GUIDEBOOK ON THE DETERMINATION OF STRATEGIC GOODS

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Contents

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Strategic Goods Control List

The Strategic Goods Control List is listed in The Schedule to the Strategic Goods (Control) Order (SGCO), which includes items from the four multilateral export control regimes – Australia Group, Missile Technology Control Regime, Nuclear Suppliers Group and Wassenaar Arrangement.

Goods and technology that meet the technical specifications described in the Strategic Goods Control List are subjected to control under the Strategic Goods (Control) Act.

The Schedule consists of two parts (Part 1 and Part 2) with two divisions and further sub-divisions as follows:

The Schedule

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List of Military Goods (Division 2 of Part 1)

The List of Military Goods includes items such as arms, ammunitions, bombs, tanks, imaging devices and chemicals. It contains mainly items, equipment, components, software and technology that are ***specially designed or modified*** for military use.

The List of Military Goods is broadly categorised as follows:

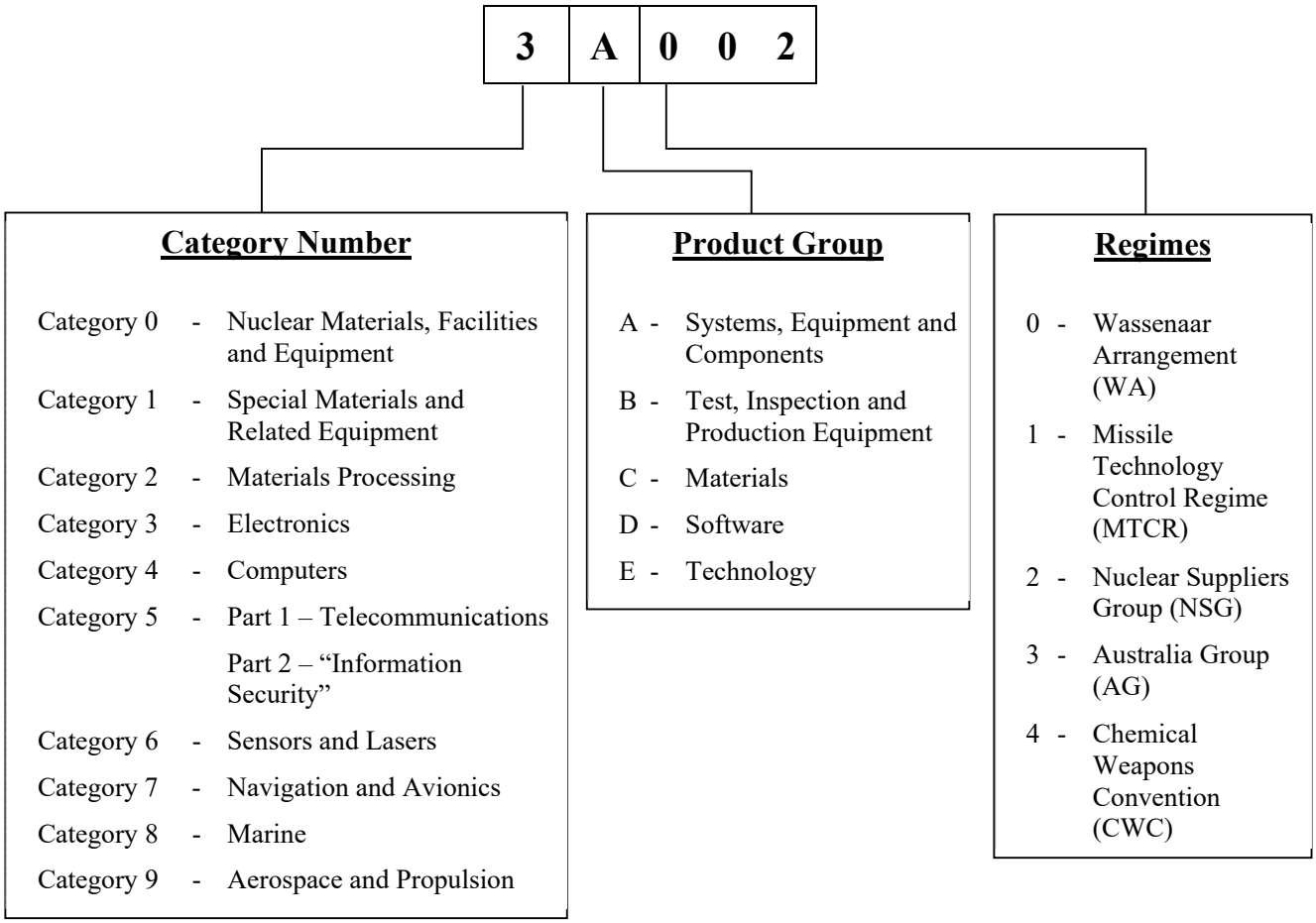
Category Code		Description
ML1	-	Small-Calibre Arms
ML2	-	Large-Calibre Weapons and Projectors
ML3	-	Ammunition and Fuse Setting Devices
ML4	-	Bombs, Missiles, Other Explosive Devices and Related Equipment
ML5	-	Fire Control and Related Alerting and Warning Equipment
ML6	-	Ground Vehicles and Components
ML7	-	Chemical or Biological Toxic Agents and Related Equipment
ML8	-	Explosives, Propellants, Fuels and Related Substances
ML9	-	Naval Vessels and Components
ML10	-	Military Aircraft and Components
ML11	-	Electronic Equipment for Military Use
ML12	-	High Velocity Kinetic Energy Weapons
ML13	-	Armoured or Protective Equipment
ML14	-	Specialised Equipment for Military Training
ML15	-	Imaging or Countermeasure Equipment
ML16	-	Unfinished Products for Use in Military Items
ML17	-	Miscellaneous Equipment and Materials
ML18	-	Production Equipment and Environmental Test Facilities
ML19	-	Directed Energy Weapon Systems
ML20	-	Cryogenic and “Superconductive” Equipment
ML21	-	Specific Software for Military Items
ML22	-	Specific Technology for Military Items

