotted, whether or not made up
5702 10 00	'Kelem', 'Schumacks', 'Karamanie' and similar hand-woven rugs
5702 20 00	Floor coverings of coconut fibres (coir)
5702 31 80	Other
5702 32 00	Of man-made textile materials
5702 39 00	Of other textile materials
5702 41 90	Other
5702 42 00	Of man-made textile materials
5702 50 00	Other, not of pile construction, not made up
5702 91 00	Of wool or fine animal hair
5702 92 00	Of man-made textile materials
5702 99 00	Of other textile materials
5703 00 00	Carpets and other textile floor coverings, tufted, whether or not made up
5704 00 00	Carpets and other textile floor coverings, of felt, not tufted or flocked, whether or not made up
5705 00 00	Other carpets and other textile floor coverings, whether or not made up
5805 00 00	Hand-woven tapestries of the type Gobelins, Flanders, Aubusson, Beauvais and the like, and needle-worked tapestries (for example, petit point, cross stitch), whether or not made up

11. Pearls, precious and semi-precious stones, articles of pearls, jewellery, gold- or silversmith articles falling within the commodity codes set out in the following table—

Commodity code	*Description*
7101 00 00	Pearls, natural or cultured, whether or not worked or graded but not strung, mounted or set; pearls, natural or cultured, temporarily strung for convenience of transport
7102 00 00	Diamonds, whether or not worked, but not mounted or set, excluding for industrial use
7103 00 00	Precious stones (other than diamonds) and semi-precious stones, whether or not worked or graded but not strung, mounted or set; ungraded precious stones (other than diamonds) and semi-precious stones, temporarily strung for convenience of transport
7104 91 00	Diamonds, excluding for industrial use
7105 00 00	Dust and powder of natural or synthetic precious or semi-precious stones
7106 00 00	Silver (including silver plated with gold or platinum), unwrought or in semi-manufactured forms, or in powder form
7107 00 00	Base metals clad with silver, not further worked than semi-manufactured
7108 00 00	Gold (including gold plated with platinum), unwrought or in semi-manufactured forms, or in powder form

Commodity code	*Description*
7109 00 00	Base metals or silver, clad with gold, not further worked than semi-manufactured
7110 11 00	Unwrought or in powder form
7110 19 00	Other
7110 21 00	Unwrought or in powder form
7110 29 00	Other
7110 31 00	Unwrought or in powder form
7110 39 00	Other
7110 41 00	Unwrought or in powder form
7110 49 00	Other
7111 00 00	Base metals, silver or gold, clad with platinum, not further worked than semi-manufactured
7113 00 00	Articles of jewellery and parts thereof, of precious metal or of metal clad with precious metal
7114 00 00	Articles of goldsmiths' or silversmiths' wares and parts thereof, of precious metal or of metal clad with precious metal
7115 00 00	Other articles of precious metal or of metal clad with precious metal
7116 00 00	Articles of natural or cultured pearls, precious or semi-precious stones (natural, synthetic or reconstructed)

12. Coins and banknotes, meaning any thing which falls within the commodity codes set out in the following table, provided that such items are not legal tender, —

Commodity code	*Description*
4907 00 30	Banknotes
7118 10 00	Coin (other than gold coin), not being legal tender
7118 90 00	Other

13. Any item of cutlery, bladed or edged instruments and tools falling within the commodity codes set out in the following table, provided such items are comprised of precious metal or plated or clad with precious metal —

Commodity code	*Description*
7114 00 00	Articles of goldsmiths' or silversmiths' wares and parts thereof, of precious metal or of metal clad with precious metal
7115 00 00	Other articles of precious metal or of metal clad with precious metal
8214 00 00	Other articles of cutlery (for example, hair clippers, butchers' or kitchen cleavers, choppers and mincing knives, paperknives); manicure or pedicure sets and instruments (including nail files)
8215 00 00	Spoons, forks, ladles, skimmers, cake-servers, fish-knives, butter-knives, sugar tongs and similar kitchen or tableware

Commodity code	*Description*
9307 00 00	Swords, cutlasses, bayonets, lances and similar arms and parts thereof and scabbards and sheaths therefor

14. Tableware of porcelain, china, stoneware or earthenware or fine pottery falling within within the commodity codes set out in the following table, provided that the sales price per item exceeds £250—

Commodity code	*Description*
6911 00 00	Tableware, kitchenware, other household articles and toilet articles, of porcelain or china
6912 00 23	Stoneware
6912 00 25	Earthenware or fine pottery
6912 00 83	Stoneware
6912 00 85	Earthenware or fine pottery
6914 10 00	Of porcelain or china
6914 90 00	Other

15. Items of lead crystal falling within the commodity codes set out in the following table, provided that the sales price per item exceeds £250—

Commodity code	*Description*
7009 91 00	Unframed
7009 92 00	Framed
7010 00 00	Carboys, bottles, flasks, jars, pots, phials, ampoules and other containers, of glass, of a kind used for the conveyance or packing of goods; preserving jars of glass; stoppers, lids and other closures, of glass
7013 22 00	Of lead crystal
7013 33 00	Of lead crystal
7013 41 00	Of lead crystal
7013 91 00	Of lead crystal
7018 10 00	Glass beads, imitation pearls, imitation precious or semi-precious stones and similar glass smallwares
7018 90 00	Other
7020 00 80	Other
9405 50 00	Non-electrical lamps and lighting fittings
9405 91 00	Of glass

16. Electronic items for domestic use, meaning any thing which falls within the commodity codes set out in the following table, provided that the sales price per item exceeds £630—

Commodity code	*Description*
8414 51	Table, floor, wall, window, ceiling or roof fans, with a self-contained electric motor of an output not exceeding 125 watts
8414 59 00	Other
8414 60 00	Hoods having a maximum horizontal side not exceeding 120 cm
8415 10 00	Window or wall types, self-contained or 'split-system'
8418 10 00	Combined refrigerator-freezers, fitted with separate external doors
8418 21 00	Compression-type
8418 29 00	Other
8418 30 00	Freezers of the chest type, not exceeding 800 litres capacity
8418 40 00	Freezers of the upright type, not exceeding 900 litres capacity
8419 81 00	For making hot drinks or for cooking or heating food
8422 11 00	Of the household type
8423 10 00	Personal weighing machines, including baby scales; household scales
8443 12 00	Offset printing machinery, sheet fed, office type (using sheets with one side not exceeding 22 cm and the other side not exceeding 36 cm in the unfolded state)
8443 31 00	Machines which perform two or more of the functions of printing, copying or facsimile transmission, capable of connecting to an automatic data-processing machine or to a network
8443 32 00	Other, capable of connecting to an automatic data-processing machine or to a network
8443 39 00	Other
8450 11 00	Fully-automatic machines
8450 12 00	Other machines, with built-in centrifugal drier
8450 19 00	Other
8451 21 00	Each of a dry linen capacity not exceeding 10 kg
8452 10 00	Sewing machines of the household type
8470 10 00	Electronic calculators capable of operation without an external source of electric power and pocket-size data-recording, reproducing and displaying machines with calculating functions
8470 21 00	Incorporating a printing device
8470 29 00	Other
8470 30 00	Other calculating machines
8471 00 00	Automatic data-processing machines and units thereof; magnetic or optical readers, machines for transcribing data onto data media in coded form and machines for processing such data, not elsewhere specified or included
8472 90 80	Other

Commodity code	*Description*
8479 60 00	Evaporative air coolers
8508 11 00	Of a power not exceeding 1,500 watts and having a dust bag or other receptacle capacity not exceeding 20 litres
8508 19 00	Other
8508 60 00	Other vacuum cleaners
8509 80 00	Other appliances
8516 31 00	Hairdryers
8516 50 00	Microwave ovens
8516 60 10	Cookers (incorporating at least an oven and a hob)
8516 71 00	Coffee or tea makers
8516 72 00	Toasters
8516 79 00	Other
8517 11 00	Line telephone sets with cordless handsets
8517 13 00	Smartphones
8517 18 00	Other
8517 61 00	Base stations
8517 62 00	Machines for the reception, conversion and transmission or regeneration of voice, images or other data, including switching and routing apparatus
8517 69 00	Other
8526 91 00	Radio navigational aid apparatus
8529 10 65	Inside aerials for radio or television broadcast receivers, including built-in types
8529 10 69	Other
8531 10 00	Burglar or fire alarms and similar apparatus
8543 70 10	Electrical machines with translation or dictionary functions
8543 70 30	Aerial amplifiers
8543 70 50	Sunbeds, sunlamps and similar suntanning equipment
8543 70 90	Other
9504 50 00	Video game consoles and machines, other than those of subheading 9504 30
9504 90 80	Other

17. Electrical/electronic or optical apparatus for recording and reproducing sound and images, meaning any thing which falls within the commodity codes set out in the following table, provided that the sales price per item exceeds £840—

Commodity code	*Description*
8519 00 00	Sound recording or sound reproducing apparatus
8521 00 00	Video recording or reproducing apparatus, whether or not incorporating a video tuner
8527 00 00	Reception apparatus for radio-broadcasting, whether or not combined, in the same housing, with sound recording or reproducing apparatus or a clock
8528 71 00	Not designed to incorporate a video display or screen
8528 72 00	Other, colour
9006 00 00	Photographic (other than cinematographic) cameras; photographic flashlight apparatus and flashbulbs other than discharge lamps of heading 8539
9007 00 00	Cinematographic cameras and projectors, whether or not incorporating sound recording or reproducing apparatus

18. Vehicles, except ambulances, for the transport of persons on earth, air or sea, teleferics, chairlifts, ski-draglines, traction mechanisms for funiculars and motorbikes, as well as their accessories and spare parts, meaning any thing which falls within the commodity codes set out in the following table, provided that the sales price exceeds—

(a) £42,000 per vehicle,

(b) £4,200 per teleferic, chairlift, ski-dragline, traction mechanism for funiculars or motorbike, or

(c) £420 per accessory or spare part,

as applicable—

Commodity code	*Description*
4011 10 00	Of a kind used on motor cars (including station wagons and racing cars)
4011 20 00	Of a kind used on buses or lorries
4011 30 00	Of a kind used on aircraft
4011 40 00	Of a kind used on motorcycles
4011 90 00	Other
7009 10 00	Rear-view mirrors for vehicles
8407 00 00	Spark-ignition reciprocating or rotary internal combustion piston engines
8408 00 00	Compression-ignition internal combustion piston engines (diesel or semi-diesel engines)
8409 00 00	Parts suitable for use solely or principally with the engines of heading 8407 or 8408
8411 00 00	Turbojets, turbopropellers and other gas turbines
8428 60 00	Teleferics, chairlifts, ski-draglines, traction mechanisms for funiculars
8431 39 00	Parts and acccessories of teleferics, chairlifts, ski-draglines, traction mechanisms for funiculars

Commodity code	*Description*
8483 00 00	Transmission shafts (including cam shafts and crank shafts) and cranks; bearing housings and plain shaft bearings; gears and gearing; ball or roller screws; gear boxes and other speed changers, including torque converters; flywheels and pulleys, including pulley blocks; clutches and shaft couplings (including universal joints)
8511 00 00	Electrical ignition or starting equipment of a kind used for spark-ignition or compression-ignition internal combustion engines (for example, ignition magnetos, magneto-dynamos, ignition coils, sparking plugs and glow plugs, starter motors); generators (for example, dynamos, alternators) and cut-outs of a kind used in conjunction with such engines
8512 20 00	Other lighting or visual signalling equipment
8512 30 10	Burglar alarms of a kind used for motor vehicles
8512 30 90	Other
8512 40 00	Windscreen wipers, defrosters and demisters
8544 30 00	Ignition wiring sets and other wiring sets of a kind used in vehicles, aircraft or ships
8603 00 00	Self-propelled railway or tramway coaches, vans and trucks, other than those of heading 8604
8605 00 00	Railway or tramway passenger coaches, not self-propelled; luggage vans, post office coaches and other special purpose railway or tramway coaches, not self-propelled (excluding those of heading 8604)
8607 00 00	Parts of railway or tramway locomotives or rolling stock
8702 00 00	Motor vehicles for the transport of ten or more persons, including the driver
8703 00 00	Motor cars and other motor vehicles principally designed for the transport of persons (other than those of heading 8702), including station wagons and racing cars, including snowmobiles
8706 00 00	Chassis fitted with engines, for the motor vehicles of headings 8701 to 8705
8707 00 00	Bodies (including cabs), for the motor vehicles of headings 8701 to 8705
8708 00 00	Parts and accessories of the motor vehicles of headings 8701 to 8705
8711 00 00	Motorcycles (including mopeds) and cycles fitted with an auxiliary motor, with or without side-cars; side-cars
8712 00 00	Bicycles and other cycles (including delivery tricycles), not motorised
8714 00 00	Parts and accessories of vehicles of headings 8711 to 8713
8716 10 00	Trailers and semi-trailers of the caravan type, for housing or camping
8716 40 00	Other trailers and semi-trailers
8716 90 00	Parts

