

HOW TO NAVIGATE THE CONSOLIDATED LIST AND SEARCH FOR CONTROLLED TECHNOLOGY AND SOFTWARE

USING THIS GUIDANCE

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

This guidance concerns technology and software. If you are seeking guidance on determining physical items, please see the Guidance for Controlled Goods.

You will need to search the [Consolidated List of strategic military and dual use items](#) (referred to as 'Consolidated List' hereafter) to establish whether the technology / software in question requires export authorisation.

Controlled items and controlled technology or software are listed separately from physical items in the Consolidated List and identified by a code, with software being in control category D and technology in category E. This document will focus on technology, as it is applicable to more researchers, but the steps are the same for both.

While in some cases a technology will be directly controlled (i.e. it is subject to a specific control in category E that is not associated with a physical good ((see step 3)), in many cases to identify the technology code, you will first be required to identify the physical goods code associated with it (**steps 1, 2 and 4**). So 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 will be applicable to. For instance, if you exporting research data relating to materials (e.g. an alloy) for the development of aeroengines (the engine/aircraft) your search should include engines/aircraft as well as the alloys.

DEFINITIONS AND EXEMPTIONS

WHAT COUNTS AS TECHNOLOGY OR SOFTWARE?

- Exports can be physical items ('goods'), software or technology.
- Technology can include information (such as blueprints, manuals, diagrams, and designs) that is capable of use in connection with the development, production, or use of goods or items.

- It is important to note that technology can include oral communication (telephone, Teams, Zoom, etc.) and electronic transfer (email, remote access to storage platforms, etc).
- Software constitutes a collection of one or more 'programs' or 'microprograms' fixed in any tangible medium of expression.
- Export Controls can apply to items carried with you, items sent in the post, accessed remotely, or sent by email. This is important to be aware of when travelling abroad – if bringing controlled technology or software with you (e.g. technology on a laptop, memory stick, or in paper files), you may need to apply for an Export Control Licence, even if you do not intend to share the item/software/technology. You may also need to apply for an Export Control Licence from the country you travel to in order to depart that country with the item/technology/software. You can find more information at the Research Operations Office Export Control website here: <https://www.research-operations.admin.cam.ac.uk/policies/export-control>. Should you require any further assistance or information, please contact the Research Governance Team at researchgovernance@admin.cam.ac.uk

EXEMPTIONS

Where any of the following are true of the technology or software you are intending to export, they may be exempted from Export Controls. Please click the links for definitions and more detailed information. Seek advice by emailing researchgovernance@admin.cam.ac.uk.

- the software or technology is in the [public domain](#).
- the technology meets the definition of [basic scientific research](#).
- the technology is non-nuclear dual-use, and meet the minimum technical information required to support a [patent application](#).

End Use Controls

It is important to note that if you are aware or informed that the recipient of the software or technology intends to use it for military purposes in an arms embargoed country or you are aware, are informed or suspect that they will use it for WMD purposes, the export is likely to be controlled irrespective of whether the software or technology is on the consolidated Lists.

You should pay particular attention to the potential for end use controls if:

- your research is in one of the [disciplines that could be targeted by would-be proliferators](#).

- the recipient intends to use or send the information outside the EU.
 - preliminary [online searches or other open source checks](#) show the recipient is potentially involved in suspicious activity.
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For further information and guidance, please contact the Research Governance and Integrity Team at researchgovernance@admin.cam.ac.uk.

ACCESSING THE CONSOLIDATED LIST

- Previous guidance recommended the use of the Goods Checker Tool. However, we now recommend using the live PDF of the [Consolidated List of Strategic Military and Dual-Use Items that Require Export Authorisation](#) as the Goods Checker Tool is not updated as regularly as the live PDF and does currently not include the control entries the UK government introduced in April 2024.
- Clicking the above link takes you to the webpage containing the live-PDF, which contains the most up-to-date list. The page also contains links to the Goods Checker Tool, but it is recommended that the live-PDF is searched for most accurate results in your query.
- **Please note, the version of the List that can be searched via the Goods Checker Tool does not include the control entries that the UK added unilaterally to the Consolidated List in 2024 (PL9013, PL9014 and PL9015).**

SEARCHING THE CONSOLIDATED LIST PDF

Step 1: Locate and select the live PDF using the link above (highlighted in red below).

Note: while you can download the PDF, we recommend that you visit the live page for every new search, as this will provide the most up-to-date version of the Consolidated List.

