

How to navigate the Consolidated List and search for controlled technology and software

This guidance is designed to help establish whether [technology](#) or software to be exported outside the UK is controlled and requires an export licence.¹

Please note that technology and software are not controlled if they are in the public domain or, in the case of technology, meet the definition of basic scientific research or are the minimum necessary information for patent applications. These exemptions do not apply, however, if you have been informed, are aware, or suspect that the recipient of the software or technology intends to use it for WMD purposes.

You will need to search the Consolidated List of strategic military and dual use items to establish whether the technology / software in question requires export authorisation. Use the [goods checker tool](#) to search for keywords and identify the sections of the list that are relevant to your research.

Controlled items and controlled technology or software are listed separately in the Consolidated List and identified by a code, with software being in control category D and technology in category E. This document will guide you through the steps of how to search for controlled [technology](#) and [software](#).

Identifying controlled technology or software overview

Identifying whether technology or software are controlled requires a more complex search process than is required for goods. This is because controls can be placed on both specific technologies / software and on technologies / software that enable the development, production and / or use of a controlled item / good. Identifying the latter requires you to first identify the code of the physical good associated with the technology and use that to identify the technology/software code.

Remember that technology and software that enable controlled items are controlled where they are "required" for the "development", "production" or "use" of controlled goods. **This applies even if you do not intend to use it for that purpose.**

For example, technology for the development or production of composite propeller blades or propfans is controlled, but only where it is 'required' for achieving or exceeding a capability of absorbing more than 2,000 kW at flight speeds exceeding Mach 0.55. (9E003 b). The control applies to the capability of the technology and not its intended end use, e.g. if the technology exceeds the threshold for control it is likely to require a licence even if the recipient of the technology does not intend to

¹This guidance is based on the University of Manchester's publicly available export control information and is used with permission of the University of Manchester.

use it to 'develop', 'produce' or 'use' an item or good exceeding the threshold for control.²

The process below sets out how you can first identify the codes of specifically controlled technologies and software and codes of relevant physical goods (**steps 1-3**) and then how to identify technology or software codes associated with the physical goods (**step 4**).

You need to search for the physical goods that (a) you use in your research (samples, materials, equipment) as well as (b) those physical goods that your research may be applicable to or could help develop (e.g. Neutron generator systems, satellites, lasers). For instance, you are working with materials (search for: [name of the material]), your research contributes towards the development of aero-engines (search for: aero-engines) or you are developing software for the use of radar systems.

Please note, software is generally not controlled if any of the following three exemptions apply:

1. It is generally available to the public by being:

- a) Sold from stock at retail selling points, without restriction, by means of over-the-counter transactions; mail order transactions; electronic transactions; or telephone call transactions; AND
- b) Designed for installation by the user without further substantial support by the supplier.³

2. It is in the [Public Domain](#) without restriction (with the exception of copyright restrictions).

3. It is the minimum necessary "object code" for the installation, operation, maintenance (checking) or repair of those items whose export has been authorised.⁴

²Controls do not apply to that "technology" which is the minimum necessary for the installation, operation, maintenance (checking) or repair of those goods which are not controlled or whose export has been authorised.

Note: This does not release such "technology" specified in 1E002.e., 1E002.f., 8E002.a. and 8E002.b of the Consolidated List.

³ Note: Exemption 1 does not release software specified in Category 5 – Part 2 of the Control Lists ("Information Security").

⁴ Note: Exemption 3 does not release software specified in Category 5 – Part 2 of the Control Lists ("Information Security").

Process for searching for controlled technology or software

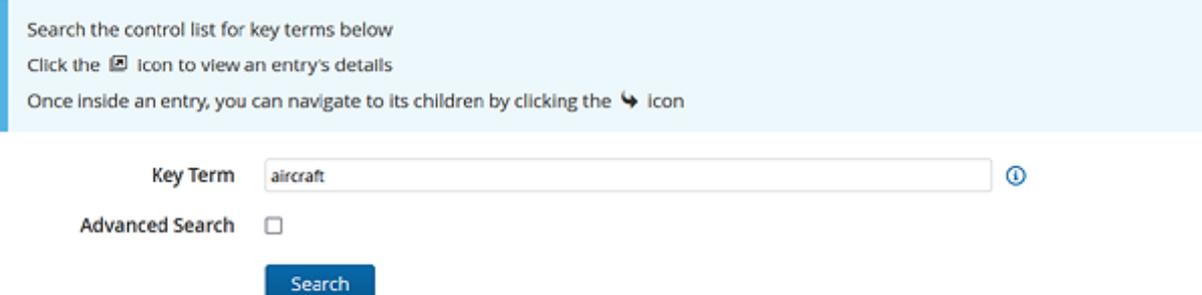
Searching the list takes time. A guide on how to use the goods checker tool is [here](#). If you are unable at first to find your goods, software or technology (information or data) in the lists using the goods checker, it does not mean that they are not controlled. You might need to run an exhaustive search of keywords as the goods checker tool is based on very specific terminology used within the strategic export control list. Examples of what you are expected to do are listed under '[Example Searches](#)' in the goods checker tool sidebar.

