Singapore Customs

Amendments to Strategic Goods (Control) Order (SGCO)

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Table of Contents

Introduction

As part of Singapore's international obligation to prevent the proliferation of weapons of mass destruction, Singapore Customs regularly updates our Strategic Goods Control List ("Control List") prescribed in the Schedule to the Strategic Goods (Control) Order (SGCO). With effect from 1 Oct 2024, the SGCO 2024 will replace the SGCO 2023.

The SGCO 2024 updates our Control List to align with the 2023 Wassenaar Arrangement Munition List ("WAML") and the 2023 European Union List of Dual-Use Items ("EUDL").

This document outlines the amendments to the SGCO 2023, presenting a side-by-side comparison of the 2023 and 2024 versions in a table format.

List of Military Goods

Definitions

Category Code	SGCO 2023	SGCO 2024
"laser" (ML9, ML13, ML17, ML19)	"laser" (ML9, ML17, ML19) means an item that produces spatially and temporally coherent light through amplification by stimulated emission of radiation;	"laser" (ML9, ML13, ML17, ML19) means an item that produces spatially and temporally coherent light through amplification by stimulated emission of radiation;

Acronyms and Abbreviations

Category Code	SGCO 2023	SGCO 2024	
AIP	-	First Column	Second Column
		Acronym or Abbreviation	Meaning
		AIP	Air Independent Propulsion
		AMPS	Aircraft Missile Protection System
		CAS	Chemical Abstracts Service
		CW	Chemical Warfare
		EMP	Electromagnetic Pulse
		NIJ	National Institute of Justice
		UV	Ultraviolet

ML8

Category Code	SGCO 2023	SGCO 2024
ML8 *Technical Notes & Note*	"Energetic materials" and related substances, as follows: --- *Technical Notes* *1. For the purpose of Category Code ML8, excluding Category Code ML8.c.11. or ML8.c.12., 'mixture' refers to a composition of two or more substances with at least one substance being listed in the sub-items under this Category Code.* *2. Any substance listed in the sub-items under Category Code ML8 is treated as coming within the description of that substance even when utilised in an application other than that indicated. (e.g. TAGN is predominantly used as an explosive but can also be used either as a fuel or an oxidiser.)* *3. For the purpose of Category Code ML8, particle size is the mean particle diameter on a weight or volume basis. International or equivalent national standards will be used in sampling and determining particle size.*	"Energetic materials" and related substances, as follows: --- *Note* *Any substance listed in the sub-items under Category Code ML8 is treated as coming within the description of that substance even when utilised in an application other than that indicated. (e.g. TAGN is predominantly used as an explosive but can also be used either as a fuel or an oxidiser.)* *Technical Notes* *1. For the purpose of Category Code ML8, excluding Category Code ML8.c.11. or ML8.c.12., 'mixture' refers to a composition of two or more substances with at least one substance being listed in the sub-items under this Category Code.* *2. For the purpose of Category Code ML8, particle size is the mean particle diameter on a weight or volume basis. International or equivalent national standards will be used in sampling and determining particle size.*

Category Code	SGCO 2023	SGCO 2024
ML8.d.3 *Note 3*	"Energetic materials" and related substances, as follows: --- d. Oxidisers as follows, and 'mixtures' thereof: --- 3. Compounds composed of fluorine and any of the following: --- *Note 1* *Category Code ML8.d.3. does not apply to chlorine trifluoride (7790-91-2).* *Note 2* *Category Code ML8.d.3. does not apply to nitrogen trifluoride (7783-54-2) in its gaseous state.*	"Energetic materials" and related substances, as follows: --- d. Oxidisers as follows, and 'mixtures' thereof: --- 3. Compounds composed of fluorine and any of the following: --- *Note 1* *Category Code ML8.d.3. does not apply to chlorine trifluoride (7790-91-2).* *Note 2* *Category Code ML8.d.3. does not apply to nitrogen trifluoride (7783-54-2) in its gaseous state.* *Note 3* *Category Code ML8.d.3. does not apply to iodine pentafluoride (7783-66-6).*

ML9

Category Code	SGCO 2023	SGCO 2024
ML9.a.2. *Technical Note*	Vessels of war (surface or underwater), special naval equipment, accessories, components and other surface vessels, as follows: --- a. Vessels and components, as follows: --- 2. Surface vessels, not specified in Category Code ML9.a.1., having any of the following, fixed or integrated into the vessel: --- d. Active weapon countermeasure systems specified in Category Code ML4.b., ML5.c. or ML11.a. and having any of the following: ---	Vessels of war (surface or underwater), special naval equipment, accessories, components and other surface vessels, as follows: --- a. Vessels and components, as follows: --- 2. Surface vessels, not specified in Category Code ML9.a.1., having any of the following, fixed or integrated into the vessel: --- d. Active weapon countermeasure systems specified in Category Code ML4.b., ML5.c. or ML11.a. and having any of the following: ---

Category Code	SGCO 2023	SGCO 2024
	1. 'CBRN protection'; --- *Technical Note* *'CBRN protection' is a self-contained interior space containing features such as over-pressurisation, isolation of ventilation systems, limited ventilation openings with CBRN filters and limited personnel access points incorporating air-locks.*	1. 'CBRN protection'; --- *Technical Note* *For the purpose of Category Code ML9.a.2., 'CBRN protection' is a self-contained interior space containing features such as over-pressurization, isolation of ventilation systems, limited ventilation openings with CBRN filters and limited personnel access points incorporating air-locks.*
ML9.a.2.c.2 *Technical Note*	Vessels of war (surface or underwater), special naval equipment, accessories, components and other surface vessels, as follows: --- a. Vessels and components, as follows: --- 2. Surface vessels, not specified in Category Code ML9.a.1., having any of the following, fixed or integrated into the vessel: --- c. Having both of the following: --- 2. 'Pre-wet or wash down system' designed for decontamination purposes; or --- *Technical Notes* *1. 'CBRN protection' is a self-contained interior space containing features such as over-pressurisation, isolation of ventilation systems, limited ventilation openings with CBRN filters and limited personnel access points incorporating air-locks.* *2. 'Pre-wet or wash down system' is a seawater spray system capable of*	Vessels of war (surface or underwater), special naval equipment, accessories, components and other surface vessels, as follows: --- a. Vessels and components, as follows: --- 2. Surface vessels, not specified in Category Code ML9.a.1., having any of the following, fixed or integrated into the vessel: --- c. Having both of the following: --- 2. 'Pre-wet or wash down system' designed for decontamination purposes; or --- *Technical Note* *For the purpose of Category Code ML9.a.2.c.2., 'pre-wet or wash down system' is a seawater spray system capable of simultaneously wetting the exterior superstructure and decks of a vessel.*