Note: The descriptions of the categories are provided for ease of reference only. Please refer to the Control List for the descriptions of items that are subjected to strategic goods control.

List of Dual-Use Goods (Division 2 of Part 2)

The List of Dual-Use Goods includes a wide range of goods that are designed for commercial applications but can have military applications or potentially be used as precursors or components of weapons of mass destruction (WMD).

A 5-digit alphanumeric code is used for goods and technology listed under the List of Dual-Use Goods, where the List is divided into 10 categories with each category further sub-divided into 5 product groups.



Please note that goods listed in Category 0 are from the Nuclear Suppliers Group.

Note: The descriptions of the categories are provided for ease of reference only. Please refer to the Control List for the descriptions of items that are subjected to strategic goods control.

Terms Used in the Strategic Goods Control List

Definitions

Definitions of certain words and expressions are stated in Division 1 of each Part of The Schedule. The definitions are applicable to all category codes in Division 2 of the respective Part and are identifiable in double quotation marks (“ ”).

Words or expressions with single quotation marks (‘ ’) takes the definition stated in the *Technical Note* that follows immediately after.

References

Different types of references are included in Division 2 of The Schedule to illustrate and help interpret the control text better.

Note	- used to clarify the scope of control for a particular category code, including exclusion of certain items - found at the beginning or at the end of each category code, or its corresponding sub-category
N.B. (Nota Bene)	- used to make reference to any other possible category codes for similar product - generally found at the beginning of each category code
Technical Note	- used to explain or define terms used in a specific code - usually found at the end of category code or sub-category code