To determine if there are any technology codes that could apply, begin by assessing your research following the four steps below:

Step 1: Visit the [goods checker tool](#), scroll down and select the first Goods checker link

Step 2: In the search box enter a key word such as:

- a physical good that you use in your research (i.e. samples, materials, equipment) and / or
- a physical good to which your research will be applicable (i.e. equipment, materials, processes) and / or
- a related research output (i.e. algorithms or software to develop aircraft, 'aircraft' being the word inserted as a key word here)



The screenshot shows a search interface with a light blue header. The header contains the text: "Search the control list for key terms below", "Click the [info icon] icon to view an entry's details", and "Once inside an entry, you can navigate to its children by clicking the [arrow icon] icon". Below the header is a search box labeled "Key Term" with the word "aircraft" entered. To the right of the search box is a blue circular icon with a white 'i'. Below the search box is a checkbox labeled "Advanced Search" which is currently unchecked. At the bottom of the search area is a blue button labeled "Search".

- Depending on your search query, the number of results you receive will vary, you may need to scroll down to identify the terms relevant to your work.
- The terms you use in your searches are important: use as many alternatives for your item as possible. For example, if you are checking 'drones', use alternative terms such as 'UAV'. It is your responsibility to determine whether the item / technology / software you are planning to export is controlled, which is why you are strongly advised to do numerous searches to exhaust all possibilities.

Step3: Once you have identified a relevant entry, click on the symbol / icon next to it (as you hover over the symbol/icon it will pop up the 'View Goods Checker Entry' message) to expand the entry and view further information (which may include further technical 'thresholds' details such as physical parameters or capabilities) of the control restrictions.

The screenshot shows a sidebar on the left with links: 'Goods Checker Browse', 'Guidance', 'Quick Help (PDF)', 'Example Searches (PDF)', 'Contact', and 'eCO/DIR'. The main content area displays 'ANNEX I LIST OF DUAL-USE ITEMS' with categories 7 and 9. Under category 9, item 9A012 is highlighted, and a blue circle with an arrow points to the 'View Goods Checker Entry' button next to it.

The screenshot shows the detailed entry for '9A012 Unmanned aerial vehicles'. It includes the following text:

- ANNEX I LIST OF DUAL-USE ITEMS**
- CATEGORY 9 - AEROSPACE AND PROPULSION**
- 9A Systems, Equipment and Components**
- N.B.: For propulsion systems designed or rated against neutron or transient ionizing radiation, SEE THE MILITARY GOODS CONTROLS.*
- 9A012 "Unmanned aerial vehicles" ("UAVs"), unmanned "airships", related equipment and components, as follows:**
- N.B. 1 SEE ALSO 9A112.**
- N.B. 2 For "UAVs" that are "sub-orbital craft", see 9A004.h.**
- a. "UAVs" or unmanned "airships", designed to have controlled flight out of the direct 'natural vision' of the 'operator' and having any of the following:
- b. Related equipment and components, as follows:

 Below this is a 'Definition of Terms' table:

Term	Definition
Unmanned Aerial Vehicle	"Unmanned Aerial Vehicle" ("UAV") (9) means any aircraft capable of initiating flight and sustaining controlled flight and navigation without any human presence on board;
Airship	"Airship" (9) means a power-driven airborne vehicle that is kept buoyant by a body of gas (usually helium, formerly hydrogen) which is lighter than air.

