Singapore Customs Amendments to Strategic Goods (Control) Order (SGCO)

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

Category Code	SGCO 2023	SGCO 2024
ML8 Technical	"Energetic materials" and related substances, as follows:	"Energetic materials" and related substances, as follows:
Notes & Note		
	<u>Technical Notes</u>	<u>Note</u>
	1. For the purpose of Category Code ML8, excluding	Any substance listed in the sub-items under Category Code ML8
	Category Code ML8.c.11. or ML8.c.12., 'mixture' refers	is treated as coming within the description of that substance even
	to a composition of two or more substances with at least	when utilised in an application other than that indicated. (e.g.
	one substance being listed in the sub-items under this	TAGN is predominantly used as an explosive but can also be used
	Category Code.	either as a fuel or an oxidiser.)
	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.)	 <u>Technical Notes</u> <u>I</u>. 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.
	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.	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:	"Energetic materials" and related substances, as follows:
	d. Oxidisers as follows, and 'mixtures' thereof:	d. Oxidisers as follows, and 'mixtures' thereof:
	3. Compounds composed of fluorine and any of the	3. Compounds composed of fluorine and any of the
	following:	following:
	<u>Note 1</u>	<u>Note 1</u>
	Category Code ML8.d.3. does not apply to chlorine	Category Code ML8.d.3. does not apply to chlorine
	trifluoride (7790-91-2).	<i>trifluoride (7790-91-2).</i>
	<u>Note 2</u>	<u>Note 2</u>
	Category Code ML8.d.3. does not apply to nitrogen	Category Code ML8.d.3. does not apply to nitrogen
	trifluoride (7783-54-2) in its gaseous state.	trifluoride (7783-54-2) in its gaseous state.
		<u>Note 3</u>
		Category Code ML8.d.3. does not apply to iodine
		pentafluoride (7783-66-6).

Category Code	SGCO 2023	SGCO 2024
ML9.a.2. <i>Technical</i> <i>Note</i>	Vessels of war (surface or underwater), special naval equipment, accessories, components and other surface vessels, as follows:	Vessels of war (surface or underwater), special naval equipment, accessories, components and other surface vessels, as follows:
	a. Vessels and components, as follows:	a. Vessels and components, as follows:
	 Surface vessels, not specified in Category Code ML9.a.1., having any of the following, fixed or integrated into the vessel: 	 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:	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';	1. 'CBRN protection';
	 <u>Technical Note</u> '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.	 <u>Technical Note</u> 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	Vessels of war (surface or underwater), special naval equipment,	Vessels of war (surface or underwater), special naval equipment,
Technical Note	accessories, components and other surface vessels, as follows:	accessories, components and other surface vessels, as follows:
	a. Vessels and components, 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:	 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:	c. Having both of the following:
	2. 'Pre-wet or wash down system' designed for decontamination purposes; <u>or</u>	2. 'Pre-wet or wash down system' designed for decontamination purposes; <u>or</u>
	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	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: 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
	<u>Note</u> 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. <u>Note 2</u> Category Code ML9.f. does not apply to ordinary propulsive shaft and hydrodynamic control rod hull penetrators.

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

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

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

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

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

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List of Dual-Use Goods

General Note

Subdivision 1	SGCO 2023	SGCO 2024	
General Note			
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
<mark>"program"</mark>	-	"program" (Categories 1, 7) means a sequence of instructions to
(Categories 1,7)		carry out a process in, or convertible into, a form executable by an
		electronic computer;

Category 1

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

Category Code	SGCO 2023	SGCO 2024	
	1C010, as follows, and specially designed components and accessories therefor:	1C010, as follows, and specially designed components and accessories therefor:	
	 <u>Technical Notes</u> 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. 	 <u>Technical Notes</u> 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. 	

Category Code	SGCO 2023	SGCO 2024
1C002 Technical	Metal alloys, metal alloy powder and alloyed materials, as follows:	Metal alloys, metal alloy powder and alloyed materials, as follows:
Notes		
	<u>Technical Notes</u>	<u>Technical Note</u>
	<i>1. The metal alloys in Category Code 1C002 are those containing</i>	For the purpose of Category Code 1C002, metal alloys are those
	a higher percentage by weight of the stated metal than of any	containing a higher percentage by weight of the stated metal than of
	other element.	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 divid with an average stress ratio equal to T	
	and a stress-concentration factor (K_i) equal to 1. The average	
	stress ratio is defined as maximum stress minus minimum stress	
	aividea by maximum stress.	
1C002.b. Technical	Metal alloys, metal alloy powder and alloyed materials, as follows:	Metal alloys, metal alloy powder and alloyed materials, as follows:
Notes		
	<u>Technical Notes</u>	b. Metal alloys, as follows, made from the powder or particulate