How to Determine Strategic Goods

Understand the product

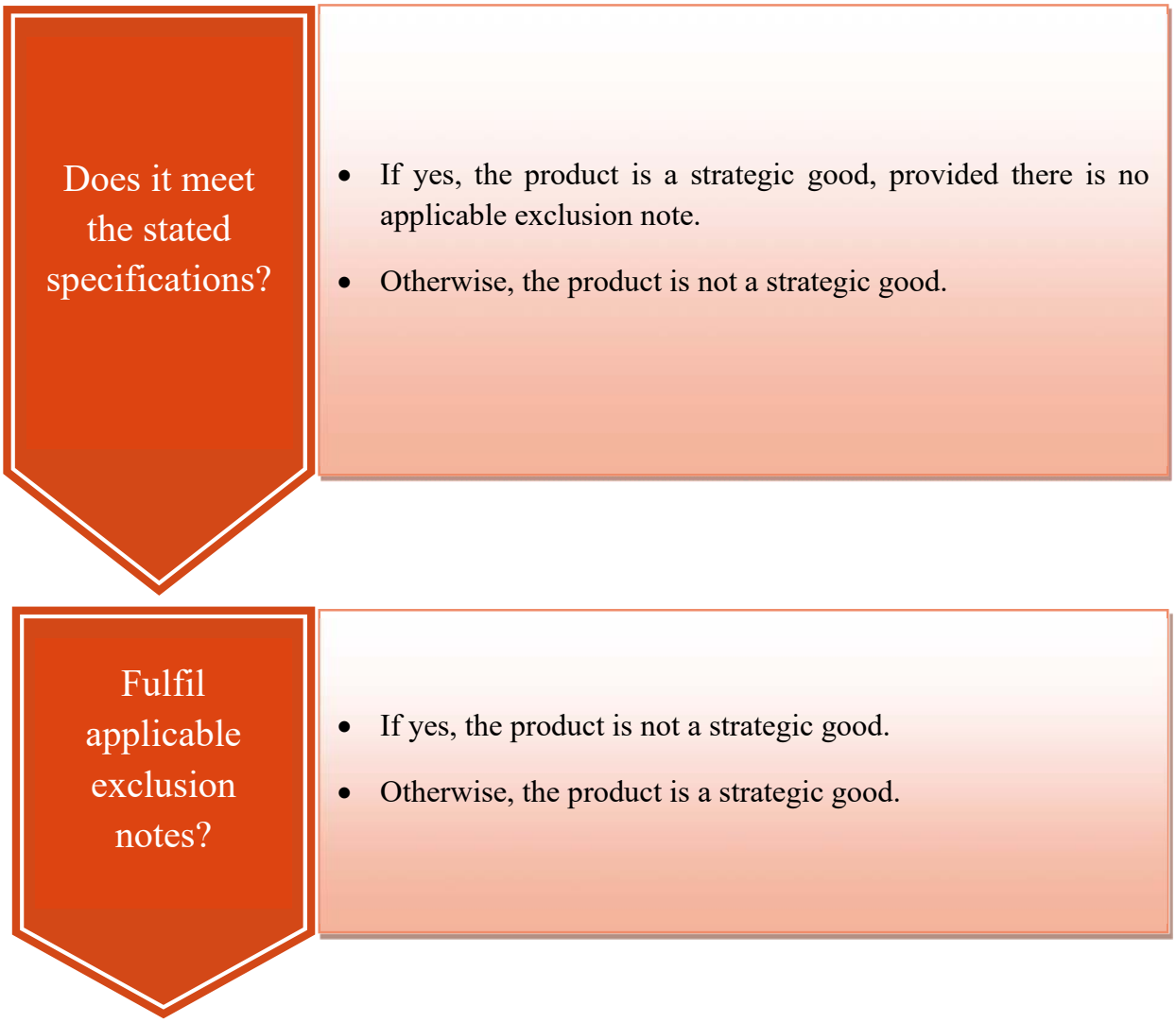
- What is this product?
- What is the function and application of the product?
- Is it a complete system, equipment or raw material?

Specially designed or modified for military use?

- If yes, refer to the List of Military Goods.
- Otherwise, refer to the List of Dual-Use Goods.

Identify possible Category Code(s)

- Make use of the reference Category Code(s) (on page 4) to identify possible Category Code(s) if it is specially designed or modified for military use.
- Make use of the reference Category Numbers and Product Groups (on page 5) to identify possible Category Code(s) if it is not specially designed or modified for military use.
- Compare the product's specifications against the possible Category Code(s) description and make reference to the applicable notes and definitions.
- If there is no possible Category Code, the product is not a strategic good.


Does it meet the stated specifications?
If yes, the product is a strategic good, provided there is no applicable exclusion note.
Otherwise, the product is not a strategic good.
Fulfil applicable exclusion notes?
If yes, the product is not a strategic good.
Otherwise, the product is a strategic good.

Case Studies

Case 1 – Unmanned Aerial Vehicles (UAV)

Specifications	
Weight	13 kg
Wingspan	150 cm
Length	120 cm
Engine Type	Piston
Max Payload	5 kg
Speed	360 to 540 km/hr
Range	350 km
Endurance	Approx. 2 hours at sea level in zero wind
Flight Control	Able to fly out of direct vision range
Communications	1 GHz Data Link, Ground to Aircraft (Two-way, Autopilot and Telemetry)

Understand the product

- An unmanned aerial vehicle (UAV) is an aircraft without a human pilot on board and is controlled under the remote control of a pilot on the ground.
- UAVs are typically air-breathing vehicles that use aerodynamic lift to fly and thereby perform their entire mission within the earth's atmosphere.
- This product is powered by small piston engines that drive on ducted propellers.