Category Code	SGCO 2023	SGCO 2024
	simultaneously wetting the exterior superstructure and decks of a vessel.	
ML9.b.4. *Technical Note, Note & N.B.*	Vessels of war (surface or underwater), special naval equipment, accessories, components and other surface vessels, as follows: --- b. Engines and propulsion systems, as follows, specially designed for military use, and components therefor specially designed for military use: --- 4. 'Air Independent Propulsion' (AIP) systems specially designed for submarines; --- *Technical Note* *'Air Independent Propulsion' (AIP) allows a submerged submarine to operate its propulsion system, without access to atmospheric oxygen, for a longer time than the batteries would have otherwise allowed. For the purpose of Category Code ML9.b.4., AIP does not include nuclear power.*	Vessels of war (surface or underwater), special naval equipment, accessories, components and other surface vessels, as follows: --- b. Engines and propulsion systems, as follows, specially designed for military use, and components therefor specially designed for military use: --- 4. 'Air Independent Propulsion' (AIP) systems specially designed for submarines; --- *Note* *Category Code ML9.b.4. does not apply to nuclear power.* *Technical Note* *For the purpose of Category Code ML9.b.4., 'AIP' allows a submerged submarine to operate its propulsion system, without access to atmospheric oxygen, for a longer time than the batteries would have otherwise allowed.* *N.B.* *See Category Code ML9.h. for nuclear power propulsion equipment.*
ML9.f. *Note, Note 1 & Note 2*	Vessels of war (surface or underwater), special naval equipment, accessories, components and other surface vessels, as follows: --- f. Hull penetrators and connectors, specially designed for military use, that enable interaction with equipment external to a vessel, and components therefor specially designed for military use; ---	Vessels of war (surface or underwater), special naval equipment, accessories, components and other surface vessels, as follows: --- f. Hull penetrators and connectors, specially designed for military use, that enable interaction with equipment external to a vessel, and components therefor specially designed for military use; ---

Category Code	SGCO 2023	SGCO 2024
	Note *Category Code ML9.f. includes connectors for vessels which are of the single-conductor, multi conductor, coaxial or waveguide type, and hull penetrators for vessels, both of which are capable of remaining impervious to leakage from without and of retaining required characteristics at marine depths exceeding 100 m; and fibre optic connectors and optical hull penetrators, specially designed for "laser" beam transmission, regardless of depth.*	*Note 1* *Category Code ML9.f. includes connectors for vessels which are of the single-conductor, multi conductor, coaxial or waveguide type, and hull penetrators for vessels, both of which are capable of remaining impervious to leakage from without and of retaining required characteristics at marine depths exceeding 100 m; and fibre optic connectors and optical hull penetrators, specially designed for "laser" beam transmission, regardless of depth.* *Note 2* *Category Code ML9.f. does not apply to ordinary propulsive shaft and hydrodynamic control rod hull penetrators.*

ML13

Category Code	SGCO 2023	SGCO 2024
ML13.d. *N.B.*	Armoured or protective equipment, constructions, components and accessories, as follows: --- d. Body armour or protective garments, and components therefor, as follows: --- *Note 5* *Category Code ML13.d.1. does not apply to protective eyewear.* *N.B.* *For laser protective eyewear, see Category Code ML17.o.*	Armoured or protective equipment, constructions, components and accessories, as follows: --- d. Body armour or protective garments, and components therefor, as follows: --- *Note 5* *Category Code ML13.d.1. does not apply to protective eyewear.* *N.B.* *For "laser" protective eyewear, see Category Code ML17.o.*

ML14

Category Code	SGCO 2023	SGCO 2024
ML14. *Technical Note & Note 3*	'Specialised equipment for military training' or for simulating military scenarios, simulators specially designed for training in the	'Specialised equipment for military training' or for simulating military scenarios, simulators specially designed for training in the

Category Code	SGCO 2023	SGCO 2024
	use of any firearm or weapon specified in Category Code ML1 or ML2, and specially designed components and accessories therefor. --- *Technical Note* *The term 'specialised equipment for military training' includes military types of attack trainers, operational flight trainers, radar target trainers, radar target generators, gunnery training devices, anti-submarine warfare trainers, flight simulators (including human-rated centrifuges for pilot/astronaut training), radar trainers, instrument flight trainers, navigation trainers, missile launch trainers, target equipment, drone "aircraft", armament trainers, pilotless "aircraft" trainers, mobile training units and training equipment for ground military operations.* *Note 1* *Category Code ML14 includes image generating and interactive environment systems for simulators, when specially designed or modified for military use.* *Note 2* *Category Code ML14 does not apply to equipment specially designed for training in the use of hunting or sporting weapons.*	use of any firearm or weapon specified in Category Code ML1 or ML2, and specially designed components and accessories therefor. --- *Note 1* *Category Code ML14 includes image generating and interactive environment systems for simulators, when specially designed or modified for military use.* *Note 2* *Category Code ML14 does not apply to equipment specially designed for training in the use of hunting or sporting weapons.* *Note 3* *'Specialised equipment for military training' includes military types of attack trainers, operational flight trainers, radar target trainers, radar target generators, gunnery training devices, anti-submarine warfare trainers, flight simulators (including human-rated centrifuges for pilot/astronaut training), radar trainers, instrument flight trainers, navigation trainers, missile launch trainers, target equipment, drone "aircraft", armament trainers, pilotless "aircraft" trainers, mobile training units and training equipment for ground military operations.*