Commodity code	*Description*
8901 10 00	Cruise ships, excursion boats and similar vessels principally designed for the transport of persons; ferry-boats of all kinds
8901 90 00	Other vessels for the transport of goods and other vessels for the transport of both persons and goods
8903 00 00	Yachts and other vessels for pleasure or sports; rowing boats and canoes

19. Clocks and watches and their parts, meaning any thing which falls within the commodity codes set out in the following table, provided that the sales price per item exceeds £250—

Commodity code	*Description*
9101 00 00	Wristwatches, pocket-watches and other watches, including stopwatches, with case of precious metal or of metal clad with precious metal
9102 00 00	Wristwatches, pocket-watches and other watches, including stopwatches, other than those of heading 9101
9103 00 00	Clocks with watch movements, excluding clocks of heading 9104
9104 00 00	Instrument panel clocks and clocks of a similar type for vehicles, aircraft, spacecraft or vessels
9105 00 00	Other clocks
9108 00 00	Watch movements, complete and assembled
9109 00 00	Clock movements, complete and assembled
9110 00 00	Complete watch or clock movements, unassembled or partly assembled (movement sets); incomplete watch or clock movements, assembled; rough watch or clock movements
9111 00 00	Watch cases and parts thereof
9112 00 00	Clock cases and cases of a similar type for other goods of this chapter, and parts thereof
9113 00 00	Watch straps, watch bands and watch bracelets, and parts thereof
9114 00 00	Other clock or watch parts

20. Musical instruments, meaning any thing which falls within the commodity codes set out in the following table, provided that the sales price per item exceeds £1260—

Commodity code	*Description*
9201 00 00	Pianos, including automatic pianos; harpsichords and other keyboard stringed instruments
9202 00 00	Other string musical instruments (for example, guitars, violins, harps)
9205 00 00	Wind musical instruments (for example, keyboard pipe organs, accordions, clarinets, trumpets, bagpipes), other than fairground organs and mechanical street organs

Commodity code	*Description*
9206 00 00	Percussion musical instruments (for example, drums, xylophones, cymbals, castanets, maracas)
9207 00 00	Musical instruments, the sound of which is produced, or must be amplified, electrically (for example, organs, guitars, accordions)

21. Works of art, collectors' pieces and antiques, meaning any thing which falls within chapter 97.

22. Articles and equipment for sports, including skiing, golf, diving and water sports, meaning any thing which falls within the commodity codes set out in the following table, provided that the sales price per item exceeds £250—

Commodity code	*Description*
4015 19 00	Other
4015 90 00	Other
6210 40 00	Other men's or boys' garments
6210 50 00	Other women's or girls' garments
6211 11 00	Men's or boys'
6211 12 00	Women's or girls'
6211 20 00	Ski suits
6216 00 00	Gloves, mittens and mitts
6402 12 00	Ski-boots, cross-country ski footwear and snowboard boots
6402 19 00	Other
6403 12 00	Ski-boots, cross-country ski footwear and snowboard boots
6403 19 00	Other
6404 11 00	Sports footwear; tennis shoes, basketball shoes, gym shoes, training shoes and the like
6404 19 90	Other
9004 90 00	Other
9020 00 00	Other breathing appliances and gas masks, excluding protective masks having neither mechanical parts nor replaceable filters
9506 11 00	Skis
9506 12 00	Ski-fastenings (ski-bindings)
9506 19 00	Other
9506 21 00	Sailboards
9506 29 00	Other
9506 31 00	Clubs, complete
9506 32 00	Golf balls
9506 39 00	Other

Commodity code	*Description*
9506 40 00	Articles and equipment for table tennis
9506 51 00	Lawn-tennis rackets, whether or not strung
9506 59 00	Other
9506 61 00	Lawn-tennis balls
9506 69 10	Cricket and polo balls
9506 69 90	Other
9506 70	Ice skates and roller skates, including skating boots with skates attached
9506 91	Articles and equipment for general physical exercise, gymnastics or athletics
9506 99 10	Cricket and polo equipment, other than balls
9506 99 90	Other
9507 00 00	Fishing rods, fish-hooks and other line fishing tackle; fish landing nets, butterfly nets and similar nets; decoy 'birds' (other than those of heading 9208 or 9705) and similar hunting or shooting requisites

23. Articles and equipment for billiards, automatic bowling, casino games and games operated by coins, banknotes, bank cards, tokens or by any other means of payment, video games consoles and amusement machines, meaning any thing which falls within the commodity codes set out in the following table, provided that the sales price per item exceeds £250—

Commodity code	*Description*
9504 20 00	Articles and accessories for billiards of all kinds
9504 30 00	Other games, operated by coins, banknotes, bank cards, tokens or by any other means of payment, other than automatic bowling alley equipment
9504 40 00	Playing cards
9504 30 00	Video game consoles and machines, other than those of subheading 9504 50
9504 90 80	Other**]**

[F17SCHEDULE 3B

Regulation 46C

Iron and steel products

Textual Amendments

F17 Sch. 3B inserted (14.4.2022 at 5.00 p.m.) by The Russia (Sanctions) (EU Exit) (Amendment) (No. 8) Regulations 2022 (S.I. 2022/452), reg. 1(2), **Sch. Pt. 2**

Part 1

Interpretation

1. Paragraph 1 of Schedule 3 applies for the purposes of interpreting Part 2.

PART 2

Specified products

2. Any thing falling within a commodity code mentioned in column 1 of the following table—

Commodity code	*Description*
7208 10 00	Non Alloy and Other Alloy Hot Rolled Sheets and Strips
7208 25 00	Non Alloy and Other Alloy Hot Rolled Sheets and Strips
7208 26 00	Non Alloy and Other Alloy Hot Rolled Sheets and Strips
7208 27 00	Non Alloy and Other Alloy Hot Rolled Sheets and Strips
7208 36 00	Non Alloy and Other Alloy Hot Rolled Sheets and Strips
7208 37 00	Non Alloy and Other Alloy Hot Rolled Sheets and Strips
7208 38 00	Non Alloy and Other Alloy Hot Rolled Sheets and Strips
7208 39 00	Non Alloy and Other Alloy Hot Rolled Sheets and Strips
7208 40 00	Non Alloy and Other Alloy Hot Rolled Sheets and Strips
7208 52 99	Non Alloy and Other Alloy Hot Rolled Sheets and Strips
7208 53 90	Non Alloy and Other Alloy Hot Rolled Sheets and Strips
7208 54 00	Non Alloy and Other Alloy Hot Rolled Sheets and Strips
7211 14 00	Non Alloy and Other Alloy Hot Rolled Sheets and Strips
7211 19 00	Non Alloy and Other Alloy Hot Rolled Sheets and Strips
7212 60 00	Non Alloy and Other Alloy Hot Rolled Sheets and Strips
7225 19 10	Non Alloy and Other Alloy Hot Rolled Sheets and Strips
7225 30 10	Non Alloy and Other Alloy Hot Rolled Sheets and Strips
7225 30 30	Non Alloy and Other Alloy Hot Rolled Sheets and Strips
7225 30 90	Non Alloy and Other Alloy Hot Rolled Sheets and Strips
7225 40 15	Non Alloy and Other Alloy Hot Rolled Sheets and Strips
7225 40 90	Non Alloy and Other Alloy Hot Rolled Sheets and Strips
7226 19 10	Non Alloy and Other Alloy Hot Rolled Sheets and Strips
7226 91 20	Non Alloy and Other Alloy Hot Rolled Sheets and Strips
7226 91 91	Non Alloy and Other Alloy Hot Rolled Sheets and Strips

(1) GOES means Grain Oriented Electrical Steel.**]**

Commodity code	*Description*
7226 91 99	Non Alloy and Other Alloy Hot Rolled Sheets and Strips
7209 15 00	Non Alloy and Other Alloy Cold Rolled Sheets
7209 16 90	Non Alloy and Other Alloy Cold Rolled Sheets
7209 17 90	Non Alloy and Other Alloy Cold Rolled Sheets
7209 18 91	Non Alloy and Other Alloy Cold Rolled Sheets
7209 25 00	Non Alloy and Other Alloy Cold Rolled Sheets
7209 26 90	Non Alloy and Other Alloy Cold Rolled Sheets
7209 27 90	Non Alloy and Other Alloy Cold Rolled Sheets
7209 28 90	Non Alloy and Other Alloy Cold Rolled Sheets
7209 90 20	Non Alloy and Other Alloy Cold Rolled Sheets
7209 90 80	Non Alloy and Other Alloy Cold Rolled Sheets
7211 23 20	Non Alloy and Other Alloy Cold Rolled Sheets
7211 23 30	Non Alloy and Other Alloy Cold Rolled Sheets
7211 23 80	Non Alloy and Other Alloy Cold Rolled Sheets
7211 29 00	Non Alloy and Other Alloy Cold Rolled Sheets
7211 90 20	Non Alloy and Other Alloy Cold Rolled Sheets
7211 90 80	Non Alloy and Other Alloy Cold Rolled Sheets
7225 50 20	Non Alloy and Other Alloy Cold Rolled Sheets
7225 50 80	Non Alloy and Other Alloy Cold Rolled Sheets
7226 20 00	Non Alloy and Other Alloy Cold Rolled Sheets
7226 92 00	Non Alloy and Other Alloy Cold Rolled Sheets
7209 16 10	Electrical Sheets (other than GOES)[(1)]
7209 17 10	Electrical Sheets (other than GOES)
7209 18 10	Electrical Sheets (other than GOES)
7209 26 10	Electrical Sheets (other than GOES)
7209 27 10	Electrical Sheets (other than GOES)
7209 28 10	Electrical Sheets (other than GOES)
7225 19 90	Electrical Sheets (other than GOES)
7226 19 80	Electrical Sheets (other than GOES)
7210 41 00 20	Metallic Coated Sheets
7210 41 00 30	Metallic Coated Sheets
7210 49 00 20	Metallic Coated Sheets
7210 49 00 30	Metallic Coated Sheets

(1) GOES means Grain Oriented Electrical Steel.**]**

Commodity code	*Description*
7210 61 00 20	Metallic Coated Sheets
7210 61 00 30	Metallic Coated Sheets
7210 69 00 20	Metallic Coated Sheets
7210 69 00 30	Metallic Coated Sheets
7212 30 00 20	Metallic Coated Sheets
7212 30 00 30	Metallic Coated Sheets
7212 50 61 20	Metallic Coated Sheets
7212 50 61 30	Metallic Coated Sheets
7212 50 69 20	Metallic Coated Sheets
7212 50 69 30	Metallic Coated Sheets
7225 92 00 20	Metallic Coated Sheets
7225 92 00 30	Metallic Coated Sheets
7225 99 00 11	Metallic Coated Sheets
7225 99 00 22	Metallic Coated Sheets
7225 99 00 23	Metallic Coated Sheets
7225 99 00 41	Metallic Coated Sheets
7225 99 00 45	Metallic Coated Sheets
7225 99 00 91	Metallic Coated Sheets
7225 99 00 92	Metallic Coated Sheets
7225 99 00 93	Metallic Coated Sheets
7226 99 30 10	Metallic Coated Sheets
7226 99 30 30	Metallic Coated Sheets
7226 99 70 11	Metallic Coated Sheets
7226 99 70 13	Metallic Coated Sheets
7226 99 70 91	Metallic Coated Sheets
7226 99 70 93	Metallic Coated Sheets
7226 99 70 94	Metallic Coated Sheets
7210 20 00	Metallic Coated Sheets
7210 30 00	Metallic Coated Sheets
7210 90 80	Metallic Coated Sheets
7212 20 00	Metallic Coated Sheets
7212 50 20	Metallic Coated Sheets
7212 50 30	Metallic Coated Sheets