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

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

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

10000		
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: 	 '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:
	 Any gene or genes specific to any virus specified in Category Code Code 1C351.a. or 1C354.a.; 	 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:	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:
	 Colletotrichum kahawae (Colletotrichum coffeanum var. virulans); Cochliobolus miyabeanus (Helminthosporium oryzae); Microcyclus ulei (syn. Dothidella ulei); 	 Colletotrichum kahawae (Colletotrichum coffeanum var. virulans); Bipolaris oryzae (Cochliobolus miyabeanus, Helminthosporium oryzae); Pseudocercospora ulei (Microcyclus ulei, Dothidella ulei);

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:	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. 	 B. Rotor-forming mandrels designed to form cylindrical rotors of inside diameter between 75 mm and 650 mm.

Category Code	SGCO 2023	SGCO 2024
2B228.c. Technical	Rotor fabrication or assembly equipment, rotor straightening	Rotor fabrication or assembly equipment, rotor straightening
Note a	equipment, bellows-forming mandrels and dies, as follows:	equipment, bellows-forming mandrels and dies, as follows:
	c. Bellows-forming mandrels and dies for producing single- convolution bellows.	c. Bellows-forming mandrels and dies for producing single- convolution bellows.

Category Code	SGCO 2023	SGCO 2024
	 <u>Technical Note</u> a. Inside diameter between 75 mm and <mark>400 mm</mark> ;	 <u>Technical Note</u> a. Inside diameter between 75 mm and <mark>650 mm</mark> ;

Category Code	SGCO 2023	SGCO 2024
2B352.d.1.b.	Biological manufacturing and handling equipment, as follows:	Biological manufacturing and handling equipment, as follows:
	d. Cross (tangential) flow filtration equipment and components 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 cultures having both of the following characteristics:	1. Cross (tangential) flow filtration equipment capable of separation of "microorganisms", viruses, toxins or cell cultures having both of the following characteristics:
	b. Having either of the following characteristics:	b. Having either of the following characteristics:
	1. Capable of being sterilised or disinfected in situ; or	1. Capable of being 'sterilised' or 'disinfected' in situ; or
	 Using disposable or single use filtration components; <u>Technical Note</u> 	 Using disposable or single use filtration components; <u>Technical Note</u>
	In Category Code 2B352.d.1.b., sterilised denotes the elimination of all viable	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	microbes from the equipment through the use of either physical (e.g. steam) or
	chemical agents. Disinfected denotes the	chemical agents. 'Disinfected' denotes a
	destruction of potential microbial infectivity	process to reduce the number of
	chemical agents with a germicidal effect	spores through the use of chemical agents
	Disinfection and sterilisation are distinct	without necessarily killing or removing all

Category Code	SGCO 2023	SGCO 2024
	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.	organisms.
2B352.f. Note 2	 Biological manufacturing and handling equipment, as follows: Protective and containment equipment, as follows: <u>Note 2</u> 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: Protective and containment equipment, as follows: Protective and containment equipment, as follows: <u>Note 2</u> 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 infected patients.

Category Code	SGCO 2023	SGCO 2024
3B001.e. Technical	Equipment for the manufacturing of semiconductor devices or	Equipment for the manufacturing of semiconductor devices or
Notes	materials, as follows and specially designed components and	materials, as follows and specially designed components and
	accessories therefor:	accessories therefor:
	e. Automatic loading multi chamber central wafer handling	e. Automatic loading multi chamber central wafer handling
	systems, having both of the following characteristics:	systems, having both of the following characteristics:
	<u>Technical Notes</u>	<u>Technical Notes</u>
	1. For the purpose of Category Code <mark>3B001.e.</mark> ,	1. For the purpose of Category Code 3B001.e.1.,
	'semiconductor process tools' refers to modular tools	'semiconductor process tools' refers to modular tools
	that provide physical processes for semiconductor	that provide physical processes for semiconductor

Category Code	SGCO 2023	SGCO 2024
	 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. 	 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.