ML15

Category Code	SGCO 2023	SGCO 2024
ML15 *N.B.*	Imaging or countermeasure equipment, as follows, specially designed for military use, and specially designed components and accessories therefor: --- *N.B.* *See also Category Codes 6A002.a.2. and 6A002.b. in Division 2 of Part 2 of this Schedule.*	Imaging or countermeasure equipment, as follows, specially designed for military use, and specially designed components and accessories therefor: --- *N.B.* *See also Category Codes 6A002.a.2., 6A002.b. and 6A003.b. in Division 2 of Part 2 of this Schedule.*

ML17

Category Code	SGCO 2023	SGCO 2024
ML17.e.3. *Technical Note*	Miscellaneous equipment, materials and "libraries", as follows, and specially designed components therefor: --- e. "Robots", "robot" controllers and "robot" "end-effectors", having any of the following characteristics: --- 3. Specially designed or rated for operating in an electromagnetic pulse (EMP) environment; *Technical Note* *Electromagnetic pulse does not refer to unintentional interference caused by electromagnetic radiation from nearby equipment (e.g. machinery, appliances or electronics) or lightning.*	Miscellaneous equipment, materials and "libraries", as follows, and specially designed components therefor: --- e. "Robots", "robot" controllers and "robot" "end-effectors", having any of the following characteristics: --- 3. Specially designed or rated for operating in an electromagnetic pulse (EMP) environment; *Technical Note* *For the purpose of Category Code ML18, 'EMP' does not refer to unintentional interference caused by electromagnetic radiation from nearby equipment (e.g. machinery, appliances or electronics) or lightning.*

ML18

Category Code	SGCO 2023	SGCO 2024
ML18.a. & ML18.b.	'Production' equipment, environmental test facilities and components, as follows: --- a. Specially designed or modified 'production' equipment for the 'production' of products specified in this Division, and specially designed components therefor; b. Specially designed environmental test facilities and specially designed equipment therefor, not specified elsewhere, for the certification, qualification or testing of products specified in this Division.	'Production' equipment, environmental test facilities and components, as follows: --- a. Equipment specially designed or modified for the 'production' of items specified in this Division, and specially designed components therefor; b. Environmental test facilities specially designed for the certification, qualification or testing of items specified in this Division, and specially designed equipment therefore, not specified elsewhere.

List of Dual-Use Goods

General Note

Subdivision 1 General Note	SGCO 2023	SGCO 2024
General Note 4.	4. Chemicals in Division 2 are listed by name and CAS number. Chemicals of the same structural formula (including hydrates) as chemicals listed in Division 2 are to be considered as coming within the descriptions of the second-mentioned chemicals regardless of name or CAS number. CAS numbers are shown in order to assist in identifying whether a particular chemical or mixture is a chemical within Division 2, irrespective of nomenclature. CAS numbers are not intended to be used as unique identifiers, because some forms of the listed chemical have different CAS numbers, and mixtures containing a listed chemical may also have different CAS numbers.	4. Chemicals in Division 2 are listed by name and CAS number. Chemicals of the same structural formula (including hydrates, isotopically-labelled forms or all possible stereoisomers) as chemicals listed in Division 2 are to be considered as coming within the descriptions of the second-mentioned chemicals regardless of name or CAS number. CAS numbers are shown in order to assist in identifying whether a particular chemical or mixture is a chemical within Division 2, irrespective of nomenclature. CAS numbers are not intended to be used as unique identifiers, because some forms of the listed chemical have different CAS numbers, and mixtures containing a listed chemical may also have different CAS numbers.

Definitions

Category Code	SGCO 2023	SGCO 2024
"program" (Categories 1,7)	-	"program" (Categories 1, 7) means a sequence of instructions to carry out a process in, or convertible into, a form executable by an electronic computer;

Category 1

1B001

Category Code	SGCO 2023	SGCO 2024
1B001 *Technical Notes*	Equipment for the production or inspection of "composite" structures or laminates specified in Category Code 1A002 or "fibrous or filamentary materials" specified in Category Code	Equipment for the production or inspection of "composite" structures or laminates specified in Category Code 1A002 or "fibrous or filamentary materials" specified in Category Code

Category Code	SGCO 2023	SGCO 2024
	1C010, as follows, and specially designed components and accessories therefor: --- *Technical Notes* *1. For the purpose of Category Code 1B001, 'primary servo positioning' axes control, under computer program direction, the position of the end effector (i.e. head) in space relative to the workpiece at the correct orientation and direction to achieve the desired process.*	1C010, as follows, and specially designed components and accessories therefor: --- *Technical Notes* *1. For the purpose of Category Code 1B001, 'primary servo positioning' axes control, under computer "program" direction, the position of the end effector (i.e. head) in space relative to the workpiece at the correct orientation and direction to achieve the desired process.*

1C002

Category Code	SGCO 2023	SGCO 2024
1C002 *Technical Notes*	Metal alloys, metal alloy powder and alloyed materials, as follows: --- *Technical Notes* *1. The metal alloys in Category Code 1C002 are those containing a higher percentage by weight of the stated metal than of any other element.* *2. 'Stress-rupture life' is measured in accordance with ASTM standard E-139 or national equivalents.* *3. 'Low cycle fatigue life' is measured in accordance with ASTM standard E-606 'Recommended Practice for Constant-Amplitude Low-Cycle Fatigue Testing' or national equivalents. Testing should be axial with an average stress ratio equal to 1 and a stress-concentration factor (K_t) equal to 1. The average stress ratio is defined as maximum stress minus minimum stress divided by maximum stress.*	Metal alloys, metal alloy powder and alloyed materials, as follows: --- *Technical Note* *For the purpose of Category Code 1C002, metal alloys are those containing a higher percentage by weight of the stated metal than of any other element.*
1C002.b. *Technical Notes*	Metal alloys, metal alloy powder and alloyed materials, as follows: --- *Technical Notes*	Metal alloys, metal alloy powder and alloyed materials, as follows: --- b. Metal alloys, as follows, made from the powder or particulate