Specially designed or modified for military use?

- No, the product is not specially designed or modified for military use. Refer to the List of Dual-Use Goods.

Identify possible Category Code(s)

Since this is an unmanned aerial vehicle (UAV) and it is remotely controlled by the remote control of a pilot on the ground, Category Codes 9A012.a. and 9A112 are identified.

Category Code 9A012.a.

"Unmanned aerial vehicles" ("UAVs"), unmanned "airships", related systems, equipment and components, as follows:

a. "UAVs" or unmanned "airships", designed to have controlled flight out of direct 'natural vision' of the 'operator' and having either of the following characteristics:
   1. Having both of the following characteristics:
      a. A maximum 'endurance' greater than or equal to 30 minutes but less than 1 hour; and
      b. Designed to take-off and have stable controlled flight in wind gusts equal to or exceeding 46.3 km/h (25 knots); or
   2. A maximum 'endurance' of 1 hour or greater;

   Technical Notes

   1. *For the purpose of Category Code 9A012.a.,'operator' is a person who initiates or commands the "UAV" or unmanned "airship" flight.*
   2. *For the purpose of Category Code 9A012.a., 'endurance' is to be calculated for ISA conditions (Ref. ISO 2533:1975) at sea level in zero wind.*
   3. *For the purpose of Category Code 9A012.a., 'natural vision' means unaided human sight, with or without corrective lenses.*

Identify possible Category Code(s)

Category Code 9A112

"Unmanned aerial vehicles" ("UAVs"), other than those specified in Category Code 9A012, as follows:

a. "Unmanned aerial vehicles" ("UAVs") capable of a range of 300 km;

b. "Unmanned aerial vehicles" ("UAVs") having both of the following characteristics:

   1. Having either of the following characteristics:

      a. An autonomous flight control and navigation capability; or

      b. Capability of controlled flight out of direct vision range involving a human operator; and

   2. Having either of the following characteristics:

      a. Incorporating an aerosol dispensing system or mechanism with a capacity greater than 20 litres; or

      b. Designed or modified to incorporate an aerosol dispensing system or mechanism with a capacity greater than 20 litres.

Technical Notes

1. *An aerosol consists of particulate or liquids other than fuel components, by products or additives, as part of the payload to be dispersed in the atmosphere. Examples of aerosols include pesticides for crop dusting and dry chemicals for cloud seeding.*
2. *An aerosol dispensing system or mechanism contains all those devices (mechanical, electrical, hydraulic, etc.), which are necessary for storage and dispersion of an aerosol into the atmosphere. This includes the possibility of aerosol injection into the combustion exhaust vapour and into the propeller slip stream.*

Does it meet the stated specifications?

☑ Designed to have controlled flight out of direct 'natural vision' of the 'operator'

☑ Maximum 'endurance' of 1 hour or greater

- Yes, the UAV meets the stated specifications listed in Category Code 9A012.a.2.

Fulfil applicable exclusion notes?

- There is no applicable exclusion note.

Final determination

- The UAV is controlled under Category Code 9A012 because it meets the stated specifications listed in Category 9A012.a. As the UAV is controlled under Category Code 9A012, it would not be controlled in Category Code 9A112 since it is for "UAVs, other than those specified in Category Code 9A012".

Case 2 – Maraging Steel

Dimension	
Length	50 mm
Width	30 mm
Thickness	10 mm
Material Composition	
Nickel (Ni)	18 %
Cobalt (Co)	8.5 %
Molybdenum (Mo)	3 %
Titanium (Ti)	0.2 %
Aluminium (Al)	0.1 %
Material Properties	
Ultimate Tensile Strength ***measured at 20 °C in the precipitation hardened stage***	2,350 MPa
Application	
Usable in complete rocket systems of a range exceeding 300 km	

Understand the product

- Maraging steel possesses superior strength and toughness without losing malleability.
- The product has an ultimate tensile strength of 2,350 MPa when measured at 20 ºC in the precipitation hardened stage.
- It is in the form of a sheet of 50 mm x 30 mm x 10 mm.
- It is usable in complete rocket systems of a range exceeding 300km.

Specially designed or modified for military use?

- No, the product is not specially designed or modified for military use. Refer to the List of Dual-Use Goods.