(1) GOES means Grain Oriented Electrical Steel.**]**

Commodity code	*Description*
7212 50 40	Metallic Coated Sheets
7212 50 90	Metallic Coated Sheets
7225 91 00	Metallic Coated Sheets
7226 99 10	Metallic Coated Sheets
7210 41 00 80	Metallic Coated Sheets
7210 49 00 80	Metallic Coated Sheets
7210 61 00 80	Metallic Coated Sheets
7210 69 00 80	Metallic Coated Sheets
7212 30 00 80	Metallic Coated Sheets
7212 50 61 80	Metallic Coated Sheets
7212 50 69 80	Metallic Coated Sheets
7225 92 00 80	Metallic Coated Sheets
7225 99 00 25	Metallic Coated Sheets
7225 99 00 95	Metallic Coated Sheets
7226 99 30 90	Metallic Coated Sheets
7226 99 70 19	Metallic Coated Sheets
7226 99 70 96	Metallic Coated Sheets
7210 70 80	Organic Coated Sheets
7212 40 80	Organic Coated Sheets
7209 18 99	Tin Mill products
7210 11 00	Tin Mill products
7210 12 20	Tin Mill products
7210 12 80	Tin Mill products
7210 50 00	Tin Mill products
7210 70 10	Tin Mill products
7210 90 40	Tin Mill products
7212 10 10	Tin Mill products
7212 10 90	Tin Mill products
7212 40 20	Tin Mill products
7208 51 20	Non Alloy and Other Alloy Quarto Plates
7208 51 91	Non Alloy and Other Alloy Quarto Plates
7208 51 98	Non Alloy and Other Alloy Quarto Plates
7208 52 91	Non Alloy and Other Alloy Quarto Plates

(1) GOES means Grain Oriented Electrical Steel.**]**

Commodity code	*Description*
7208 90 20	Non Alloy and Other Alloy Quarto Plates
7208 90 80	Non Alloy and Other Alloy Quarto Plates
7210 90 30	Non Alloy and Other Alloy Quarto Plates
7225 40 12	Non Alloy and Other Alloy Quarto Plates
7225 40 40	Non Alloy and Other Alloy Quarto Plates
7225 40 60	Non Alloy and Other Alloy Quarto Plates
7219 11 00	Stainless Hot Rolled Sheets and Strips
7219 12 10	Stainless Hot Rolled Sheets and Strips
7219 12 90	Stainless Hot Rolled Sheets and Strips
7219 13 10	Stainless Hot Rolled Sheets and Strips
7219 13 90	Stainless Hot Rolled Sheets and Strips
7219 14 10	Stainless Hot Rolled Sheets and Strips
7219 14 90	Stainless Hot Rolled Sheets and Strips
7219 22 10	Stainless Hot Rolled Sheets and Strips
7219 22 90	Stainless Hot Rolled Sheets and Strips
7219 23 00	Stainless Hot Rolled Sheets and Strips
7219 24 00	Stainless Hot Rolled Sheets and Strips
7220 11 00	Stainless Hot Rolled Sheets and Strips
7220 12 00	Stainless Hot Rolled Sheets and Strips
7219 31 00	Stainless Cold Rolled Sheets and Strips
7219 32 10	Stainless Cold Rolled Sheets and Strips
7219 32 90	Stainless Cold Rolled Sheets and Strips
7219 33 10	Stainless Cold Rolled Sheets and Strips
7219 33 90	Stainless Cold Rolled Sheets and Strips
7219 34 10	Stainless Cold Rolled Sheets and Strips
7219 34 90	Stainless Cold Rolled Sheets and Strips
7219 35 10	Stainless Cold Rolled Sheets and Strips
7219 35 90	Stainless Cold Rolled Sheets and Strips
7219 90 20	Stainless Cold Rolled Sheets and Strips
7219 90 80	Stainless Cold Rolled Sheets and Strips
7220 20 21	Stainless Cold Rolled Sheets and Strips
7220 20 29	Stainless Cold Rolled Sheets and Strips
7220 20 41	Stainless Cold Rolled Sheets and Strips

(1) GOES means Grain Oriented Electrical Steel.**]**

Commodity code	*Description*
7220 20 49	Stainless Cold Rolled Sheets and Strips
7220 20 81	Stainless Cold Rolled Sheets and Strips
7220 20 89	Stainless Cold Rolled Sheets and Strips
7220 90 20	Stainless Cold Rolled Sheets and Strips
7220 90 80	Stainless Cold Rolled Sheets and Strips
7219 21 10	Stainless Hot Rolled Quarto Plates
7219 21 90	Stainless Hot Rolled Quarto Plates
7214 30 00	Non Alloy and Other Alloy Merchant Bars and Light Sections
7214 91 10	Non Alloy and Other Alloy Merchant Bars and Light Sections
7214 91 90	Non Alloy and Other Alloy Merchant Bars and Light Sections
7214 99 31	Non Alloy and Other Alloy Merchant Bars and Light Sections
7214 99 39	Non Alloy and Other Alloy Merchant Bars and Light Sections
7214 99 50	Non Alloy and Other Alloy Merchant Bars and Light Sections
7214 99 71	Non Alloy and Other Alloy Merchant Bars and Light Sections
7214 99 79	Non Alloy and Other Alloy Merchant Bars and Light Sections
7214 99 95	Non Alloy and Other Alloy Merchant Bars and Light Sections
7215 90 00	Non Alloy and Other Alloy Merchant Bars and Light Sections
7216 10 00	Non Alloy and Other Alloy Merchant Bars and Light Sections
7216 21 00	Non Alloy and Other Alloy Merchant Bars and Light Sections
7216 22 00	Non Alloy and Other Alloy Merchant Bars and Light Sections
7216 40 10	Non Alloy and Other Alloy Merchant Bars and Light Sections
7216 40 90	Non Alloy and Other Alloy Merchant Bars and Light Sections
7216 50 10	Non Alloy and Other Alloy Merchant Bars and Light Sections
7216 50 91	Non Alloy and Other Alloy Merchant Bars and Light Sections
7216 50 99	Non Alloy and Other Alloy Merchant Bars and Light Sections
7216 99 00	Non Alloy and Other Alloy Merchant Bars and Light Sections
7228 10 20	Non Alloy and Other Alloy Merchant Bars and Light Sections
7228 20 10	Non Alloy and Other Alloy Merchant Bars and Light Sections
7228 20 91	Non Alloy and Other Alloy Merchant Bars and Light Sections
7228 30 20	Non Alloy and Other Alloy Merchant Bars and Light Sections
7228 30 41	Non Alloy and Other Alloy Merchant Bars and Light Sections
7228 30 49	Non Alloy and Other Alloy Merchant Bars and Light Sections
7228 30 61	Non Alloy and Other Alloy Merchant Bars and Light Sections

(1) GOES means Grain Oriented Electrical Steel.**]**

Commodity code	*Description*
7228 30 69	Non Alloy and Other Alloy Merchant Bars and Light Sections
7228 30 70	Non Alloy and Other Alloy Merchant Bars and Light Sections
7228 30 89	Non Alloy and Other Alloy Merchant Bars and Light Sections
7228 60 20	Non Alloy and Other Alloy Merchant Bars and Light Sections
7228 60 80	Non Alloy and Other Alloy Merchant Bars and Light Sections
7228 70 10	Non Alloy and Other Alloy Merchant Bars and Light Sections
7228 70 90	Non Alloy and Other Alloy Merchant Bars and Light Sections
7228 80 00	Non Alloy and Other Alloy Merchant Bars and Light Sections
7214 20 00	Rebars
7214 99 10	Rebars
7222 11 11	Stainless Bars and Light Sections
7222 11 19	Stainless Bars and Light Sections
7222 11 81	Stainless Bars and Light Sections
7222 11 89	Stainless Bars and Light Sections
7222 19 10	Stainless Bars and Light Sections
7222 19 90	Stainless Bars and Light Sections
7222 20 11	Stainless Bars and Light Sections
7222 20 19	Stainless Bars and Light Sections
7222 20 21	Stainless Bars and Light Sections
7222 20 29	Stainless Bars and Light Sections
7222 20 31	Stainless Bars and Light Sections
7222 20 39	Stainless Bars and Light Sections
7222 20 81	Stainless Bars and Light Sections
7222 20 89	Stainless Bars and Light Sections
7222 30 51	Stainless Bars and Light Sections
7222 30 91	Stainless Bars and Light Sections
7222 30 97	Stainless Bars and Light Sections
7222 40 10	Stainless Bars and Light Sections
7222 40 50	Stainless Bars and Light Sections
7222 40 90	Stainless Bars and Light Sections
7221 00 10	Stainless Wire Rod
7221 00 90	Stainless Wire Rod
7213 10 00	Non Alloy and Other Alloy Wire Rod

(1) GOES means Grain Oriented Electrical Steel.**]**

Commodity code	*Description*
7213 20 00	Non Alloy and Other Alloy Wire Rod
7213 91 10	Non Alloy and Other Alloy Wire Rod
7213 91 20	Non Alloy and Other Alloy Wire Rod
7213 91 41	Non Alloy and Other Alloy Wire Rod
7213 91 49	Non Alloy and Other Alloy Wire Rod
7213 91 70	Non Alloy and Other Alloy Wire Rod
7213 91 90	Non Alloy and Other Alloy Wire Rod
7213 99 10	Non Alloy and Other Alloy Wire Rod
7213 99 90	Non Alloy and Other Alloy Wire Rod
7227 10 00	Non Alloy and Other Alloy Wire Rod
7227 20 00	Non Alloy and Other Alloy Wire Rod
7227 90 10	Non Alloy and Other Alloy Wire Rod
7227 90 50	Non Alloy and Other Alloy Wire Rod
7227 90 95	Non Alloy and Other Alloy Wire Rod
7216 31 10	Angles, Shapes and Sections of Iron or Non Alloy Steel
7216 31 90	Angles, Shapes and Sections of Iron or Non Alloy Steel
7216 32 11	Angles, Shapes and Sections of Iron or Non Alloy Steel
7216 32 19	Angles, Shapes and Sections of Iron or Non Alloy Steel
7216 32 91	Angles, Shapes and Sections of Iron or Non Alloy Steel
7216 32 99	Angles, Shapes and Sections of Iron or Non Alloy Steel
7216 33 10	Angles, Shapes and Sections of Iron or Non Alloy Steel
7216 33 90	Angles, Shapes and Sections of Iron or Non Alloy Steel
7301 10 00	Sheet Piling
7302 10 22	Railway Material
7302 10 28	Railway Material
7302 10 40	Railway Material
7302 10 50	Railway Material
7302 40 00	Railway Material
7306 30 41	Other tubes, pipes
7306 30 49	Other tubes, pipes
7306 30 72	Other tubes, pipes
7306 30 77	Other tubes, pipes
7306 61 10	Hollow sections

(1) GOES means Grain Oriented Electrical Steel.**]**

Commodity code	*Description*
7306 61 92	Hollow sections
7306 61 99	Hollow sections
7304 11 00	Seamless Stainless Tubes and Pipes
7304 22 00	Seamless Stainless Tubes and Pipes
7304 24 00	Seamless Stainless Tubes and Pipes
7304 41 00	Seamless Stainless Tubes and Pipes
7304 49 83	Seamless Stainless Tubes and Pipes
7304 49 85	Seamless Stainless Tubes and Pipes
7304 49 89	Seamless Stainless Tubes and Pipes
7304 19 10	Other Seamless Tubes
7304 19 30	Other Seamless Tubes
7304 19 90	Other Seamless Tubes
7304 23 00	Other Seamless Tubes
7304 29 10	Other Seamless Tubes
7304 29 30	Other Seamless Tubes
7304 29 90	Other Seamless Tubes
7304 31 20	Other Seamless Tubes
7304 31 80	Other Seamless Tubes
7304 39 30	Other Seamless Tubes
7304 39 50	Other Seamless Tubes
7304 39 82	Other Seamless Tubes
7304 39 83	Other Seamless Tubes
7304 39 88	Other Seamless Tubes
7304 51 81	Other Seamless Tubes
7304 51 89	Other Seamless Tubes
7304 59 82	Other Seamless Tubes
7304 59 83	Other Seamless Tubes
7304 59 89	Other Seamless Tubes
7304 90 00	Other Seamless Tubes
7305 11 00	Large welded tubes
7305 12 00	Large welded tubes
7305 19 00	Large welded tubes
7305 20 00	Large welded tubes

(1) GOES means Grain Oriented Electrical Steel.**]**

Commodity code	*Description*
7305 31 00	Large welded tubes
7305 39 00	Large welded tubes
7305 90 00	Large welded tubes
7306 11 00	Other Welded Pipes
7306 19 00	Other Welded Pipes
7306 21 00	Other Welded Pipes
7306 29 00	Other Welded Pipes
7306 30 12	Other Welded Pipes
7306 30 18	Other Welded Pipes
7306 30 80	Other Welded Pipes
7306 40 20	Other Welded Pipes
7306 40 80	Other Welded Pipes
7306 50 21	Other Welded Pipes
7306 50 29	Other Welded Pipes
7306 50 80	Other Welded Pipes
7306 69 10	Other Welded Pipes
7306 69 90	Other Welded Pipes
7306 90 00	Other Welded Pipes
7215 10 00	Non-alloy and other alloy cold finished bars
7215 50 11	Non-alloy and other alloy cold finished bars
7215 50 19	Non-alloy and other alloy cold finished bars
7215 50 80	Non-alloy and other alloy cold finished bars
7228 10 90	Non-alloy and other alloy cold finished bars
7228 20 99	Non-alloy and other alloy cold finished bars
7228 50 20	Non-alloy and other alloy cold finished bars
7228 50 40	Non-alloy and other alloy cold finished bars
7228 50 61	Non-alloy and other alloy cold finished bars
7228 50 69	Non-alloy and other alloy cold finished bars
7228 50 80	Non-alloy and other alloy cold finished bars
7217 10 10	Non Alloy Wire
7217 10 31	Non Alloy Wire
7217 10 39	Non Alloy Wire
7217 10 50	Non Alloy Wire