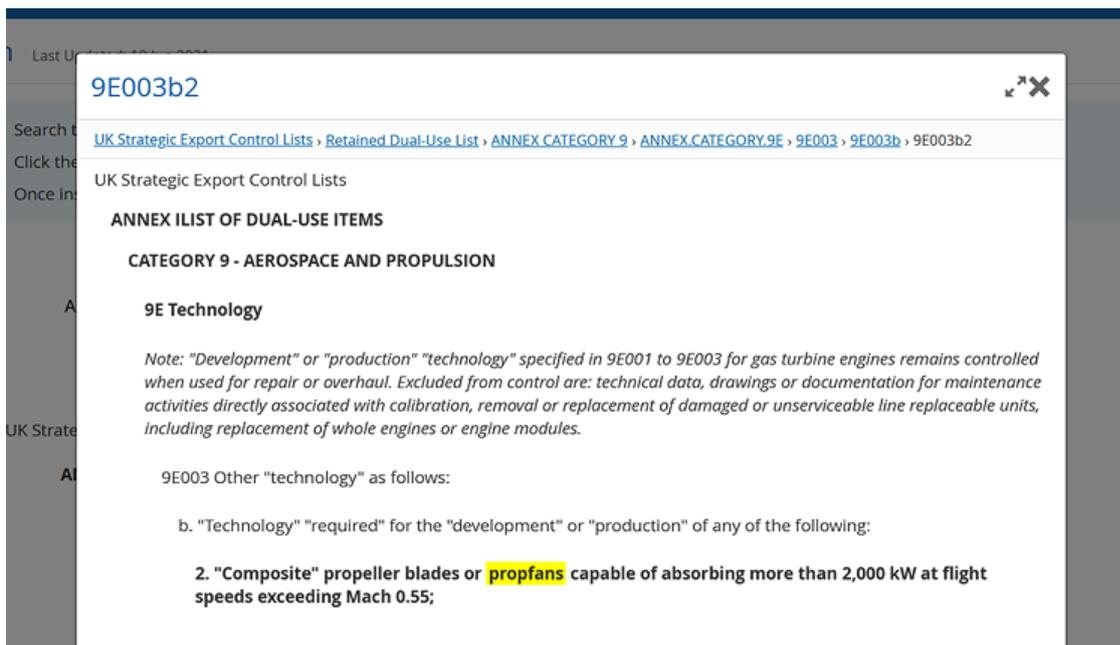
This process may identify controlled items and / or controlled technology or software.

- If you identify that your research falls within the thresholds of a controlled technology or software (i.e. under sections D or E of each section of the

control lists) the technology or software is very likely to be controlled, and you may need to apply for an export licence.⁵ Alternatively, you may wish to consider adjusting your proposed work to keep it under the controlled thresholds.

- If your search identifies relevant controlled items and your research relates to a good that falls within the control thresholds, the technology or software associated with it is likely, although not certain, to be controlled (please note that any export of the physical item will be controlled and is likely to require a licence). To establish whether associated technology or software is controlled note the code of the controlled item (e.g. 9A012) and go to step 4 to identify the technology code associated with this controlled physical good.
- If you do not hit the thresholds, the physical item is not controlled, but the technology / software associated with it may be still controlled in some circumstances. As above, you will need to note the code (e.g. 9A012) for a physical item and go to step 4 to identify whether there are any applicable technology / software codes.

Example of controlled technology, even if the physical item is not controlled:



Step 4: To identify a technology or software code related to a physical code in the dual use list, visit the [goods checker tool](#), scroll down and select the first 'Goods checker' link:

⁵ Remember that the control applies to the capability of the software and not its intended end use, e.g. if the software exceeds the threshold for control it is very likely to require a licence even if the recipient of the software does not intend to use it to 'develop', 'produce' or 'use' an item or good exceeding the threshold for control.

- Select 'goods checker browse' on the left
- Expand the 'Annex I list of dual-use items' and expand the category for the code you have found applicable to the physical item related to your research.

- Expand the 'D Software' or 'E Technology' entry as required and search for the physical goods code you identified in step 3.
- If the physical goods code is included in a D or E Code entry, it will state whether technology is controlled for "developing", "producing" or "using" the physical item. **Note: doing research usually falls under "developing"**. If your activity falls under the definition of the relevant D or E code (e.g. the

research you are undertaking will enable the development or use of the relevant physical good), the technology is controlled, and you might need to apply for an export licence.

- Alternatively, if you want to avoid the need for an export control licence, you may wish to consider adjusting your proposed work to keep it under the controlled thresholds (pertaining only to controlled technology over a certain threshold).

Department for International Trade Goods Checker OGEL Checker

Goods Checker Browse Last Updated: 10 Jun 2021

Guidance

- Quick Help (PDF)
- Example Searches (PDF)

Contact

ECO/DIT

Goods Checker Search

[UK Strategic Export Control Lists](#) > [Retained Dual-Use List](#) > ANNEX CATEGORY 9

UK Strategic Export Control Lists

ANNEX I LIST OF DUAL-USE ITEMS

CATEGORY 9 - AEROSPACE AND PROPULSION

- 9A Systems, Equipment and Components
- 9B Test, Inspection and Production Equipment
- 9C Materials
- 9D Software
- 9E Technology**

[UK Strategic Export Control Lists](#) > [Retained Dual-Use List](#) > ANNEX CATEGORY 9

Goods Checker Search

UK Strategic Export Control Lists

ANNEX I LIST OF DUAL-USE ITEMS

CATEGORY 9 - AEROSPACE AND PROPULSION

9E Technology

Note: "Development" or "production" "technology" specified in 9E001 to 9E003 for gas turbine engines remains controlled when used for repair or overhaul. Excluded from technical data, drawings or documentation for maintenance activities directly associated with calibration, removal or replacement of damaged or unserviceable line replax including replacement of whole engines or engine modules.