Identify possible Category Code(s)

Category Code 1C116

Maraging steels, usable in 'missiles', having both of the following characteristics:

N.B.
See also Category Code 1C216.

a. An Ultimate Tensile Strength (UTS), measured at 293 K (20 ºC), equal to or greater than:
   1. 0.9 GPa in the solution annealed stage; or
   2. 1.5 GPa in the precipitation hardened stage; and

b. Either of the following forms:
   1. Sheet, plate or tubing with a wall or plate thickness equal to or less than 5 mm; or
   2. Tubular forms with a wall thickness equal to or less than 50 mm and having an inner diameter equal to or greater than 270 mm.

Technical Notes

1. *Maraging steels are iron alloys:*
   a. *Generally characterised by high nickel, very low carbon content and the use of substitutional elements or precipitates to produce strengthening and age-hardening of the alloy; and*
   b. *Subjected to heat treatment cycles to facilitate the martensitic transformation process (solution annealed stage) and subsequently age hardened (precipitation hardened stage).*
2. *In Category Code 1C116, 'missile' means complete rocket systems and unmanned aerial vehicle systems capable of a range exceeding 300 km.*

Category Code 1C216

Maraging steel, other than that specified in Category Code 1C116, 'capable of' an Ultimate Tensile Strength (UTS) of 1,950 MPa or more, at 293 K (20 ºC).

Note
Category Code 1C216 does not include forms in which all linear dimensions are 75 mm or less.

Technical Note

The phrase maraging steel 'capable of' encompasses maraging steel before or after heat treatment.

Does it meet the stated specifications?

Category Code 1C116

☑ Usable in 'missiles'

☑ Ultimate Tensile Strength (UTS), measured at 293 K (20ºC), equal to or greater than 1.5 GPa in the precipitation hardened stage

☒ In the form of sheet, plate or tubing with a wall or plate thickness equal to or less than 5 mm.

No, the maraging steel does not meet the stated specifications listed in Category Code 1C116.

Category Code 1C216

☑ Ultimate Tensile Strength (UTS) of 1,950 MPa or greater, measured at 293 K (20ºC)

Yes, the maraging steel meets the stated specifications listed in Category Code 1C216.

Fulfil applicable exclusion notes?

☑ Forms in which all linear dimensions are 75 mm or less.

Yes, the product meets the exclusion note listed in Category Code 1C216 and is thus excluded from control in Category Code 1C216.

Final determination

- The maraging steel is not listed in any applicable Category Codes, hence it is not controlled.

Case 3 – Additive 111

Chemical Composition	% by weight
Hydrogen Fluoride	50 %
Acetone	25 %
Sodium Hexafluorosilicate	25 %

Understand the product

- This is an additive to improve the performance of the lubricants. It is a chemical mixture consisting of Hydrogen Fluoride (50 %), Acetone (25 %) and Sodium Hexafluorosilicate (25 %).

Specially designed or modified for military use?

- No, the product is not specially designed or modified for military use. Refer to the List of Dual-Use Goods.

Identify possible Category Code(s)

Category Code 1C350

Chemicals, which may be used as precursors for toxic chemical agents, as follows, and "chemical mixtures" containing one or more thereof:

N.B.

See also Division 2 of Part 1 of this Schedule and Category Code 1C450.

⋮

24. Hydrogen fluoride (7664-39-3);

⋮

62. Sodium hexafluorosilicate (16893-85-9);

⋮

Note 1

Category Code 1C350 does not include "chemical mixtures" containing one or more of the chemicals specified in Category Codes 1C350.2, .6, .7, .8, .9, .10, .14, .15, .16, .19, .20, .24, .25, .30, .37, .38, .39, .40, .41, .42, .43, .44, .45, .46, .47, .48, .49, .50, .51, .52, .53, .58, .59, .60, .61., .62., .64., .66., .67., .68., .69., .70., .71., .72., .73., .74., .75., .76., .77., .78., .79., .80., .81., .82., .83., .84., .85., .86., .87., .88. and .89. in which no individually specified chemical constitutes more than 30 % by the weight of the mixture.

Category Code 1C450

Toxic chemicals and toxic chemical precursors, as follows, and "chemical mixtures" containing one or more thereof:

Does it meet the stated specifications?

Category Code 1C350

☑ 24. Hydrogen fluoride (7664-39-3);

☑ 62. Sodium hexafluorosilicate (16893-85-9);

Yes, Additive 111 meets the stated specifications listed in Category Code 1C350.

Category Code 1C450

No, Additive 111 does not meet any of the chemicals listed in Category Code 1C450.