(1) GOES means Grain Oriented Electrical Steel.**]**

Commodity code	*Description*
7217 10 90	Non Alloy Wire
7217 20 10	Non Alloy Wire
7217 20 30	Non Alloy Wire
7217 20 50	Non Alloy Wire
7217 20 90	Non Alloy Wire
7217 30 41	Non Alloy Wire
7217 30 49	Non Alloy Wire
7217 30 50	Non Alloy Wire
7217 30 90	Non Alloy Wire
7217 90 20	Non Alloy Wire
7217 90 50	Non Alloy Wire
7217 90 90	Non Alloy Wire

(1) GOES means Grain Oriented Electrical Steel.**]**

[F18SCHEDULE 3C

Regulation 21

DEFENCE AND SECURITY GOODS AND DEFENCE AND SECURITY TECHNOLOGY

Textual Amendments

F18 Sch. 3C inserted (15.7.2022) by The Russia (Sanctions) (EU Exit) (Amendment) (No. 11) Regulations 2022 (S.I. 2022/792), reg. 1(2), **Sch. 3** (with reg. 13)

PART 1

PRELIMINARY

Application to non-government controlled Ukrainian territory

1. Regulation 53A applies, subject to paragraph 2, in relation to all the goods and technology specified in Parts 2, 3 and 4.

CAS numbers

2.—(1) For the purposes of this Schedule "CAS Number" when followed by a numerical sequence is a reference to the CAS Registry Numbers assigned to chemicals by the Chemical Abstracts Service.

(2) But regulation 53A applies to chemicals of the same structural formula (including hydrates) regardless of name or CAS Number.

PART 2

Interception and monitoring goods and interception and monitoring technology

Interception and monitoring equipment

1. This Part applies to any goods which can perform any of the following functions (whether individually or as part of a system)—

(a) deep packet inspection;

(b) network interception, including associated systems management and data retention functions;

(c) radio frequency monitoring, including associated processing or examination;

(d) network and satellite jamming;

(e) remote infection;

(f) speaker recognition, including associated processing functions;

(g) IMSI, MSISDN, IMEI and TMSI interception and monitoring;

(h) tactical SMS, GSM, GPS, GPRS, UMTS, CDMA, and PSTN interception and monitoring;

(i) DHCP, SMTP and GTP information interception and monitoring;

(j) pattern recognition and pattern profiling;

(k) remote forensics;

(l) semantic processing;

(m) WEP and WPA code breaking;

(n) interception of VoIP (including proprietary and standard protocols).

2. Any software which can perform any of the functions described in paragraph 1(a) to (n) (whether individually or as part of a system).

Other software and other technology

3. Any software or other technology which is specially designed for the development, production or use of any goods or software described in paragraph 1 or 2.

Interpretation

4. For the purposes of this Part, the following terms have the meaning given to them in the Dual-Use Regulation—

"development";

"production";

"software";

"technology";

"use".

PART 3

Internal repression goods and internal repression technology

Firearms and related goods

1. Firearms, ammunition and related accessories, as follows—

(a) firearms;

(b) ammunition specially designed for firearms;

(c) weapon-sights.

2. Simulators for training persons to use firearms.

3. Bombs and grenades.

Vehicles

4.—(1) Subject to sub-paragraph (3), the following types of vehicles—

(a) vehicles equipped with a water cannon, specially designed or modified for the purpose of riot control;

(b) vehicles specially designed or modified to be electrified to repel boarders;

(c) vehicles specially designed or modified to remove barricades, including construction equipment with ballistic protection;

(d) vehicles specially designed for the transport or transfer of prisoners or detainees;

(e) vehicles specially designed to deploy mobile barriers.

(2) Components for the vehicles specified in sub-paragraphs (1)(a) to (e) that have been designed for the purposes of riot control.

(3) Vehicles that might otherwise fall within sub-paragraph (1)(a) to (e) are not internal repression goods if they are specially designed for the purposes of fire-fighting.

(4) For the purposes of this paragraph, "vehicle" includes a trailer.

Explosive substances and related goods

5.—(1) Equipment and devices specially designed to initiate explosions by electrical or non-electrical means, including—

(a) firing sets;

(b) detonators; (codes for electric detonators and detonating caps);

(c) igniters;

(d) boosters;

(e) detonating cord.

(2) Components that have been specially designed for any thing mentioned in sub-paragraph (1).

(3) Sub-paragraphs (1) and (2) do not apply to any thing that has been specially designed for a specific commercial use.

(4) For the purpose of sub-paragraph (3), a "specific commercial use" means the actuation or operation by explosive means of other equipment or devices the function of which is not the creation of explosions, including—

(a) car air-bag inflaters;

(b) electric-surge arresters;

(c) fire sprinkler actuators.

(5) Linear cutting explosive charges.

(6) The following explosives and related substances—

(a) amatol;

(b) nitrocellulose (containing more than 12.5 % nitrogen);

(c) nitroglycol;

(d) pentaerythritol tetranitrate (PETN);

(e) picryl chloride;

(f) 2,4,6-trinitrotoluene (TNT).

Other goods

6.—(1) Subject to sub-paragraph (2), the following equipment designed for the protection of a person—

(a) body armour providing ballistic or stabbing protection or both;

(b) helmets providing ballistic or fragmentation protection, or both, including anti-riot helmets;

(c) anti-riot shields and ballistic shields.

(2) Sub-paragraph (1) does not apply to—

(a) any thing specially designed to protect persons for the following purposes—

(i) participation in competitive sport;

(ii) ensuring safety at work;

(b) any thing mentioned in sub-paragraph (1)(a) or (b) when accompanying a person for that person's own protection.

7. Night vision equipment.

8. Thermal imaging equipment.

9. Image intensifier tubes.

10. Razor barbed wire.

11. The following types of knives—

(a) knives that are designed for use by military personnel (military knives);

(b) knives that are designed for use as a weapon for inflicting injury (combat knives);

(c) bayonets with blade lengths in excess of 10 cm.

12. Law enforcement striking weapons, including saps, police batons, side handle batons, tonfas, sjamboks, and whips.

13.—(1) Handcuffs, straitjackets and specially designed components and accessories.

(2) Sub-paragraph (1) does not apply to—

(a) medical devices that are equipped to restrain patient movement during medical procedures;

(b) devices which confine memory impaired patients to appropriate medical facilities.

14. Technology exclusively for the development or production of equipment controlled by paragraph 15.

15. Chemical agents, including tear gas formulation containing 1 per cent. or less of orthochlorobenzalmalononitrile (CS), or 1 per cent. or less of chloroacetophenone (CN), except in individual containers with a net weight of 20 grams or less; liquid pepper except when packaged in individual containers with a net weight of 3 ounces (85.05 grams) or less; smoke bombs; non-irritant smoke flares, canisters, grenades and charges; and other pyrotechnic articles having dual military and commercial use, and specially designed components thereof.

16. Fingerprinting powders, dyes, and inks.

Production equipment

17. Any equipment which is specially designed or modified for the development or for one or more of the production phases of any item mentioned in paragraphs 1 to 13 of this Part.

Software and technology

18. Any software which is specially designed for the simulators mentioned in paragraph 2.

19. Any technology which is specially designed for the development, production or use of any item mentioned in paragraphs 1 to 11.

Interpretation

20.—(1) In this Part, "firearm" means any portable barrelled weapon that expels, is designed to expel or may be converted to expel, a shot, bullet or projectile by the action of a combustible propellant.

(2) For the purposes of this Schedule, the following terms have the meaning given to them in Annex I of the Dual-Use Regulation—

"development";

"production";

"software";

"technology";

"use".

PART 4

Chemicals and equipment

Chemicals

Chemical Name	*CAS Number*	*Regulation 53A applies?*
Aluminium chloride	(7446-70-0)	
Dichloromethane	(75-09-2)	
N,N-Dimethylaniline	(121-69-7)	
Isopropyl bromide	(75-26-3)	
Isopropyl ether	(108-20-3)	
Monoisopropylamine	(75-31-0)	

Chemical Name	*CAS Number*	*Regulation 53A applies?*
Potassium Bromide	(7758-02-3)	
Pyridine	(110-86-1)	
Sodium bromide	(7647-15-6)	
Sodium metal	(7440-23-5)	
Tributylamine	(102-82-9)	
Triethylamine	(121-44-8)	
Trimethylamine	(75-50-3)	
Diethylenetriamine	(111-40-0)	
Butyrylcholinesterase (BCHE)	Not Applicable	Yes
Pyridostigmine bromide	(101-26-8)	
Obidoxime chloride	(114-90-9)	
Acetylene	(CAS 74-86-2)	
Acetone	(CAS 67-64-1)	
Antimony	(CAS 7440-36-0)	
Arsenic	(CAS 7440-38-2)	
Arsenic trioxide	(CAS 1327-53-3)	
Bis(2-chloroethyl)ethylamine hydrochloride	(CAS 3590-07-6)	
Bis(2-chloroethyl)methylamine hydrochloride	(CAS 55-86-7)	
Benzil	(CAS 134-81-6)	
Benzaldehyde	(CAS 100-52-7)	
Benzoin	(CAS 119-53-9)	
2-bromochloroethane	(CAS 107-04-0)	
Chlorine	(CAS 7782-50-5)	
Diethyl ether	(CAS 60-29-7)	
Dimethyl ether	(CAS 115-10-6)	
Dimethylaminoethanol	(CAS 108-01-0)	
Dicyclohexylamine (DCA)	(CAS 101-83-7)	
Ethylene	(CAS 74-85-1)	
Ethylene dichloride	(CAS 107-06-2)	
2-methoxyethanol	(CAS 109-86-4)	
Ethyl bromide	(CAS 74-96-4)	
Ethyl chloride	(CAS 75-00-3)	

Chemical Name	*CAS Number*	*Regulation 53A applies?*
Ethylamine	(CAS 75-04-7)	
Ethylene oxide	(CAS 75-21-8)	
Fluorapatite	(CAS 1306-05-4)	
Hexamine	(CAS 100-97-0)	Yes
Hydrogen sulfide	(CAS 7783-06-4)	
Isocyanatomethane	(CAS 624-83-9)	
Isopropanol, 95% concentration or greater	(CAS 67-63-0)	
Mandelic acid	(CAS 90-64-2)	
Methylamine	(CAS 74-89-5)	
Methyl bromide	(CAS 74-83-9)	
Methyl chloride	(CAS 74-87-3)	
Methyl iodide	(CAS 74-88-4)	
Methylmercaptan	(CAS 74-93-1)	
Monoethylene Glycol (MEG)	(CAS 107-21-1)	
Nitromethane	(CAS 75-52-5)	
Oxalyl chloride	(CAS 79-37-8)	
Picric acid	(CAS 88-89-1)	
Potassium sulfide	(CAS 1312-73-8)	
Potassium thiocyanate	(CAS 333-20-0)	
Quinaldine	(CAS 91-63-4)	
Thiophosphoryl chloride	(CAS 3982-91-0)	
Tributylphosphite	(CAS 102-85-2)	
Triisobutylphosphite	(CAS 1606-96-8)	
Tris(2-chloroethyl)amine hydrochloride	(CAS 817-09-4)	
Sodium hypochlorite	(CAS 7681-52-9)	
Sulfur trioxide	(CAS 7446-11-9)	
White/yellow phosphorus	(CAS 12185-10-3, 7723-14-0)	
Mercury	(7439#97#6)	
Barium chloride	(10361#37#2)	
Sulphuric acid, with a concentration by weight of 90% or greater	(7664#93#9)	