4D001

Category Code	SGCO 2023	SGCO 2024
4D001.b.1.	"Software" as follows:	"Software" as follows:
	b. "Software", other than that specified in Category Code 4D001.a., specially designed or modified for the "development" or "production" of equipment, as follows:	b. "Software", other than that specified in Category Code 4D001.a., specially designed or modified for the "development" or "production" of equipment, as follows:
	 "Digital computers" having an "Adjusted Peak Performance" ("APP") exceeding 15 Weighted TeraFLOPS (WT); 	 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	Technology
	b. "Technology" (according to the General Technology Note), other than that specified in Category Code 4E001.a., for the	b. "Technology" (according to the General Technology Note), other than that specified in Category Code 4E001.a., for the

Category Code	SGCO 2023	SGCO 2024
	"development" or "production" of equipment as follows:	"development" or "production" of equipment as follows:
	 "Digital computers" having an "Adjusted Peak Performance" ("APP") exceeding 15 Weighted TeraFLOPS (WT); 	 "Digital computers" having an "Adjusted Peak Performance" ("APP") exceeding 24 Weighted TeraFLOPS (WT);

Category Code	SGCO 2023	SGCO 2024
6A004.a.1.	Optical equipment and components, as follows:	Optical equipment and components, as follows:
Technical Notes		
	a. Optical mirrors (reflectors) as follows:	a. Optical mirrors (reflectors) as follows:
	1. 'Deformable mirrors' having an active optical aperture	1. 'Deformable mirrors' having an active optical aperture
	greater than 10 mm and having either of the following	greater than 10 mm and having either of the following
	characteristics, and specially designed components	characteristics, and specially designed components
	therefor:	therefor:
	 Technical Note	 Technical Notes
	'Deformable mirrors' are mirrors having either of the	For the purpose of Category Code 64004 a 1.
	following characteristics:	1 Deformable mirrors' are mirrors having either
	a. A single continuous optical reflecting surface	of the following characteristics:
	which is dynamically deformed by the application	a. A single continuous optical reflecting
	of individual torques or forces to compensate for	surface which is dynamically deformed by
	distortions in the optical waveform incident upon	the application of individual torques or
	the mirror; <u>or</u>	forces to compensate for distortions in the
	b. Multiple optical reflecting elements that can be	optical waveform incident upon the mirror;
	individually and dynamically repositioned by the	<u>or</u>
	application of torques or forces to compensate for	b. Multiple optical reflecting elements that can
	distortions in the optical waveform incident upon	be individually and dynamically
	the mirror.	repositioned by the application of torques or
	Deformable mirrors' are also known as adaptive optic	forces to compensate for distortions in the

Category Code	SGCO 2023	SGCO 2024
	mirrors.	optical waveform incident upon the mirror.
		2. 'Deformable mirrors' are also known as adaptive
		optic mirrors.

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	"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:	characteristics:
	3. Output wavelength exceeding 510 nm but not exceeding 540 nm, and either of the following characteristics:	3. Output wavelength exceeding 510 nm but not exceeding 540 nm, and either of the following characteristics:
	a. 'Single transverse mode' output, and either of the following characteristics:	a. 'Single transverse mode' output, and either of the following characteristics:
	2. "Average output power" exceeding 50 W; or	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:	"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:	d. Other "lasers", not specified in Category Code 6A005.a., 6A005.b. or 6A005.c. as follows:
	1. Semiconductor "lasers" as follows:	1. Semiconductor "lasers" as follows:
	a. Individual single-transverse mode semiconductor "lasers" having either of the following characteristics:	a. Individual single-transverse mode semiconductor "lasers" having either of the following characteristics:

Category Code	SGCO 2023	SGCO 2024
	1. Wavelength equal to or less than 1,510 nm and average or CW output power, exceeding 1.5 W; or	 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: 2. Wavelength greater than 1,510 nm and average or CW output power, exceeding 500 mW; 	 "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: 2. Wavelength greater than 1,570 nm and average or CW output power, exceeding 500 mW;

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.

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

Category 7

	8666 2022	0000 2024
Category Code	SGCO 2023	SGCO 2024
7A003 Note 2 &	'Inertial measurement equipment or systems', having any of the	'Inertial measurement equipment or systems', having any of the
Note	following characteristics:	following characteristics:
	Note 2	<u>Note</u>
	Category Code 7A003 does not include 'inertial measurement equipment or systems' which are certified for use on "civil aircraft" by civil aviation authorities of one or more "participating states".	Category Code 7A003 does not include 'inertial measurement 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:	'Inertial measurement equipment or systems', having any of the following characteristics: <i>Technical Notes:</i>
	'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	1. For the purpose of Category Code 7A003, 'inertial measurement equipment or systems' incorporate accelerometers or gyroscopes to measure changes in

Category Code	SGCO 2023	SGCO 2024
	 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). 	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 Measurement Units (IMUs); - Inertial Navigation Systems (INSs); - Inertial Reference Systems (IRSs); - Inertial Reference Units (IRUs).