	1. The metal alloys in Category Code 1C002 are those containing a higher percentage by weight of the stated metal than of any other element. *2. 'Stress-rupture life' is measured in accordance with ASTM standard E-139 or national equivalents.* *3. 'Low cycle fatigue life' is measured in accordance with ASTM standard E-606 'Recommended Practice for Constant-Amplitude Low-Cycle Fatigue Testing' or national equivalents. Testing should be axial with an average stress ratio equal to 1 and a stress-concentration factor (K_t) equal to 1. The average stress ratio is defined as maximum stress minus minimum stress divided by maximum stress.*	material specified in Category Code 1C002.c.: --- *Technical Notes* *For the purpose of Category Code 1C002.b.:* *1. 'Stress-rupture life' should be measured in accordance with ASTM standard E-139 or national equivalents.* *2. 'Low cycle fatigue life' should be measured in accordance with ASTM Standard E-606 'Recommended Practice for Constant-Amplitude Low-Cycle Fatigue Testing' or national equivalents. Testing should be axial with an average stress ratio equal to 1 and a stress-concentration factor (K_t) equal to 1. The average stress ratio is defined as maximum stress minus minimum stress divided by maximum stress.*

1C351

Category Code	SGCO 2023	SGCO 2024
1C351.d.	Human and animal pathogens and "toxins", as follows: --- d. "Toxins", as follows, and "sub-unit of toxins" thereof: --- 1. Botulinum toxins; 2. Clostridium perfringens alpha, beta 1, beta 2, epsilon and iota toxins; 3. Conotoxin; 4. Ricin; 5. Saxitoxin; 6. Shiga toxins (shiga like toxins, verotoxins and verocytotoxins); 7. Staphylococcus aureus enterotoxins, hemolysin alpha toxin, and toxic shock syndrome toxin (formerly known as Staphylococcus enterotoxin F); 8. Tetrodotoxin; 9. Not used;	Human and animal pathogens and "toxins", as follows: --- d. "Toxins", as follows, and "sub-unit of toxins" thereof: --- 1. Botulinum toxins; 2. Clostridium perfringens alpha, beta 1, beta 2, epsilon and iota toxins; 3. Conotoxin; 4. Ricin; 5. Saxitoxin; 6. Shiga toxins (shiga like toxins, verotoxins and verocytotoxins); 7. Staphylococcus aureus enterotoxins, hemolysin alpha toxin, and toxic shock syndrome toxin (formerly known as Staphylococcus enterotoxin F); 8. Tetrodotoxin; 9. Not used;

Category Code	SGCO 2023	SGCO 2024
	10. Microcystins (Cyanginosins); 11. Aflatoxins; 12. Abrin; 13. Cholera toxin; 14. Diacetoxyscirpenol; 15. T-2 toxin; 16. HT-2 toxin; 17. Modeccin; 18. Volkensin; 19. Viscumin (Viscum Album Lectin 1);	10. Microcystins (Cyanginosins); 11. Aflatoxins; 12. Abrin; 13. Not used; 14. Diacetoxyscirpenol; 15. T-2 toxin; 16. HT-2 toxin; 17. Modeccin; 18. Volkensin; 19. Viscumin (Viscum Album Lectin 1); 20. Brevetoxins; 21. Gonyautoxins; 22. Nodularins; 23. Palytoxin;

1C353

Category Code	SGCO 2023	SGCO 2024
1C353.a.1.	'Genetic elements' and 'genetically-modified organisms', as follows: --- a. Any 'genetically modified organism' which contains, or 'genetic element' that codes for, any of the following: --- 1. Any gene or genes specific to any virus specified in Category Code Code 1C351.a. or 1C354.a.;	'Genetic elements' and 'genetically-modified organisms', as follows: --- a. Any 'genetically modified organism' which contains, or 'genetic element' that codes for, any of the following: --- 1. Any gene, genes, translated product or translated products, specific to any virus specified in Category Code Code 1C351.a. or 1C354.a.;

1C354

Category Code	SGCO 2023	SGCO 2024
1C354.c.	Plant pathogens, as follows: ---	Plant pathogens, as follows: ---

Category Code	SGCO 2023	SGCO 2024
	c. Fungi, whether natural, enhanced or modified, either in the form of "isolated live cultures" or as material which has been deliberately inoculated or contaminated with such cultures, as follows: --- 1. Colletotrichum kahawae (Colletotrichum coffeanum var. virulans); 2. Cochliobolus miyabeanus (Helminthosporium oryzae); 3. Microcyclus ulei (syn. Dothidella ulei);	c. Fungi, whether natural, enhanced or modified, either in the form of "isolated live cultures" or as material which has been deliberately inoculated or contaminated with such cultures, as follows: --- 1. Colletotrichum kahawae (Colletotrichum coffeanum var. virulans); 2. Bipolaris oryzae (Cochliobolus miyabeanus, Helminthosporium oryzae); 3. Pseudocercospora ulei (Microcyclus ulei, Dothidella ulei);

Category 2

2B206

Category Code	SGCO 2023	SGCO 2024
2B206.a.1.	Dimensional inspection machines, instruments or systems, other than those specified in Category Code 2B006, as follows: --- a. Computer controlled or numerically controlled Coordinate Measuring Machines (CMM) having either of the following characteristics: --- 1. Having only two axes and having a maximum permissible error of length measurement along any axis (one dimensional), identified as any combination of E0x,MPE, E0y,MPE, or E0z,MPE, equal to or less (better) than (1.25 + L/1,000) µm (where L is the measured length in mm) at any point within the operating range of the machine (i.e. within the length of the axis), according to Ref. ISO 10360 2:2009; or	Dimensional inspection machines, instruments or systems, other than those specified in Category Code 2B006, as follows: --- a. Computer controlled or numerically controlled Coordinate Measuring Machines (CMM) having either of the following characteristics: --- 1. Having only two axes and having a maximum permissible error of length measurement along any axis (one dimensional), identified as any combination of E0x,MPE, E0y,MPE, or E0z,MPE, equal to or less (better) than 4(1.25 + L/1,000) µm (where L is the measured length in mm) at any point within the operating range of the machine (i.e. within the length of the axis), according to Ref. ISO 10360 2:2009; or