Chemical Name	*CAS Number*	*Regulation 53A applies?*
3,3#dimethyl#1#butene	(558#37#2)	
2,2#dimethylpropanal	(630#19#3)	
2,2#dimethylpropylchloride	(753#89#9)	
2#methylbutene	(26760#64#5)	
2#chloro#3#methylbutane	(631#65#2)	
2,3#dimethyl#2,3#butanediol	(76#09#5)	
2#methyl#2#butene	(513#35#9)	
Butyl lithium	(109#72#8)	
Bromo(methyl)magnesium	(75#16#1)	
Formaldehyde	(50#00#0)	
Diethanolamine	(111#42#2)	
Dimethylcarbonate	(616#38#6)	
Methyldiethanolamine hydrochloride	(54060#15#0)	
Methanol	(67#56#1)	
Ethanol	(64#17#5)	Yes
1#butanol	(71#36#3)	
2#butanol	(78#92#2)	
Iso#butanol	(78#83#1)	
Tert#butanol	(75#65#0)	
Cyclohexanol	(108#93#0)	
Diethylamine hydrochloride	(660#68#4)	
Diisopropylamine hydrochloride	(819#79#4)	
3#Quinuclidinone hydrochloride	(1193#65#3)	
3#Quinuclidinol hydrochloride	(6238#13#7)	
(R)#3# Quinuclidinol hydrochloride	(42437#96#7)	
N,N#Diethylaminoethanol hydrochloride	(14426#20#1)	
Acetyl-alpha-methylfentanyl	101860-00-8	
Alfentanil	71195-58-9	
Alpha-methylfentanyl	79704-88-4	
Alpha-methylthiofentanyl	103963-66-2	
Beta-hydroxyfentanyl	78995-10-5	

Chemical Name	*CAS Number*	*Regulation 53A applies?*
Beta-hydroxy-3-methylfentanyl	78995-14-9	
Fentanyl	437-38-7	
3-methylfentanyl	42045-86-3	
3-methylthiofentanyl	86052-04-2	
Para-fluorofentanyl	90736-23-5	
Remifentanil	132875-61-7	
Sufentanil	56030-54-7	
Thiofentanyl	60771-38-2	
Acryloylfentanyl (Acrylfentanyl)	82003-75-6	
Carfentanil	59708-52-0	
4-Fluoroisobutyrfentanyl (4-FIBF, pFIBF)	244195-32-2	
Furanyl fentanyl	101345-66-8	
Ocfentanil	101343-69-5	
Tetrahydrofuranyl fentanyl (THF-F)	2142571-01-3	
Cyclopropylfentanyl	1169-68-2	
Methoxyacetylfentanyl	101345-67-9	
Orthofluorofentanyl	910616-29-4	
Parafluorobutyrylfentanyl	244195-31-1	
Crotonylfentanyl	760930-59-4	
Valerylfentanyl	122882-90-0	
4-Anilino-*N*-phenethylpiperidine (ANPP)	21409-26-7	
N-Phenethyl-4-piperidone (NPP)	39742-60-4	
Dialkyl(≤C10) chlorophosphates	N/A	
Dialkyl(≤C10) fluorophosphates	N/A	
N,N-Methylisopropylacetamidine	1339185-57-7	
N,N-Methylethylacetamidine	1339632-40-4	
N,N-Ethylisopropylacetamidine	1339156-10-3	
N,N-Methylpropylacetamidine	1344238-28-3	
N,N-Ethylpropylacetamidine	1339737-43-7	
N,N-Isopropylpropylacetamidine	1341389-98-7	

Chemical Name	*CAS Number*	*Regulation 53A applies?*
N,N-Methylethylpropanamidine	1339424-26-8	
N,N-Ethylisopropylpropanamidine	1344354-09-1	
N,N-Methylpropylpropanamidine	1340216-25-2	
N,N-Ethylpropylpropanamidine	1341493-60-4	
N,N-Isopropylpropylpropanamidine	1343225-93-3	
N,N-Methylisopropylpropanamidine	1339042-55-5	
N,N-Methylethylbutanamidine	1341049-51-1	
N,N-Methylpropylbutanamidine	1343721-02-7	
N,N-Ethylpropylbutanamidine	1343806-12-1	
N,N-Isopropylpropylbutanamidine	1343316-02-8	
N,N-Methylisopropylbutanamidine	1340219-94-4	
N,N-Ethylisopropylbutanamidine	1342204-10-7	
N,N-Methylethylisobutanamidine	1342365-47-2	
N,N-Ethylpropylisobutanamidine	1342566-58-8	
N,N-Methylpropylisobutanamidine	1342270-21-6	
N,N-Isopropylpropylisobutanamidine	1342156-11-9	
N,N-Methylisopropylisobutanamidine	1341992-96-8	
N,N-Ethylisopropylisobutanamidine	1339048-76-8	
N,N-Dimethylacetamidine hydrobromide	1801188-12-4	
N,N-Dimethylacetamidine hydrochloride	2909-15-1	
N,N-Diethylacetamidine hydrochloride	91400-32-7	
N,N-Diethylacetamidine hydrobromide	78053-54-0	

Chemical Name	*CAS Number*	*Regulation 53A applies?*
N,N-Dimethylpropanamidine dihydrochloride	79972-73-9	
N,N-Dimethylpropanamidine hydrochloride	56776-15-9	

Equipment

Item	*Regulation 53A applies?*
Floor-mounted fume hoods (walk-in style) with a minimum nominal width of 2.5 metres.	
Full face-mask air-purifying and air-supplying respirators.	Yes
Class II biosafety cabinets and glove boxes.	
Batch centrifuges with a rotor capacity of 4 L or greater, usable with biological materials.	
Fermenters with an internal volume of 10 L – 20 L, usable with biological materials.	Yes
Reaction vessels, reactors, agitators, heat exchangers, condensers, pumps (including single seal pumps), valves, storage tanks, containers, receivers, and distillation or absorption columns that meet AG performance parameters, regardless of their materials of construction.	Yes
Conventional or turbulent air-flow clean-air rooms and self-contained fan-HEPA filter units that may be used for P3 or P4 (BSL 3, BSL 4, L3, L4) containment facilities.	
Vacuum pumps with a manufacturer's specified maximum flow-rate greater than 1 m^3/h (under standard temperature and pressure conditions), casings (pump bodies), preformed casing-liners, impellers, rotors, and jet pump nozzles designed for such pumps, in which all surfaces that come into direct contact with the chemicals being processed are made from controlled materials.	
Laboratory equipment, including parts and accessories for such equipment, for the	

Item	*Regulation 53A applies?*
analysis or detection, destructive or non-destructive, of chemical substances.	
Whole chlor-alkali electrolysis cells – mercury, diaphragm, and membrane.	
Titanium electrodes (including those with coatings produced from other metal oxides), specially designed for use in chlor-alkali cells.	
Nickel electrodes (including those with coatings produced from other metal oxides), specially designed for use in chlor-alkali cells.	
Bipolar titanium nickel electrodes (including those with coatings produced from other metal oxides), specially designed for use in chlor-alkali cells.	
Asbestos diaphragms specially designed for use in chlor-alkali cells.	
Fluoropolymer based diaphragms specially designed for use in chlor-alkali cells.	
Fluoropolymer based ion exchange membranes specially designed for use in chlor-alkali cells.	
Compressors specially designed to compress wet or dry chlorine, regardless of material of construction.	
Microwave reactors— Machinery, plant or laboratory equipment, whether or not electrically heated, for the treatment of materials by a process involving a change of temperature such as heating 84 19 89 98 00.	Yes
Microreactors— Instruments and apparatus for physical or chemical analysis: 90 27 89 90 00 BE (classified similar item to 90 27 80 17 90, now invalid due to code changes), for similar microreactors.	
Solid & Liquid Aerosol generating equipment— Mechanical appliances (whether or not hand-operated), for projecting, dispersing	

Item	*Regulation 53A applies?*
or spraying liquids or powders: 84 24 89 70 00.	

Laboratory equipment

Item	*Regulation 53A applies?*
Next-generation (second generation) and third generation DNA and RNA sequencers	
PCR Machines and qPCR (real-time) PCR machines	Yes
Solid phase DNA and RNA synthesisers	
Peptide synthesizers	
Automated nucleic acid extraction systems	
Ultracentrifuges	
Probe sonicators	
Fast protein liquid chromatography (FPLC) systems (medium pressure chromatography systems)	
Cell disruptors and tissue homogenisers, with a volume of 1 L or greater	

Associated Parts and Consumables

Item		*Regulation 53A applies?*
Next generation (second generation) and third generation DNA and RNA sequencers	DNA and RNA sequencing reagent kits	Yes
	Library and template preparation kits	
	Cluster generation kits	Yes
	Flow cells	Yes
PCR Machines and qPCR (real-time) PCR machines		Yes
Solid phase DNA and RNA synthesisers	Nucleoside phosphoramidites	
	Columns	
	Solid support resin	Yes
	Reagent kits	Yes
	Synthesis reagents	Yes
Peptide synthesizers	Fmoc and T-Boc protected amino acids	
	Resins	Yes
	Synthesis reagents	Yes

Item		*Regulation 53A applies?*
Automated nucleic acid extraction systems	Reagents	Yes
	Rotor adapters	
Ultracentrifuges	Ultracentrifuge rotors with total capacity 1 L or greater	
Probe sonicators	Sonicator probes over 25mm diameter	
	High volume (1 L or greater) sonicator continuous flow cell	
Fast protein liquid chromatography (FPLC) systems (medium pressure chromatography systems)	FPLC columns	
	Reagents	Yes
Cell disruptors and tissue homogenisers		

Other related items

Item	*Regulation 53A applies?*
0B999 Specific processing equipment as follows:	
a. Ring magnets.	Yes
b. Hot cells.	
c. Glove boxes suitable for use with radioactive materials.	
0D999 Specific software, as follows:	
a. Software for neutronic calculations/modelling;	
b. Software for radiation transport calculations/modelling;	
c. Software for hydrodynamic calculations/modelling.	Yes
1A995 Protective and detection equipment as follows and specially designed components therefor.	
a. Personal radiation monitoring dosimeters;	
b. Equipment limited by design or function to protect against hazards specific to civil industries, such as mining, quarrying, agriculture, pharmaceuticals, medical, veterinary, environmental, waste management, or to the food industry. *Note: This entry does not control items for protection against chemical or biological agents that are consumer goods, packaged for retail sale or personal use, or medical products, such as latex exam gloves, latex surgical gloves, liquid disinfectant soap, disposable surgical drapes, surgical gowns, surgical foot covers, and surgical masks.*	

Item	*Regulation 53A applies?*
1A999 Specific processing equipment as follows:	
Radiation detection, monitoring and measurement equipment	
Radiographic detection equipment such as x-ray converters, and storage phosphor image plates.	Yes
1C991 Vaccines, immunotoxins, medical products, diagnostic and food testing kits, as follows.	
Technical note:- For the purpose of this entry, 'immunotoxins' are monoclonal antibodies linked to a toxin with the intention of destroying a specific target cell while leaving adjacent cells intact. For the purpose of this entry, "medical products" are: (1) pharmaceutical formulations designed for testing and human (or veterinary) administration in the treatment of medical conditions, (2) prepackaged for distribution as clinical or medical products. For the purpose of this entry, "diagnostic and food testing kits" are specifically developed, packaged and marketed for diagnostic or public health purposes. For the purpose of this entry, "vaccine" is defined as a medicinal (or veterinary) product in a pharmaceutical formulation that is intended to stimulate a protective immunological response in humans or animals in order to prevent disease in those to whom or to which it is administered.	
Technical Note: For purposes of the controls described in this entry 'toxins' refers to those toxins, or their subunits, controlled under 1C351.d of Annex I of the Dual-Use Regulation	
a. Vaccines containing, or designed for use against, items controlled by 1C351, 1C353 or 1C354 of Annex I of the Dual-Use Regulation;	Yes
b. Immunotoxins containing items controlled by 1C351.d of Annex I of the Dual-Use Regulation;	Yes
c. Medical products that contain any of the following:	Yes
c.1. Toxins controlled by 1C351.d of Annex I of the Dual-Use Regulation (*except for* botulinum toxins controlled by 1C351.d.3 of Annex I of the Dual-Use Regulation, conotoxins controlled by 1C351.d.6, of Annex I of the Dual-Use Regulation or items controlled for CW reasons under 1C351.d.11 or .d.12 of Annex I of the Dual-Use Regulation); or	Yes
c.2. Genetically modified organisms or genetic elements controlled by 1C353.a.3 of Annex I of the Dual-Use Regulation (*except for* those that contain, or code for, botulinum toxins controlled by C351.d.3 of Annex I	Yes