Fulfil applicable exclusion notes?

☒ "chemical mixtures" containing one or more of the chemicals specified in Category Codes 1C350.2., .6., .7., .8., .9., .10., .14., .15., .16., .19., .20., .24., .25., .30., .37., .38., .39., .40., .41., .42., .43., .44., .45., .46., .47., .48., .49., .50., .51., .52., .53., .58., .59., .60., .61., .62., .64., .66., .67., .68., .69., .70., .71., .72., .73., .74., .75., .76., .77., .78., .79., .80., .81., .82., .83., .84., .85., .86., .87., .88. and .89. in which no individually specified chemical constitutes more than 30 % by the weight of the mixture.

No, Hydrogen Fluoride (50 %) does not meet the exclusion note of "no more than 30 % by the weight of the mixture" listed in Category Code 1C350.

Final determination

- The Additive 111 is controlled under Category Code 1C350 because it meets the stated specifications listed in Category Code 1C350.

Frequently Asked Questions

1. **Does the determination of strategic goods depend on the end-use of the goods?**

   No, strategic goods are determined based on the technical specifications of the items. The items are strategic goods if their technical specifications meet the specifications stated in the Strategic Goods Control List.

2. **If my product is not listed in the Strategic Goods Control List, does that mean it is not controlled?**

   Yes. However, if you have been notified, know, or have reasonable grounds to suspect that an item is intended or likely to be intended for nuclear, chemical or biological weapons purposes, or missiles capable of delivering these weapons, the item will be subject to the "catch-all" provision under Strategic Goods (Control) Act and the requirements of the Act will apply.

3. **Once I have determined my product to be a strategic good, what should I do?**

   If your item is determined to be a strategic good, a strategic goods permit is required to be obtained prior to its export, transhipment or bringing in transit. You may refer to our website at www.customs.gov.sg for more information on the permit declaration procedures.

4. **If I have a controlled component in a non-controlled product, is my product controlled?**

   Non-controlled goods (including plant) containing one or more controlled components shall be considered as being controlled if the controlled components are the principal element of the non-controlled goods and can feasibly be removed or used for other purposes.

   Example: Non-controlled airplane is controlled under DL9A001 or DL9A101 if its engine's technical specifications meet the specifications stated in the Strategic Goods Control List. It is because the engine is the principal element of the non-controlled airplane and can feasibly be removed or used for other purposes.

5. **What is a Strategic Goods Product Code?**

   For items in the List of Military Goods, the strategic goods product code is identical to the category code (e.g. ML18) in the Strategic Goods Control List.

For items in the List of Dual-Use Goods, the strategic goods product code (e.g. DL3A002) is equivalent to the category code (e.g. 3A002) in the Strategic Goods Control List, but added with a "DL" prefix.

6. What is the difference between HS Code and Strategic Goods Category Code?

The HS Code and Strategic Goods Category Code are two different types of coding systems.

The HS Code refers to the Harmonised System (HS) Code which is an international nomenclature developed by the World Customs Organisation (WCO), for the classification of goods and is harmonized at 6-digit level for use by all WCO member countries. Singapore adopts the 8-digit level HS Codes in the ASEAN Harmonised Tariff Nomenclature (AHTN), which is based on the WCO 6-digit level HS Codes, for use by all ASEAN member countries.

To determine if your product is listed as strategic goods, you will need to check the product's specifications against the Strategic Goods Control List.

7. Does the HS Code help to determine whether my product is a strategic goods?

No, the HS Code does not help to determine if an item is a strategic goods. The determination of strategic goods is based on the technical specifications of the item. The items are strategic goods if their technical specifications meet the specifications stated in the Strategic Goods Control List.

8. Does the strategic goods category code used by other countries (e.g. US, UK) help to determine whether my product is a strategic goods in Singapore?

While Singapore and other countries (e.g. US, UK) may use similar category codes for strategic goods, controls and descriptions listed by the other countries may differ from the controls and descriptions stated in the same category codes in our Strategic Goods Control List. You may use the category codes from other countries only as a reference to correlate to our Strategic Goods Control List. The actual determination of a strategic good shall still be based on the specifications stated in Singapore's Strategic Goods Control List.

9. Does painting a product green make it modified for military use?

If the paint used is commercial green paint, it is not likely to be considered as modified for military use. However, if the paint used is a military green paint (for instance, to make it infra-red reflective), it is likely to be considered as modified for military use.