2B209

Category Code	SGCO 2023	SGCO 2024
2B209.b.	Flow forming machines, spin forming machines capable of flow forming functions, other than those specified in Category Code 2B009 or 2B109, and mandrels, as follows: --- b. Rotor-forming mandrels designed to form cylindrical rotors of inside diameter between 75 mm and 400 mm.	Flow forming machines, spin forming machines capable of flow forming functions, other than those specified in Category Code 2B009 or 2B109, and mandrels, as follows: --- b. Rotor-forming mandrels designed to form cylindrical rotors of inside diameter between 75 mm and 650 mm.

2B228

Category Code	SGCO 2023	SGCO 2024
2B228.c. *Technical Note a*	Rotor fabrication or assembly equipment, rotor straightening equipment, bellows-forming mandrels and dies, as follows: --- c. Bellows-forming mandrels and dies for producing single-convolution bellows. --- *Technical Note* *a. Inside diameter between 75 mm and 400 mm;*	Rotor fabrication or assembly equipment, rotor straightening equipment, bellows-forming mandrels and dies, as follows: --- c. Bellows-forming mandrels and dies for producing single-convolution bellows. --- *Technical Note* *a. Inside diameter between 75 mm and 650 mm;*

2B352

Category Code	SGCO 2023	SGCO 2024
2B352.d.1.b.	Biological manufacturing and handling equipment, as follows: --- d. Cross (tangential) flow filtration equipment and components as follows: --- 1. Cross (tangential) flow filtration equipment capable of separation of “microorganisms”, viruses, toxins or cell	Biological manufacturing and handling equipment, as follows: --- d. Cross (tangential) flow filtration equipment and components as follows: --- 1. Cross (tangential) flow filtration equipment capable of separation of “microorganisms”, viruses, toxins or cell

Category Code	SGCO 2023	SGCO 2024
	cultures having both of the following characteristics: --- b. Having either of the following characteristics: 1. Capable of being sterilised or disinfected *in situ*; or 2. Using disposable or single use filtration components; *Technical Note* *In Category Code 2B352.d.1.b., sterilised denotes the elimination of all viable microbes from the equipment through the use of either physical (e.g. steam) or chemical agents. Disinfected denotes the destruction of potential microbial infectivity in the equipment through the use of chemical agents with a germicidal effect. Disinfection and sterilisation are distinct from sanitisation, the latter referring to cleaning procedures designed to lower the microbial content of equipment without necessarily achieving elimination of all microbial infectivity or viability.*	cultures having both of the following characteristics: --- b. Having either of the following characteristics: 1. Capable of being 'sterilised' or 'disinfected' *in situ*; or 2. Using disposable or single use filtration components; *Technical Note* *In Category Code 2B352.d.1.b., 'sterilised' denotes the elimination of all viable microbes from the equipment through the use of either physical (e.g. steam) or chemical agents. 'Disinfected' denotes a process to reduce the number of microorganisms but not usually of bacterial spores, through the use of chemical agents, without necessarily killing or removing all organisms.*
2B352.f. *Note 2*	Biological manufacturing and handling equipment, as follows: --- f. Protective and containment equipment, as follows: --- *Note 2* *Category Code 2B352.f.2. includes any isolator meeting all of the abovementioned characteristics, regardless of its intended use and its designation.*	Biological manufacturing and handling equipment, as follows: --- f. Protective and containment equipment, as follows: --- *Note 2* *Category Code 2B352.f.2. includes any isolator meeting all of the abovementioned characteristics, regardless of its intended use and its designation, except for medical isolators specially designed for barrier nursing or transportation of*

Category Code	SGCO 2023	SGCO 2024
		infected patients.

Category 3

3B001

Category Code	SGCO 2023	SGCO 2024
3B001.e. *Technical Notes*	Equipment for the manufacturing of semiconductor devices or materials, as follows and specially designed components and accessories therefor: --- e. Automatic loading multi chamber central wafer handling systems, having both of the following characteristics: --- <u>*Technical Notes*</u> *1. For the purpose of Category Code 3B001.e., 'semiconductor process tools' refers to modular tools that provide physical processes for semiconductor production that are functionally different, such as deposition, implant or thermal processing.* *2. For the purpose of Category Code 3B001.e., 'sequential multiple wafer processing' means the capability to process each wafer in different 'semiconductor process tools', such as by transferring each wafer from one tool to a second tool and on to a third tool with the automatic loading multi chamber central wafer handling systems.*	Equipment for the manufacturing of semiconductor devices or materials, as follows and specially designed components and accessories therefor: --- e. Automatic loading multi chamber central wafer handling systems, having both of the following characteristics: --- <u>*Technical Notes*</u> *1. For the purpose of Category Code 3B001.e.1., 'semiconductor process tools' refers to modular tools that provide physical processes for semiconductor production that are functionally different, such as deposition, implant or thermal processing.* *2. For the purpose of Category Code 3B001.e.2., 'sequential multiple wafer processing' means the capability to process each wafer in different 'semiconductor process tools', such as by transferring each wafer from one tool to a second tool and on to a third tool with the automatic loading multi chamber central wafer handling systems.*

Category 4

4D001

Category Code	SGCO 2023	SGCO 2024
4D001.b.1.	"Software" as follows:	"Software" as follows:

Category Code	SGCO 2023	SGCO 2024
	--- b. "Software", other than that specified in Category Code 4D001.a., specially designed or modified for the "development" or "production" of equipment, as follows: --- 1. "Digital computers" having an "Adjusted Peak Performance" ("APP") exceeding 15 Weighted TeraFLOPS (WT);	--- b. "Software", other than that specified in Category Code 4D001.a., specially designed or modified for the "development" or "production" of equipment, as follows: --- 1. "Digital computers" having an "Adjusted Peak Performance" ("APP") exceeding 24 Weighted TeraFLOPS (WT);

4E001

Category Code	SGCO 2023	SGCO 2024
4E001.b.1	Technology --- b. "Technology" (according to the General Technology Note), other than that specified in Category Code 4E001.a., for the "development" or "production" of equipment as follows: --- 1. "Digital computers" having an "Adjusted Peak Performance" ("APP") exceeding 15 Weighted TeraFLOPS (WT);	Technology --- b. "Technology" (according to the General Technology Note), other than that specified in Category Code 4E001.a., for the "development" or "production" of equipment as follows: --- 1. "Digital computers" having an "Adjusted Peak Performance" ("APP") exceeding 24 Weighted TeraFLOPS (WT);

Category 6

6A004

Category Code	SGCO 2023	SGCO 2024
6A004.a.1. *Technical Notes*	Optical equipment and components, as follows: --- a. Optical mirrors (reflectors) as follows: --- 1. 'Deformable mirrors' having an active optical aperture	Optical equipment and components, as follows: --- a. Optical mirrors (reflectors) as follows: --- 1. 'Deformable mirrors' having an active optical aperture

Category Code	SGCO 2023	SGCO 2024
	greater than 10 mm and having either of the following characteristics, and specially designed components therefor: --- *Technical Note* *'Deformable mirrors' are mirrors having either of the following characteristics:* *a. A single continuous optical reflecting surface which is dynamically deformed by the application of individual torques or forces to compensate for distortions in the optical waveform incident upon the mirror; or* *b. Multiple optical reflecting elements that can be individually and dynamically repositioned by the application of torques or forces to compensate for distortions in the optical waveform incident upon the mirror.* *'Deformable mirrors' are also known as adaptive optic mirrors.*	greater than 10 mm and having either of the following characteristics, and specially designed components therefor: --- *Technical Notes* *For the purpose of Category Code 6A004.a.1.:* *1. 'Deformable mirrors' are mirrors having either of the following characteristics:* *a. A single continuous optical reflecting surface which is dynamically deformed by the application of individual torques or forces to compensate for distortions in the optical waveform incident upon the mirror; or* *b. Multiple optical reflecting elements that can be individually and dynamically repositioned by the application of torques or forces to compensate for distortions in the optical waveform incident upon the mirror.* *2. 'Deformable mirrors' are also known as adaptive optic mirrors.*

6A005

Category Code	SGCO 2023	SGCO 2024
6A005.b.3.a.2.	"Lasers", other than those specified in Category Code 0B001.g.5. or 0B001.h.6., components and optical equipment, as follows: --- b. Non-"tunable" "pulsed lasers" having any of the following characteristics: --- 3. Output wavelength exceeding 510 nm but not exceeding 540 nm, and either of the following characteristics:	"Lasers", other than those specified in Category Code 0B001.g.5. or 0B001.h.6., components and optical equipment, as follows: --- b. Non-"tunable" "pulsed lasers" having any of the following characteristics: --- 3. Output wavelength exceeding 510 nm but not exceeding 540 nm, and either of the following characteristics:

Category Code	SGCO 2023	SGCO 2024
	--- a. ‘Single transverse mode’ output, and either of the following characteristics: --- 2. “Average output power” exceeding 50 W; or	--- a. ‘Single transverse mode’ output, and either of the following characteristics: --- 2. “Average output power” exceeding 80 W; or
6A005.d.1.a.1.	“Lasers”, other than those specified in Category Code 0B001.g.5. or 0B001.h.6., components and optical equipment, as follows: --- d. Other “lasers”, not specified in Category Code 6A005.a., 6A005.b. or 6A005.c. as follows: --- 1. Semiconductor “lasers” as follows: --- a. Individual single-transverse mode semiconductor “lasers” having either of the following characteristics: --- 1. Wavelength equal to or less than 1,510 nm and average or CW output power, exceeding 1.5 W; or	“Lasers”, other than those specified in Category Code 0B001.g.5. or 0B001.h.6., components and optical equipment, as follows: --- d. Other “lasers”, not specified in Category Code 6A005.a., 6A005.b. or 6A005.c. as follows: --- 1. Semiconductor “lasers” as follows: --- a. Individual single-transverse mode semiconductor “lasers” having either of the following characteristics: --- 1. Wavelength equal to or less than 1,570 nm and average or CW output power, exceeding 2.0 W; or
6A005.d.1.a.2.	“Lasers”, other than those specified in Category Code 0B001.g.5. or 0B001.h.6., components and optical equipment, as follows: --- d. Other “lasers”, not specified in Category Code 6A005.a., 6A005.b. or 6A005.c. as follows: --- 1. Semiconductor “lasers” as follows: --- a. Individual single-transverse mode semiconductor “lasers” having either of the following characteristics: ---	“Lasers”, other than those specified in Category Code 0B001.g.5. or 0B001.h.6., components and optical equipment, as follows: --- d. Other “lasers”, not specified in Category Code 6A005.a., 6A005.b. or 6A005.c. as follows: --- 1. Semiconductor “lasers” as follows: --- a. Individual single-transverse mode semiconductor “lasers” having either of the following characteristics: ---

Category Code	SGCO 2023	SGCO 2024
	2. Wavelength greater than 1,510 nm and average or CW output power, exceeding 500 mW;	2. Wavelength greater than 1,570 nm and average or CW output power, exceeding 500 mW;

6B007

Category Code	SGCO 2023	SGCO 2024
6B007	Equipment to produce, align and calibrate land-based gravity meters with a static "accuracy" of better than 0.1 mGal.	Equipment to produce, align and calibrate land-based gravity meters with a static "accuracy" of less (better) than 0.1 mGal.