Item	*Regulation 53A applies?*
of the Dual-Use Regulation or conotoxins controlled by 1C351.d.6 of Annex I of the Dual-Use Regulation);	
d. Medical products not controlled by 1C991.c that contain any of the following:	Yes
d.1. Botulinum toxins controlled by 1C351.d.3 of Annex I of the Dual-Use Regulation;	Yes
d.2. Conotoxins controlled by 1C351.d.6 of Annex I of the Dual-Use Regulation; or	Yes
d.3. Genetically modified organisms or genetic elements controlled by 1C353.a.3 of Annex I of the Dual-Use Regulation that contain, or code for, botulinum toxins controlled by 1C351.d.3 of Annex I of the Dual-Use Regulation or conotoxins controlled by 1C351.d.6 of Annex I of the Dual-Use Regulation;	Yes
e. Diagnostic and food testing kits containing items controlled by 1C351.d of Annex I of the Dual-Use Regulation.	Yes

1C995 Mixtures that contain chemicals controlled by 1C350 or 1C450 of Annex 1 of the Dual-Use Regulation and medical, analytical, diagnostic, and food testing kits that contain chemicals controlled by 1C350, as follows:

For the purpose of this entry, "medical, analytical, diagnostic, and food testing kits" are pre-packaged materials of defined composition that are specifically developed, packaged and marketed for medical, analytical, diagnostic, or public health purposes.

a. Mixtures containing the following concentrations of precursor chemicals controlled by 1C350 of Annex I of the Dual-Use Regulation:

a.1. Mixtures containing 10 per cent. or less, by weight, of any of the following—

Chemical Name	*CAS Number*	*Regulation 53A applies?*
Arsenic trichloride;	7784-34-1	
Benzilic acid;	76-93-7	
Diethyl ethylphosphonate;	78-38-6	
Diethyl methylphosphonate;	683-08-9	
Diethyl methylphosphonite	15715-41-0	
Diethyl-N,N-dimethylphosphoroamidate;	2404-03-7	
N,N-Diisopropylaminoethanethiol hydrochloride;	41480-75-5	
N,N-Diisopropyl-beta-aminoethane thiol;	5842-07-9	
N,N-Diisopropyl-beta-aminoethanol;	96-80-0	

Chemical Name	*CAS Number*	*Regulation 53A applies?*
N,N-Diisopropyl-beta-aminoethyl chloride;	96-79-7	
N,N-Diisopropyl-beta-aminoethyl chloride hydrochloride;	4261-68-1	
Dimethyl ethylphosphonate;	6163-75-3	
Dimethyl methylphosphonate;	756-79-6	
N,N-dimethylamino-phosphoryl dichloride;	677-43-0	
Ethyl phosphonous dichloride [Ethyl phosphinyl dichloride];	1498-40-4	
Ethyl phosphonus difluoride [Ethyl phosphinyl difluoride];	430-78-4	
Ethyl phosphonyl dichloride;	1066-50-8	
Methylphosphonic acid;	993-13-5	
Methylphosphonothioic dichloride.	676-98-2	
Pinacolyl alcohol;	464-07-3	
3-Quinuclidinol;	1619-34-7	
Thiodiglycol.	111-48-8	

a.2. Mixtures containing less than 30 per cent., by weight, of:

a.2.a. Any of the following—

Chemical Name	*CAS Number*	*Regulation 53A applies?*
Diethyl phosphite;	762-04-9	
Dimethyl phosphite (dimethyl hydrogen phosphite);	868-85-9	
Ethyldiethanolamine;	139-87-7	
Phosphorus oxychloride;	10025-87-3	
Phosphorus pentachloride;	10026-13-8	
Phosphorus trichloride;	7719-12-2	
Sulfur dichloride;	10545-99-0	
Sulfur monochloride;	10025-67-9	
Thionyl chloride;	7719-09-7	
Triethanolamine;	102-71-6	
Triethyl phosphite;	122-52-1	
Trimethyl phosphite.	121-45-9	

or

a.2.b. Any of the following single precursor chemicals—

Chemical Name	*CAS Number*	*Regulation 53A applies?*
Ammonium hydrogen fluoride;	1341-49-7	
2-Chloroethanol;	107-07-3	
Diethylamine;	109-89-7	
N,N-Diethylaminoethanol;	100-37-8	
Diethyl chlorophosphite;	589-57-1	
O,O-Diethyl phosphorodithioate;	298-06-6	
O,O-Diethyl phosphorothioate;	2465-65-8	
Di-isopropylamine;	108-18-9	
Dimethylamine;	124-40-3	
Dimethylamine hydrochloride;	506-59-2	
Ethyl chlorofluorophosphate;	762-77-6	
Ethyl dichlorophosphate;	1498-51-7	
Ethyl difluorophosphate;	460-52-6	
Hydrogen fluoride;	7664-39-3	
3-Hydroxyl-1-methylpiperidine;	3554-74-3	
Methyl benzilate;	76-89-1	
Methyl chlorofluorophosphate;	754-01-8	
Methyl dichlorophosphate;	677-24-7	
Methyl difluorophosphate;	22382-13-4	
N,N Diethylacetamidine;	14277-06-6	
N,N-Diethylbutanamidine;	53510-30-8	
N,N-Diethylformamidine;	90324-67-7	
N,N Diethylisobutanamidine;	1342789-47-2	
N,N-Diethylpropanamidine;	84764-73-8	
N,N-Diisopropylbutanamidine;	1315467-17-4	
N,N-Diisopropylformamidine;	857522-08-8	
N,N-Dimethylacetamidine;	2909-14-0	
N,N-Dimethylbutanamidine;	1340437-35-5	
N,N-Dimethylformamidine;	44205-42-7	
N,N-Dimethylisobutanamidine;	321881-25-8	

Chemical Name	*CAS Number*	*Regulation 53A applies?*
N,N-Dimethylpropanamidine;	56776-14-8	
N,N-Dipropylacetamidine;	1339586-99-0	
N,N-Dipropylbutanamidine;	1342422-35-8	
N,N-Dipropylformamidine;	48044-20-8	
N,N-Dipropylisobutanamidine;	1342700-45-1	
N,N-Dipropylpropanamidine;	1341496-89-6	
Phosphorus pentasulfide;	1314-80-3	
Pinacolone;	75-97-8	
Potassium bifluoride;	7789-29-9	
Potassium cyanide;	151-50-8	
Potassium fluoride;	7789-23-3	
3-Quinuclidone;	3731-38-2	
Sodium bifluoride;	1333-83-1	
Sodium cyanide;	143-33-9	
Sodium fluoride;	7681-49-4	
Sodium hexafluorosilicate;	16893-85-9	
Sodium sulfide;	1313-82-2	
Triethanolamine hydrochloride;	637-39-8	
Tri-isopropyl phosphite.	116-17-6	

b. Mixtures containing the following concentrations of toxic or precursor chemicals controlled by 1C450 of Annex I of the Dual-Use Regulation—

b.1. Mixtures containing the following concentrations of CWC Schedule 2 chemicals controlled by 1C450.a.2, 1C450.b1, 1C450.b2, 1C450.b.3, 1C450.b.4, 1C450.b.5 or 1C450.b.6 of Annex I of the Dual-Use Regulation;

b.1.a. Mixtures containing 1 per cent. or less, by weight, of any single CWC Schedule 2 chemical controlled by 1C450.a.2 of Annex I of the Dual-Use Regulation (i.e., mixtures containing PFIB); or

b.1.b. Mixtures containing 10 per cent. or less, by weight, of any single CWC Schedule 2 chemical controlled by 1C450.b1, 1C450.b2, 1C450.b.3, 1C450.b.4, 1C450.b.5 or 1C450.b.6 of Annex I of the Dual-Use Regulation.

b.2. Mixtures containing less than 30 per cent., by weight, of any single CWC Schedule 3 chemical controlled by 1C450.a.4, 1C450.a.5, 1C450.a.6, 1C450.a.7, 1C450.b.8, of Annex I of the Dual-Use Regulation.

c. “Medical, analytical, diagnostic, and food testing kits” that contain precursor chemicals controlled by the following in an amount not exceeding 300 grams per chemical.

Chemical Name	*CAS Number*	*Regulation 53A applies?*
Ammonium hydrogen fluoride;	1341-49-7	Yes to all items in column 1 of this table

Chemical Name	*CAS Number*	*Regulation 53A applies?*
2-Chloroethanol;	107-07-3	
Diethylamine;	109-89-7	
N,N-Diethylaminoethanol;	100-37-8	
Diethyl chlorophosphite;	589-57-1	
O,O-Diethyl phosphorodithioate;	298-06-6	
O,O-Diethyl phosphorothioate;	2465-65-8	
Di-isopropylamine;	108-18-9	
Dimethylamine;	124-40-3	
Dimethylamine hydrochloride;	506-59-2	
Ethyl chlorofluorophosphate;	762-77-6	
Ethyl dichlorophosphate;	1498-51-7	
Ethyl difluorophosphate;	460-52-6	
Hydrogen fluoride;	7664-39-3	
3-Hydroxyl-1-methylpiperidine;	3554-74-3	
Methyl benzilate;	76-89-1	
Methyl chlorofluorophosphate;	754-01-8	
Methyl dichlorophosphate;	677-24-7	
Methyl difluorophosphate;	22382-13-4	
N,N Diethylacetamidine;	14277-06-6	
N,N-Diethylbutanamidine;	53510-30-8	
N,N-Diethylformamidine;	90324-67-7	
N,N Diethylisobutanamidine;	1342789-47-2	
N,N-Diethylpropanamidine;	84764-73-8	
N,N-Diisopropylbutanamidine;	1315467-17-4	
N,N-Diisopropylformamidine;	857522-08-8	
N,N-Dimethylacetamidine;	2909-14-0	
N,N-Dimethylbutanamidine;	1340437-35-5	
N,N-Dimethylformamidine;	44205-42-7	
N,N-Dimethylisobutanamidine;	321881-25-8	
N,N-Dimethylpropanamidine;	56776-14-8	
N,N-Dipropylacetamidine;	1339586-99-0	
N,N-Dipropylbutanamidine;	1342422-35-8	
N,N-Dipropylformamidine;	48044-20-8	
N,N-Dipropylisobutanamidine;	1342700-45-1	

Chemical Name	*CAS Number*	*Regulation 53A applies?*
N,N-Dipropylpropanamidine;	1341496-89-6	
Phosphorus pentasulfide;	1314-80-3	
Pinacolone;	75-97-8	
Potassium bifluoride;	7789-29-9	
Potassium cyanide;	151-50-8	
Potassium fluoride;	7789-23-3	
3-Quinuclidone;	3731-38-2	
Sodium bifluoride;	1333-83-1	
Sodium cyanide;	143-33-9	
Sodium fluoride;	7681-49-4	
Sodium hexafluorosilicate;	16893-85-9	
Sodium sulfide;	1313-82-2	
Triethanolamine hydrochloride;	637-39-8	
Tri-isopropyl phosphite.	116-17-6**]**	

[F19SCHEDULE 3D

Regulation 46S

Revenue generating goods

Textual Amendments

F19 Sch. 3D inserted (15.7.2022) by The Russia (Sanctions) (EU Exit) (Amendment) (No. 11) Regulations 2022 (S.I. 2022/792), reg. 1(2), **Sch. 3** (with reg. 13)

1. Paragraph 1 of Schedule 3 applies for the purpose of interpreting this Schedule.

2. A revenue generating good is any thing falling within a commodity code mentioned in column 1 of the following table.

Commodity code (1)	*Item (2)*
0306	Crustaceans, whether in shell or not, live, fresh, chilled, frozen, dried, salted or in brine; smoked crustaceans, whether in shell or not, whether or not cooked before or during the smoking process; crustaceans, in shell, cooked by steaming or by boiling in water, whether or not chilled, frozen, dried, salted or in brine
1604 31 00	Caviar
1604 32 00	Caviar substitutes
2523	Portland cement, aluminous cement, slag cement, supersulphate cement and similar hydraulic cements, whether or not coloured or in the form of clinkers