7D004

Category CodeSGCO 2023SGCO 20247D004 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 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.SGCO 2024Source 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 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.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 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."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 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."Source code" incorporating "development" "technology" specified in Category Code 7E004.a.2., 7E004.a.5., 7E004.a.6. or 7E004.b., for any of the following: Note 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	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: <u>Note</u> 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.	"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: <u>Note</u> 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:	Other "technology" as follows:
	Note	Note
	<i>Category</i> Code 7E004.b. does not include "technology"	Category Code 7E004.b. does not include "technology"

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

8A001

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

Category Code	SGCO 2023	SGCO 2024
8A002.o.2.b.	Marine systems, equipment and components, as follows:	Marine systems, equipment and components, as follows:
	 Propellers, power transmission systems, power generation systems and noise reduction systems, as follows: 	 Propellers, power transmission systems, power generation systems and noise reduction systems, as follows:
	 Water-screw propeller, power generation systems or transmission systems, designed for use on vessels, as follows: 	 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;	b. Internally liquid-cooled electric propulsion motors with a power output exceeding 2.5 MW;

Category Code	SGCO 2023	SGCO 2024
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: Permanent magnet electric propulsion motors specially designed for submersible vehicles, having a power output exceeding 0.1 MW; <u>Note</u> Category Code 8A002.o.4. includes rim-driven propulsion systems

Category Code	SGCO 2023	SGCO 2024
9A001 Note 1	Aero gas turbine engines having either of the following	Aero gas turbine engines having either of the following
	characteristics:	characteristics:
	a. Incorporating any of the "technologies" specified in	a. Incorporating any of the "technologies" specified in
	Category Code 9E003.a., 9E003.h. or 9E003.i.; or	Category Code 9E003.a., 9E003.h. or 9E003.i.; or

Category Code	SGCO 2023	SGCO 2024
	 <u>Note 1</u> Category Code <mark>9A001.a.</mark> does not include aero gas turbine engines which meet both of the following:	 <u>Note 1</u> Category Code <mark>9A001</mark> 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	Specially designed assemblies or components, incorporating any
	of the "technologies" specified in Category Code 9E003.a.,	of the "technologies" specified in Category Code 9E003.a.,
	9E003.h., or 9E003.i. for either of the following aero gas turbine	9E003.h., 9E003.i., or 9E003.k. for either of the following aero
	engines:	gas turbine engines:

Category Code	SGCO 2023	SGCO 2024
9A115.a. Technical	Launch support equipment as follows:	Launch support equipment as follows:
Notes		
	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';	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';
	<u>Technical Note</u>	<u>Technical Notes</u>
	In Category Code 9A115.a., 'missile' means complete rocket systems and unmanned aerial vehicle systems capable of a range exceeding 300 km.	 In Category Code 9A115.a., 'missile' means complete rocket systems and unmanned aerial vehicle systems capable of a range exceeding 300 km. Apparatus and devices specified in Category Code

Category Code	SGCO 2023	SGCO 2024
		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

Category Code	SGCO 2023	SGCO 2024
		fluids used to lubricate or cool 'engine rotor supports';
		Oil-free 'engine rotor supports'; or
		6. Systems to remove heat from 'compression system'
		core gas path flow.
		<u>Technical Notes</u>
		For the purposes of Category Code 9E003.k.:
		<i>1. Propulsion inlet systems include core flow pre-coolers.</i>
		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 thiel face and the combustor
		work
		5 An 'engine rotor support' is the begring supporting the
		main engine shaft that drives the compression system
		or turbing rotors
		NR 1
		See Category Code 9E003 h for engine control technology
		N R 2
		See Category Code 9E003 i for adjustable flow path
		systems.

9E101

/ 11/1		
Category Code	SGCO 2023	SGCO 2024
9E101	a. "Technology" (according to the General Technology Note)	"Technology" as follows:
	for the "development" of goods specified in Category Code	
	9A101, 9A102, 9A104 to 9A111, 9A112.a. or 9A115 to	a. "Technology" (according to the General Technology Note)
	9A121 <mark>.</mark>	for the "development" of goods specified in Category Code

Category Code	SGCO 2023	SGCO 2024
		9A101, 9A102, 9A104 to 9A111, 9A112.a. or 9A115 to
		9A121 <mark>;</mark>

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