- 9E001 "Technology" according to the General Technology Note for the "development" of equipment or "software", specified in 9A001.b., 9A004 to 9A012, 9D.
- 9E002 "Technology" according to the General Technology Note for the "production" of equipment specified in 9A001.b., 9A004 to 9A011, 9A350 or 9B.
- 9E003 Other "technology" as follows:
- 9E101 "Technology" according to the General Technology Note as follows:
- 9E102 "Technology" according to the General Technology Note for the "use" of space launch vehicles specified in 9A004, goods specified in 9A005 to specified in 9A012 or goods specified in 9A101, 9A102, 9A104 to 9A111, 9A112.a., 9A115 to 9A121, 9B105, 9B106, 9B115, 9B116, 9B117, 9D101 or 9D103.

Definition of Terms

Term	Definition
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Double-checking

The [goods checker tool](#), because it works by word search, can sometimes be unreliable, particularly in relation to technology and software. If you cannot find controlled items / technology / software matching your research, it is worth double-checking.

As you can see in the following illustration, when searching for 'aircraft' with the goods checker tool, you will find '9D Software' as a subcategory under **Category 9 Aerospace and Propulsion**. Only 9D105, relating to space launch vehicles, is listed on the main results list as controlled software for the search term 'aircraft'.

If instead of expanding '9D105' you expand '9D Software' you will get many more controlled software entries in **Category 9 Aerospace and Propulsion**. It is worth checking whether one of the entries applies to the software you plan to export, e.g. in this case 9D103 also relates to space launch vehicles and the referenced items in Category A listed under it may also be applicable.

c. Wind tunnels or devices, other than two-dimensional sections, capable of simulating Reynolds number flows exceeding 25×10^6 .

9B006 Acoustic vibration test equipment capable of producing sound pressure levels of 160 dB or more (referenced to 20 Pa) with a rated output of 4 kW or more at a test cell temperature exceeding 1,273 K (1,000°C), and specially designed quartz heaters therefor.

9B106 Environmental chambers and anechoic chambers, as follows:

a. Environmental chambers having all of the following:

b. Environmental chambers capable of simulating the following flight conditions:

9D Software

9D105 "Software" specially designed or modified to coordinate the function of more than one subsystem, other than that specified in 9D004.e., in space launch vehicles specified in 9A004 or sounding rockets specified in 9A104 or 'missiles'.

9E Technology

9E003 Other "technology" as follows:

d. "Technology" "required" for the "development" or "production" of helicopter power transfer systems or tilt rotor or tilt wing "aircraft" power transfer systems;

h. "Technology" for gas turbine engine "FADEC systems" as follows:

j. "Technology" "required" for the "development" of wing-folding systems designed for fixed-wing "aircraft" powered by gas turbine engines.

UK Strategic Export Control Lists

ANNEX I LIST OF DUAL-USE ITEMS

CATEGORY 9 - AEROSPACE AND PROPULSION

9D Software

- ↳ 9D001 "Software", not specified in 9D003 or 9D004, specially designed or modified for the "development" of equipment or "technology", specified in 9A001 to 9A119, 9B or 9E003.
- ↳ 9D002 "Software", not specified in 9D003 or 9D004, specially designed or modified for the "production" of equipment specified in 9A001 to 9A119 or 9B.
- ↳ 9D003 "Software" incorporating "technology" specified in 9E003.h. and used in "FADEC Systems" for systems specified in 9A or equipment specified in 9B.
- ↳ 9D004 Other "software" as follows:
 - ↳ 9D101 "Software" specially designed or modified for the "use" of goods specified in 9B105, 9B106, 9B116 or 9B117.
 - ↳ 9D103 "Software" specially designed for modelling, simulation or design integration of the space launch vehicles specified in 9A004, sounding rockets specified in 9A104 or "missiles", or the subsystems specified in 9A005, 9A007, 9A105, 9A106.c., 9A107, 9A108.c., 9A116 or 9A119
 - ↳ 9D104 "Software" as follows:
 - ↳ 9D105 "Software" specially designed or modified to coordinate the function of more than one subsystem, other than that specified in 9D004.e., in space launch vehicles specified in 9A004 or sounding rockets specified in 9A104 or 'missiles'.
 - ↳ 9D005 "Software" specially designed or modified for the operation of items specified in 9A004.e. or 9A004.f.

IMPORTANT: Research projects evolve with time and can move towards different outcomes than originally planned. When changes occur, it is your responsibility to reassess any project you are involved in and put an export licence in place if necessary. For queries, please email researchgovernance@admin.cam.ac.uk.