6C005

Category Code	SGCO 2021 read with SGCAO 2022	SGCO 2023
6C005.b. *Technical Notes*	"Laser" materials as follows: --- b. Rare-earth-metal doped double-clad fibres having either of the following characteristics: --- *Technical Notes* *1. For the purpose of Category Code 6C005.b., the core 'Numerical Aperture' ('NA') is measured at the emission wavelengths of the fibre.*	"Laser" materials as follows: --- b. Rare-earth-metal doped double-clad fibres having either of the following characteristics: --- *Technical Notes* *1. For the purpose of Category Code 6C005.b.1.b., the core 'Numerical Aperture' ('NA') is measured at the emission wavelengths of the fibre.*

Category 7

7A003

Category Code	SGCO 2023	SGCO 2024
7A003 *Note 2 & Note*	'Inertial measurement equipment or systems', having any of the following characteristics: --- *Note 2* *Category Code 7A003 does not include 'inertial measurement*	'Inertial measurement equipment or systems', having any of the following characteristics: --- *Note* *Category Code 7A003 does not include 'inertial measurement*

Category Code	SGCO 2023	SGCO 2024
	equipment or systems' which are certified for use on "civil aircraft" by civil aviation authorities of one or more "participating states".	*equipment or systems' which are certified for use on "civil aircraft" by civil aviation authorities of one or more "participating states".*
7A003 *Note 1 & Technical Notes*	'Inertial measurement equipment or systems', having any of the following characteristics: --- *Note 1* *'Inertial measurement equipment or systems' incorporate accelerometers or gyroscopes to measure changes in velocity and orientation in order to determine or maintain heading or position without requiring an external reference once aligned. 'Inertial measurement equipment or systems' include:* – *Attitude and Heading Reference Systems (AHRSs);* – *Gyrocompasses;* – *Inertial Measurement Units (IMUs);* – *Inertial Navigation Systems (INSs);* – *Inertial Reference Systems (IRSs);* – *Inertial Reference Units (IRUs).*	'Inertial measurement equipment or systems', having any of the following characteristics: --- *Technical Notes:* *1. For the purpose of Category Code 7A003, 'inertial measurement equipment or systems' incorporate accelerometers or gyroscopes to measure changes in velocity and orientation in order to determine or maintain heading or position without requiring an external reference once aligned. 'Inertial measurement equipment or systems' include:* – *Attitude and Heading Reference Systems (AHRSs);* – *Gyrocompasses;* – *Inertial Measurement Units (IMUs);* – *Inertial Navigation Systems (INSs);* – *Inertial Reference Systems (IRSs);* – *Inertial Reference Units (IRUs).*

7D004

Category Code	SGCO 2023	SGCO 2024
7D004 *Note*	"Source code" incorporating "development" "technology" specified in Category Code 7E004.a.2., 7E004.a.3., 7E004.a.5., 7E004.a.6. or 7E004.b., for any of the following: --- *Note*	"Source code" incorporating "development" "technology" specified in Category Code 7E004.a.2., 7E004.a.3., 7E004.a.5., 7E004.a.6. or 7E004.b., for any of the following: --- *Note*

Category Code	SGCO 2023	SGCO 2024
	Category Code 7D004 does not include "source code" associated with common computer elements and utilities (e.g. input signal acquisition, output signal transmission, computer program and data loading, built-in test, task scheduling mechanisms) not providing a specific flight control system function.	*Category Code 7D004 does not include "source code" associated with common computer elements and utilities (e.g. input signal acquisition, output signal transmission, computer "program" and data loading, built-in test, task scheduling mechanisms) not providing a specific flight control system function.*

7E004

Category Code	SGCO 2023	SGCO 2024
7E004 *Note*	Other "technology" as follows: --- *Note* *Category Code 7E004.b. does not include "technology" associated with common computer elements and utilities (e.g. input signal acquisition, output signal transmission, computer program and data loading, built in test, task scheduling mechanisms) not providing a specific flight control system function.*	Other "technology" as follows: --- *Note* *Category Code 7E004.b. does not include "technology" associated with common computer elements and utilities (e.g. input signal acquisition, output signal transmission, computer "program" and data loading, built in test, task scheduling mechanisms) not providing a specific flight control system function.*

Category 8

8A001

Category Code	SGCO 2023	SGCO 2024
8A001.c.1.c.	Submersible vehicles and surface vessels, as follows: --- c. Unmanned submersible vehicles, as follows: --- 1. Unmanned submersible vehicles having any of the following characteristics: --- c. Optical data or command link exceeding 1,000 m;	Submersible vehicles and surface vessels, as follows: --- c. Unmanned submersible vehicles, as follows: --- 1. Unmanned submersible vehicles having any of the following characteristics: --- c. Wireless optical data or command link exceeding 1,000 m;

8A002

Category Code	SGCO 2023	SGCO 2024
8A002.o.2.b.	Marine systems, equipment and components, as follows: --- o. Propellers, power transmission systems, power generation systems and noise reduction systems, as follows: --- 2. Water-screw propeller, power generation systems or transmission systems, designed for use on vessels, as follows: --- b. Internally liquid-cooled electric propulsion engines with a power output exceeding 2.5 MW;	Marine systems, equipment and components, as follows: --- o. Propellers, power transmission systems, power generation systems and noise reduction systems, as follows: --- 2. Water-screw propeller, power generation systems or transmission systems, designed for use on vessels, as follows: --- b. Internally liquid-cooled electric propulsion motors with a power output exceeding 2.5 MW;
8A002.o.2.c.	Marine systems, equipment and components, as follows: --- o. Propellers, power transmission systems, power generation systems and noise reduction systems, as follows: --- 2. Water-screw propeller, power generation systems or transmission systems, designed for use on vessels, as follows: ---c. "Superconductive" propulsion engines or permanent magnet electric propulsion engines, with a power output exceeding 0.1 MW;	Marine systems, equipment and components, as follows: --- o. Propellers, power transmission systems, power generation systems and noise reduction systems, as follows: --- 2. Water-screw propeller, power generation systems or transmission systems, designed for use on vessels, as follows: --- c. "Superconductive" propulsion motors, with a power output exceeding 0.1 MW;
8A002.o.4.	Marine systems, equipment and components, as follows: --- o. Propellers, power transmission systems, power generation systems and noise reduction systems, as follows:	Marine systems, equipment and components, as follows: --- o. Propellers, power transmission systems, power generation systems and noise reduction systems, as follows: --- 4. Permanent magnet electric propulsion motors specially designed for submersible vehicles, having a power output exceeding 0.1 MW; *Note*

Category Code	SGCO 2023	SGCO 2024
		Category Code 8A002.o.4. includes rim-driven propulsion systems.