Commodity code (1)	*Item (2)*
28251000	Hydrazine and hydroxylamine and their inorganic salts
28254000	Nickel oxides and hydroxides
28255000	Copper oxides and hydroxides
28256000	Germanium oxides and zirconium dioxide
28257000	Molybdenum oxides and hydroxides
28258000	Antimony oxides
28259011	Calcium hydroxide of a purity of >= 98% calculated on the dry weight, in the form of particles of which not > 1% by weight have a particle-size > 75 micrometres and not > 4% by weight have a particle-size of < 1,3 micrometres
28259019	Calcium oxide, hydroxide and peroxide (excl. calcium hydroxide of a purity of >= 98% calculated on the dry weight, in the form of particles of which not > 1% by weight have a particle-size > 75 micrometres and not > 4% by weight have a particle-size of < 1,3 micrometres)
28259020	Beryllium oxide and hydroxide
28259040	Tungsten oxides and hydroxides
28259060	Cadmium oxide
28259085	Inorganic bases and metal oxides, hydroxides and peroxides, n.e.s.
28351000	Phosphinates “hypophosphites” and phosphonates “phosphites”
28352200	Mono- or disodium phosphate
28352400	Phosphates of potassium
28352500	Calcium hydrogenorthophosphate “dicalcium phosphate”
28352910	Phosphate of triammonium
28352930	Phosphate of trisodium
28352990	Phosphates (excl. phosphates of triammonium, monosodium, disodium, trisodium, of potassium, of calcium and of mercury)
28353100	Sodium triphosphate “sodium tripolyphosphate”, whether or not chemically defined
28353900	Polyphosphates, whether or not chemically defined (excl. sodium triphosphate “sodium tripolyphosphate”, and inorganic or organic compounds of mercury whether or not chemically defined)
29012100	Ethylene
29012200	Propene “propylene”
29012300	Butene “butylene” and isomers thereof
29012400	Buta-1,3-diene and isoprene
29012900	Hydrocarbons, acyclic, unsaturated (excl. ethylene, propene “propylene”, butene “butylene” and isomers thereof and Buta-1,3-diene and isoprene)

Commodity code (1)	*Item (2)*
2902	Cyclic hydrocarbons
29051200	Propan-1-ol “propyl alcohol” and propan-2-ol “isopropyl alcohol”
29051300	Butan-1-ol “n-butyl alcohol”
29051410	2-Methylpropan-2-ol “tert-butyl alcohol”
29051490	Butanols (excl. butan-1-ol “n-butyl alcohol” and 2-Methylpropan-2-ol “tert-butyl alcohol”)
29051620	Octan-2-ol
29051685	Octanol “octyl alcohol” and isomers thereof (excl. octan-2-ol)
29051700	Dodecan-1-ol “lauryl alcohol”, hexadecan-1-ol “cetyl alcohol” and octadecan-1-ol “stearyl alcohol”
29051900	Saturated monohydric acyclic alcohols (excl. methanol “methyl alcohol”, propan-1-ol “propyl alcohol”, propan-2-ol “isopropyl alcohol”, butanols, octanol “octyl alcohol” and isomers thereof, dodecan-1-ol “lauryl alcohol”, hexadecan-1-ol “cetyl alcohol” and octadecan-1-ol “stearyl alcohol”)
29052200	Acyclic terpene alcohols
29052910	Allyl alcohol
29052990	Unsaturated monohydric acyclic alcohols (excl. allyl alcohol and acyclic terpene alcohols)
29053100	Ethylene glycol “ethanediol”
29053200	Propylene glycol “propane-1,2-diol”
29053920	Butane-1,3-diol
29053926	Butane-1,4-diol or tetramethylene glycol [1,4-butanediol] having a bio-based carbon content of 100% by mass
29053928	Butane-1,4-diol (excl. having a bio-based carbon content of 100%)
29053930	2,4,7,9-Tetramethyldec-5-yne-4,7-diol
29053995	Acyclic diols (excl. ethylene glycol “ethanediol”, propylene glycol “propane-1,2-diol”, butane-1,3-diol, butane-1,4-diol and 2,4,7,9-tetramethyldec-5-yne-4,7-diol)
29054100	2-Ethyl-2-“hydroxymethyl” propane-1,3-diol “trimethylolpropane”
29054200	Pentaerythritol
29054300	Mannitol
29054411	D-glucitol “sorbitol”, in aqueous solution containing <= 2% by weight of d-mannitol, calculated on the d-glucitol content
29054419	D-glucitol “sorbitol” in aqueous solution (excl. containing <= 2% by weight of d-mannitol, calculated on the d-glucitol content)
29054491	D-glucitol “sorbitol”, containing <= 2% by weight of d-mannitol, calculated on the d-glucitol content (excl. in aqueous solution)

Commodity code (1)	*Item (2)*
29054499	D-glucitol “sorbitol” (excl. in aqueous solution and containing <= 2% by weight of d-mannitol, calculated on the d-glucitol content)
29054500	Glycerol
29054900	Tri- and other polyhydric acyclic alcohols (excl. 2-ethyl-2-”hydroxymethyl” propane-1,3-diol “trimethylolpropane”, pentaerythritol, mannitol, d-glucitol “sorbitol” and glycerol)
29055100	Ethchlorvynol “INN”
29055991	2,2-Bis “bromomethyl” propanediol
29055998	Halogenated, sulphonated, nitrated or nitrosated derivatives of acyclic alcohols (excl. 2,2-bis”bromomethyl”propanediol and ethchlorvynol “INN”)
2907	Phenols; phenol-alcohols
2909	Ethers, ether-alcohols, ether-phenols, ether-alcohol-phenols, alcohol peroxides, ether peroxides, acetal and hemiacetal peroxides, ketone peroxides (whether or not chemically defined), and their halogenated, sulphonated, nitrated or nitrosated derivatives
3104 20	Potassium chloride
3105 20	Mineral or chemical fertilisers containing the three fertilising elements nitrogen, phosphorus and potassium
3105 60	Mineral or chemical fertilisers containing the two fertilising elements phosphorus and potassium
3105 90 20	Other fertilisers containing potassium chloride
3105 90 80	Other fertilisers containing potassium chloride
3902	Polymers of propylene or of other olefins, in primary forms
4011	New pneumatic tyres, of rubber
44	Wood and articles of wood; wood charcoal
4705	Wood pulp obtained by a combination of mechanical and chemical pulping processes
4804	Uncoated kraft paper and paperboard, in rolls or sheets, other than that of heading 4802 or 4803
6810	Articles of cement, of concrete or of artificial stone, whether or not reinforced
7005	Float glass and surface ground or polished glass, in sheets, whether or not having an absorbent, reflecting or non-reflecting layer, but not otherwise worked
7007	Safety glass, consisting of toughened (tempered) or laminated glass
7010	Carboys, bottles, flasks, jars, pots, phials, ampoules and other containers, of glass, of a kind used for the conveyance or packing of goods; preserving jars of glass; stoppers, lids and other closures, of glass

Commodity code (1)	*Item (2)*
7019	Glass fibres (including glass wool) and articles thereof (for example, yarn, rovings, woven fabrics)
7106	Silver (including silver plated with gold or platinum), unwrought or in semi-manufactured forms, or in powder form
7606	Aluminium plates, sheets and strip, of a thickness exceeding 0.2 mm
7801	Unwrought lead
84111100	Turbojets of a thrust <= 25 kN
84111210	Turbojets of a thrust > 25 kN but <= 44 kN
84111230	Turbojets of a thrust > 44 kN but <= 132 kN
84111280	Turbojets of a thrust > 132 kN
84112100	Turbopropellers of a power <= 1.100 kW
84112220	Turbopropellers of a power > 1.100 kW but <= 3.730 kW
84112280	Turbopropellers of a power > 3.730 kW
84118100	Gas turbines of a power <= 5.000 kW (excluding turbojets and turbopropellers)
84118220	Gas turbines of a power > 5.000 kW but <= 20.000 kW (excluding turbojets and turbopropellers)
84118260	Gas turbines of a power > 20.000 kW but <= 50.000 kW (excluding turbojets and turbopropellers)
84118280	Gas turbines of a power > 50.000 kW (excluding turbojets and turbopropellers)
84119900	Parts of gas turbines, n.e.s.
8431	Parts suitable for use solely or principally with the machinery of headings 8425 to 8430
8901	Cruise ships, excursion boats, ferry-boats, cargo ships, barges and similar vessels for the transport of persons or goods
8904	Tugs and pusher craft
8905	Light-vessels, fire-floats, dredgers, floating cranes, and other vessels the navigability of which is subsidiary to their main function; floating docks; floating or submersible drilling or production platforms
9403	Other furniture and parts thereof**]**

[F20]SCHEDULE 4

Regulations 32 to 38

. . . . . .

Textual Amendments

F20 Sch. 4 omitted (1.3.2022) by virtue of The Russia (Sanctions) (EU Exit) (Amendment) (No. 3) Regulations 2022 (S.I. 2022/195), regs. 1(2), **10(2)** (with reg. 11)

SCHEDULE 5

Regulation 64(2)

Treasury licences: purposes

[F21PART A1

Interpretation

Textual Amendments

F21 Sch. 5 Pt. A1 inserted (1.3.2022) by The Russia (Sanctions) (EU Exit) (Amendment) (No. 2) Regulations 2022 (S.I. 2022/194), regs. 1(2), **14(a)**

Interpretation of Schedule 5

A1. In this Schedule—

"consular post" has the same meaning as in the Vienna Convention on Consular Relations done at Vienna on 24 April 1963[F22], and any reference to the functions of a consular post is to be read in accordance with that Convention;

"diplomatic mission" and any reference to the functions of a diplomatic mission are to be read in accordance with the Vienna Convention on Diplomatic Relations done at Vienna on 18 April 1961[F23];

"humanitarian assistance activity" includes the work of international and non-governmental organisations carrying out relief activities for the benefit of the civilian population of a country;

"medical goods" includes medicines and medical devices;

"spaceflight activity" has the meaning given in section 1(6) of the Space Industry Act 2018.**]**

Textual Amendments

F22 United Nations Treaty Series, vol. 596, p.261.

F23 United Nations Treaty Series, vol. 500, p. 95.

PART 1

Asset-freeze etc.

Interpretation [F24of Part 1]

1. In this Part of this Schedule—

"designated person" has the same meaning as it has in Chapter 1 of Part 3 ([F25Asset-freeze etc.]);

"frozen funds or economic resources" means funds or economic resources frozen by virtue of regulation 11, and any reference to a person's frozen funds or economic resources is to funds or economic resources frozen as a consequence of the designation of that person for the purpose of that regulation.

Textual Amendments

F24 Words in Sch. 5 para. 1 heading inserted (1.3.2022) by The Russia (Sanctions) (EU Exit) (Amendment) (No. 2) Regulations 2022 (S.I. 2022/194), regs. 1(2), **14(b)**

F25 Words in Sch. 5 para. 1 substituted (1.3.2022) by The Russia (Sanctions) (EU Exit) (Amendment) (No. 2) Regulations 2022 (S.I. 2022/194), regs. 1(2), **14(c)**

Commencement Information

I31 Sch. 5 para. 1 in force at 31.12.2020 on IP completion day (in accordance with 2020 c. 1, **Sch. 5 para. 1(1)**), see reg. 1(2)

Basic needs

2.—(1) To enable the basic needs of a designated person, or (in the case of an individual) any dependent family member of such a person, to be met.

(2) In the case of an individual, in sub-paragraph (1) "basic needs" includes—

(a) medical needs;

(b) needs for—

(i) food;

(ii) [F26payment] of insurance premiums;

(iii) [F27payment] of tax;

(iv) rent or mortgage payments;

(v) utility payments.

(3) In the case of a person other than an individual, in sub-paragraph (1) "basic needs" includes needs for—

(a) payment of insurance premiums;

(b) payment of reasonable fees for the provision of property management services;

(c) payment of remuneration, allowances or pensions of employees;

(d) payment of tax;

(e) rent or mortgage payments;

(f) utility payments.

(4) In sub-paragraph (1)—

"dependent" means financially dependent;

"family member" includes—

(a) the wife or husband of the designated person;

(b) the civil partner of the designated person;

(c) any parent or other ascendant of the designated person;

(d) any child or other descendant of the designated person;

(e) any person who is a brother or sister of the designated person, or a child or other descendant of such a person.

Textual Amendments

F26 Word in Sch. 5 para. 2(2)(b)(ii) substituted (31.12.2020 immediately after IP completion day) by The Sanctions (EU Exit) (Miscellaneous Amendments) (No. 2) Regulations 2020 (S.I. 2020/590), regs. 1(2), **10(15)**; S.I. 2020/1514, reg. 4

F27 Word in Sch. 5 para. 2(2)(b)(iii) substituted (31.12.2020 immediately after IP completion day) by The Sanctions (EU Exit) (Miscellaneous Amendments) (No. 2) Regulations 2020 (S.I. 2020/590), regs. 1(2), **10(15)**; S.I. 2020/1514, reg. 4

Commencement Information

I32 Sch. 5 para. 2 in force at 31.12.2020 on IP completion day (in accordance with 2020 c. 1, **Sch. 5 para. 1(1)**), see reg. 1(2)

Legal services

3. To enable the payment of—

(a) reasonable professional fees for the provision of legal services, or

(b) reasonable expenses associated with the provision of legal services.

Commencement Information

I33 Sch. 5 para. 3 in force at 31.12.2020 on IP completion day (in accordance with 2020 c. 1, **Sch. 5 para. 1(1)**), see reg. 1(2)

Maintenance of frozen funds and economic resources

4. To enable the payment of—

(a) reasonable fees, or

(b) reasonable service charges,

arising from the routine holding or maintenance of frozen funds or economic resources.