Category 9

9A001

Category Code	SGCO 2023	SGCO 2024
9A001 *Note 1*	Aero gas turbine engines having either of the following characteristics: --- a. Incorporating any of the "technologies" specified in Category Code 9E003.a., 9E003.h. or 9E003.i.; or --- *Note 1* *Category Code 9A001.a. does not include aero gas turbine engines which meet both of the following:*	Aero gas turbine engines having either of the following characteristics: --- a. Incorporating any of the "technologies" specified in Category Code 9E003.a., 9E003.h. or 9E003.i.; or --- *Note 1* *Category Code 9A001 does not include aero gas turbine engines which meet both of the following:*
9A001.b.	Aero gas turbine engines having either of the following characteristics: --- b. Designed to power an "aircraft" to cruise at Mach 1 or higher, for more than 30 minutes.	Aero gas turbine engines having either of the following characteristics: --- b. Not used.

9A003

Category Code	SGCO 2023	SGCO 2024
9A003	Specially designed assemblies or components, incorporating any of the "technologies" specified in Category Code 9E003.a., 9E003.h., or 9E003.i. for either of the following aero gas turbine engines:	Specially designed assemblies or components, incorporating any of the "technologies" specified in Category Code 9E003.a., 9E003.h., 9E003.i., or 9E003.k. for either of the following aero gas turbine engines:

9A115

Category Code	SGCO 2023	SGCO 2024
9A115.a. *Technical Notes*	Launch support equipment as follows: --- a. Apparatus and devices for handling, control, activation or launching, designed or modified for space launch vehicles specified in Category Code 9A004, sounding rockets specified in Category Code 9A104 or 'missiles'; --- *Technical Note* *In Category Code 9A115.a., 'missile' means complete rocket systems and unmanned aerial vehicle systems capable of a range exceeding 300 km.*	Launch support equipment as follows: --- a. Apparatus and devices for handling, control, activation or launching, designed or modified for space launch vehicles specified in Category Code 9A004, sounding rockets specified in Category Code 9A104 or 'missiles'; --- *Technical Notes* *1. In Category Code 9A115.a., 'missile' means complete rocket systems and unmanned aerial vehicle systems capable of a range exceeding 300 km.* *2. Apparatus and devices specified in Category Code 9A115.a include those installed on a manned aircraft or an unmanned aerial vehicle.*

9E001

Category Code	SGCO 2023	SGCO 2024
9E001	"Technology" (according to the General Technology Note) for the "development" of equipment or "software", specified in Category Code 9A001.b., 9A004 to 9A012, 9A350, Category 9B or 9D.	"Technology" (according to the General Technology Note) for the "development" of equipment or "software", specified in Category Code 9A004 to 9A012, 9A350, Category 9B or 9D.

9E002

Category Code	SGCO 2023	SGCO 2024
9E002	"Technology" (according to the General Technology Note) for the "production" of equipment specified in Category Code 9A001.b., 9A004 to 9A011, 9A350 or Category 9B.	"Technology" (according to the General Technology Note) for the "production" of equipment specified in Category Code 9A004 to 9A011, 9A350 or Category 9B.

9E003

Category Code	SGCO 2023	SGCO 2024
9E003.k.	Other “technology” as follows:	Other “technology” as follows: --- k. “Technology”, not specified in 9E003.a., 9E003.h., or 9E003.i., “required” for the “development” of any of the following components or systems, specially designed for aero gas turbine engines to enable “aircraft” to cruise at Mach 1 or greater for more than 30 minutes: 1. Propulsion inlet systems; 2. Propulsion exhaust systems; 3. ‘Reheat systems'; 4. ‘Active thermal management systems’ to condition fluids used to lubricate or cool ‘engine rotor supports’; 5. Oil-free ‘engine rotor supports’; or 6. Systems to remove heat from ‘compression system’ core gas path flow. *Technical Notes* *For the purposes of Category Code 9E003.k.:* *1. Propulsion inlet systems include core flow pre-coolers.* *2. ‘Reheat systems’ provide additional thrust by combusting fuel in exhaust and/or bypass flow downstream of the last turbomachinery stage. 'Reheat systems' are also referred to as afterburners.* *3. ‘Active thermal management systems’ employ methods other than passive oil-to-air cooling or oil-to-fuel cooling, such as vapour cycle systems.* *4. ‘Compression system’ is any stage or combination of stages between the engine inlet face and the combustor that increases gas path pressure through mechanical work.* *5. An ‘engine rotor support’ is the bearing supporting the main engine shaft that drives the compression system or turbine rotors.* *N.B. 1*

Category Code	SGCO 2023	SGCO 2024
		See Category Code 9E003.h. for engine control technology. *N.B. 2* *See Category Code 9E003.i. for adjustable flow path systems.*

9E101

Category Code	SGCO 2023	SGCO 2024
9E101	a. "Technology" (according to the General Technology Note) for the "development" of goods specified in Category Code 9A101, 9A102, 9A104 to 9A111, 9A112.a. or 9A115 to 9A121.	"Technology" as follows: --- a. "Technology" (according to the General Technology Note) for the "development" of goods specified in Category Code 9A101, 9A102, 9A104 to 9A111, 9A112.a. or 9A115 to 9A121;

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