Commencement Information

I34 Sch. 5 para. 4 in force at 31.12.2020 on IP completion day (in accordance with 2020 c. 1, **Sch. 5 para. 1(1)**), see reg. 1(2)

Extraordinary expenses

5. To enable an extraordinary expense of a designated person to be met.

Commencement Information

I35 Sch. 5 para. 5 in force at 31.12.2020 on IP completion day (in accordance with 2020 c. 1, **Sch. 5 para. 1(1)**), see reg. 1(2)

Pre-existing judicial decisions etc.

6. To enable, by the use of a designated person's frozen funds or economic resources, the implementation or satisfaction (in whole or in part) of a judicial, administrative or arbitral decision or lien, provided that—

(a) the funds or economic resources so used are the subject of the decision or lien,

(b) the decision or lien—

(i) was made or established before the date on which the person became a designated person, and

(ii) is enforceable in the United Kingdom, and

(c) the use of the frozen funds or economic resources does not directly or indirectly benefit any other designated person.

Commencement Information

I36 Sch. 5 para. 6 in force at 31.12.2020 on IP completion day (in accordance with 2020 c. 1, **Sch. 5 para. 1(1)**), see reg. 1(2)

Extraordinary situation

7. To enable anything to be done to deal with an extraordinary situation.

Commencement Information

I37 Sch. 5 para. 7 in force at 31.12.2020 on IP completion day (in accordance with 2020 c. 1, **Sch. 5 para. 1(1)**), see reg. 1(2)

Prior obligations

8. To enable, by the use of a designated person's frozen funds or economic resources, the satisfaction of an obligation of that person (whether arising under a contract, other agreement or otherwise), provided that—

(a) the obligation arose before the date on which the person became a designated person, and

(b) no payments are made to another designated person, whether directly or indirectly.

Commencement Information

I38 Sch. 5 para. 8 in force at 31.12.2020 on IP completion day (in accordance with 2020 c. 1, **Sch. 5 para. 1(1)**), see reg. 1(2)

Consular posts

9.—(1) To enable anything to be done in order that the functions of a consular post in **[**[F28]non-government controlled Ukrainian territory**]**, or of an international organisation enjoying immunities in accordance with international law, may be carried out.

[F29](2) . . . . . .

Textual Amendments

F28 Words in Sch. 5 para. 9 substituted (30.3.2022 at 5.00 p.m.) by The Russia (Sanctions) (EU Exit) (Amendment) (No. 7) Regulations 2022 (S.I. 2022/395), regs. 1(2), **39(a)**

F29 Sch. 5 para. 9(2) omitted (1.3.2022) by virtue of The Russia (Sanctions) (EU Exit) (Amendment) (No. 2) Regulations 2022 (S.I. 2022/194), regs. 1(2), **14(d)**

Commencement Information

I39 Sch. 5 para. 9 in force at 31.12.2020 on IP completion day (in accordance with 2020 c. 1, **Sch. 5 para. 1(1)**), see reg. 1(2)

[F30Humanitarian assistance activity

9A. To enable anything to be done in connection with the performance of any humanitarian assistance activity.

Textual Amendments

F30 Sch. 5 paras. 9A-9T and related Pt. headings inserted (1.3.2022) by The Russia (Sanctions) (EU Exit) (Amendment) (No. 2) Regulations 2022 (S.I. 2022/194), regs. 1(2), **14(e)**

Medical goods or services

9B.—(1) To enable anything to be done in connection with the provision of medical goods or services for the benefit of the civilian population of a country.

(2) To enable the import, export or use of medical goods.

Textual Amendments

F30 Sch. 5 paras. 9A-9T and related Pt. headings inserted (1.3.2022) by The Russia (Sanctions) (EU Exit) (Amendment) (No. 2) Regulations 2022 (S.I. 2022/194), regs. 1(2), **14(e)**

Food

9C. To enable anything to be done in connection with the production or distribution of food for the benefit of the civilian population of a country.

Textual Amendments

F30 Sch. 5 paras. 9A-9T and related Pt. headings inserted (1.3.2022) by The Russia (Sanctions) (EU Exit) (Amendment) (No. 2) Regulations 2022 (S.I. 2022/194), regs. 1(2), **14(e)**

Diplomatic missions etc.

9D.—(1) To enable anything to be done in order that the functions of a diplomatic mission or consular post in Russia or of an international organisation enjoying immunities in accordance with international law may be carried out.

(2) To enable anything to be done in order that the functions of a diplomatic mission or consular post of Russia in the United Kingdom may be carried out.

Textual Amendments

F30 Sch. 5 paras. 9A-9T and related Pt. headings inserted (1.3.2022) by The Russia (Sanctions) (EU Exit) (Amendment) (No. 2) Regulations 2022 (S.I. 2022/194), regs. 1(2), **14(e)**

PART 1A

Loans and credit arrangements

Humanitarian assistance activity

9E. To enable anything to be done in connection with the performance of any humanitarian assistance activity.

Medical goods or services

9F.—(1) To enable anything to be done in connection with the provision of medical goods or services for the benefit of the civilian population of a country.

(2) To enable the import, export or use of medical goods.

Food

9G. To enable anything to be done in connection with the production or distribution of food for the benefit of the civilian population of a country.

Diplomatic missions etc.

9H.—(1) To enable anything to be done in order that the functions of a diplomatic mission or consular post in Russia, or of an international organisation enjoying immunities in accordance with international law may be carried out.

(2) To enable anything to be done in order that the functions of a diplomatic mission or consular post of Russia in the United Kingdom may be carried out.

Space

9I. To enable anything to be done in order for a United Kingdom person to undertake spaceflight activity.

Extraordinary situation

9J. To enable anything to be done to deal with an extraordinary situation.

PART 1B

Correspondent banking relationships etc.

Interpretation of Part 1B

9K. In this Part, "designated person" has the meaning given in regulation 17A.

Basic needs

9L.—(1) To enable the basic needs of a designated person, or a person owned or controlled directly or indirectly (within the meaning of regulation 7) by the designated person, to be met.

(2) In the case of a person other than an individual, in sub-paragraph (1) "basic needs" includes needs for—

(a) payment of insurance premiums;

(b) payment of reasonable fees for the provision of property management services;

(c) payment of reasonable fees for the provision of insolvency services;

(d) payment of remuneration, allowances or pensions of employees;

(e) payment of tax;

(f) rent or mortgage payments;

(g) utility payments.

Legal services

9M. To enable the payment of—

(a) reasonable professional fees for the provision of legal services to the designated person or a person owned or controlled directly or indirectly (within the meaning of regulation 7) by the designated person, or

(b) reasonable expenses associated with the provision of legal services to the designated person (or a person owned or controlled directly or indirectly (within the meaning of regulation 7) by the designated person.

Financial regulation

9N.—(1) To enable anything to be done by, or on behalf of, a relevant financial authority for the purposes of the functions of that authority.

(2) In sub-paragraph (1), "relevant financial authority" means authorities involved in the regulation of financial services in the United Kingdom, including the Financial Conduct Authority, the Prudential Regulation Authority and the Bank of England.

Extraordinary situation

9O. To enable anything to be done to deal with an extraordinary situation.

PART 1C

Sterling payments

Humanitarian assistance activity

9P. To enable anything to be done in connection with the performance of any humanitarian assistance activity.

Medical goods or services

9Q.—(1) To enable anything to be done in connection with the provision of medical goods or services for the benefit of the civilian population of a country.

(2) To enable the import, export or use of medical goods.

Food

9R. To enable anything to be done in connection with the production or distribution of food for the benefit of the civilian population of a country.

Diplomatic missions etc.

9S.—(1) To enable anything to be done in order that the functions of a diplomatic mission or consular post in Russia, or of an international organisation enjoying immunities in accordance with international law may be carried out.

(2) To enable anything to be done in order that the functions of a diplomatic mission or consular post of Russia in the United Kingdom may be carried out.

Space

9T. To enable anything to be done in order for a United Kingdom person to undertake spaceflight activity.**]**

[[F31]PART 1D

Foreign exchange reserve and asset management services

Textual Amendments

F31 Sch. 5 Pt. 1D inserted (1.3.2022 at 5.00 p.m.) by The Russia (Sanctions) (EU Exit) (Amendment) (No. 5) Regulations 2022 (S.I. 2022/205), regs. 1(2), **7**

Humanitarian assistance activity

9U. To enable anything to be done in connection with the performance of any humanitarian assistance activity.

Financial regulation

9V.—(1) To enable anything to be done by, or on behalf of, a relevant financial authority for the purposes of the functions of that authority.

(2) In sub-paragraph (1), "relevant financial authority" means authorities involved in the regulation of financial services in the United Kingdom, including the Financial Conduct Authority, the Prudential Regulation Authority and the Bank of England.

Financial stability

9W. To enable anything to be done by a person, following consultation by that person (or a person acting on their behalf) with the Bank of England, that is necessary or expedient in order to protect or enhance the stability of the financial system of the United Kingdom.

Safety and soundness of a firm

9X. To enable anything to be done by a person, following consultation by that person (or a person acting on their behalf) with the relevant supervising authority or authorities, that is necessary or expedient in order to promote the safety and soundness of a firm which is supervised by the Bank of England, the Prudential Regulation Authority or the Financial Conduct Authority.

Extraordinary situation

9Y. To enable anything to be done to deal with an extraordinary situation.**]**

PART 2

Investment in **[**F32non-government controlled Ukrainian territory**]**

Textual Amendments

F32 Words in Sch. 5 Pt. 2 heading substituted (30.3.2022 at 5.00 p.m.) by The Russia (Sanctions) (EU Exit) (Amendment) (No. 7) Regulations 2022 (S.I. 2022/395), regs. 1(2), **39(b)(i)**

Consular posts

10.—(1) To enable anything to be done in order that the functions of a consular post in **[**F33non-government controlled Ukrainian territory**]**, or of an international organisation enjoying immunities in accordance with international law, may be carried out.

F34(2) . . . . . .

Textual Amendments

F33 Words in Sch. 5 para. 10 substituted (30.3.2022 at 5.00 p.m.) by The Russia (Sanctions) (EU Exit) (Amendment) (No. 7) Regulations 2022 (S.I. 2022/395), regs. 1(2), **39(b)(ii)(aa)**

F34 Sch. 5 para. 10(2) omitted (1.3.2022) by virtue of The Russia (Sanctions) (EU Exit) (Amendment) (No. 2) Regulations 2022 (S.I. 2022/194), regs. 1(2), **14(f)**

Commencement Information

I40 Sch. 5 para. 10 in force at 31.12.2020 on IP completion day (in accordance with 2020 c. 1, **Sch. 5 para. 1(1)**), see reg. 1(2)

Medical and educational purposes

11. To enable the carrying out of projects exclusively in support of—

(a) hospitals, or other public health institutions providing medical services, or

(b) civilian education establishments, located in **[**[F35]non-government controlled Ukrainian territory**]**.

Textual Amendments

F35 Words in Sch. 5 para. 11 substituted (30.3.2022 at 5.00 p.m.) by The Russia (Sanctions) (EU Exit) (Amendment) (No. 7) Regulations 2022 (S.I. 2022/395), regs. 1(2), **39(b)(ii)(bb)**

Commencement Information

I41 Sch. 5 para. 11 in force at 31.12.2020 on IP completion day (in accordance with 2020 c. 1, **Sch. 5 para. 1(1)**), see reg. 1(2)

12. To enable anything to be done in relation to the provision or maintenance of appliances or equipment for medical use in **[**[F36]non-government controlled Ukrainian territory**]**.

Textual Amendments

F36 Words in Sch. 5 para. 12 substituted (30.3.2022 at 5.00 p.m.) by The Russia (Sanctions) (EU Exit) (Amendment) (No. 7) Regulations 2022 (S.I. 2022/395), regs. 1(2), **39(b)(ii)(cc)**

Commencement Information

I42 Sch. 5 para. 12 in force at 31.12.2020 on IP completion day (in accordance with 2020 c. 1, **Sch. 5 para. 1(1)**), see reg. 1(2)

Health and the environment

13. To enable anything to be done for the urgent prevention or mitigation of an event likely to have a serious and significant impact on human health or safety, infrastructure or the environment.

Commencement Information

I43 Sch. 5 para. 13 in force at 31.12.2020 on IP completion day (in accordance with 2020 c. 1, **Sch. 5 para. 1(1)**), see reg. 1(2)

Status:
Point in time view as at 15/07/2022.

Changes to legislation:
There are currently no known outstanding effects for the The Russia (Sanctions) (EU Exit) Regulations 2019.