GOV.UK

Home > Business and industry > Trade and investment > Exporting > Export controls and licensing

Guidance


Consolidated list of strategic military and dual-use items that require export authorisation

Assess your goods, software and technology to determine whether or not they are controlled and require a licence to export.

From: [Export Control Joint Unit](#) and [Department for Business and Trade](#)
 Published 10 April 2013
 Last updated 3 April 2024 — [See all updates](#)

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Documents



[Consolidated list of strategic military and dual-use items that require export authorisation](#)

PDF 2.26 MB 396 pages

Related content

[Export controls: dual-use items, software and technology, goods for torture and radioactive sources](#)

[Applying for export licences using SPIRE](#)

[UK strategic export controls](#)

Step 2: Search the PDF

- Enter a key word relating to the technology such as:
 - a physical good that you use in your research (i.e. samples, materials, equipment) or
 - a physical good to which your research/ the technology will be applicable (i.e. equipment, materials, processes) or
 - a related research output or key word directly relevant to the technology's use (e.g. algorithms to develop aircraft, 'aircraft' being the word inserted as a key word here. In the second example (7E004.b), you may also have searched for 'photonic', 'flight control', 'control system', 'fly-by-wire' or 'fly-by-light' to reach these controls.)

7E004 [W]

Other "technology" as follows:

a. "Technology" for the "development" or "production" of any of the f

1. Not used;
2. Air data systems based on surface static data only, i.e., which dispense with conventional air data probes;
3. Three dimensional displays for "aircraft";
4. Not used;
5. Electric actuators (i.e., electromechanical, electrohydrostatic and integrated actuator package) specially designed for 'primary flight control';
Technical Note:
For the purposes of 7E004.a.5., 'primary flight control' is "aircraft" stability or manoeuvring control using force/moment generators, i.e., aerodynamic control surfaces or propulsive thrust vectoring.

aircraft

x

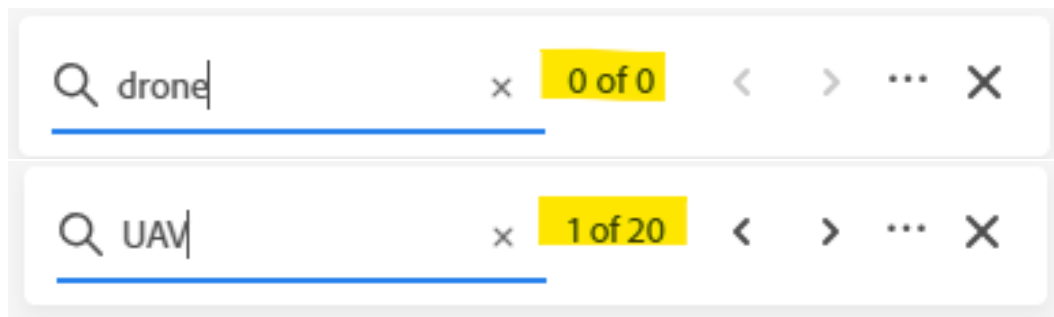
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b. "Development" "technology", as follows, for "active flight control systems" (including "fly-by-wire systems" or "fly-by-light systems"):

1. Photonic-based "technology" for sensing "aircraft" or flight control component state, transferring flight control data, or commanding actuator movement, "required" for "fly-by-light systems" "active flight control systems";

- Depending on your search query, the number of results you receive will vary, you may need to look through the highlighted results 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 relevant to your physical goods that are related to your research project.
- If your search identifies a technology (E) code control (e.g. 5E001.b.) go to Step 3
- If your search identifies a physical code (e.g. 9A012) go to Step 4.2 (Note: this applies regardless of whether you are planning to export the physical item itself).

Step 3: Directly Controlled technology or software

Directly controlled technology or software are explicitly listed on the control list in sections D or E and are controlled whether or not they are required for the development, production, or use of a controlled good (or whether the good or item it is required for is controlled or not).

- Identifying directly controlled technology is similar to the standard process for identifying controls on physical items (please see our website).
- For example, a search for 'ceramic materials' returns results in the 'technology' (E) category controlling technology for the design or production of specific ceramic powders or non-composite ceramic materials, which are not linked to any physical items (A-C codes):

1E002

[W]

Other "technology" as follows:

- a. "Technology" for the "development" or "production" of polybenzothiazoles or polybenzoxazoles;
- b. "Technology" for the "development" or "production" of fluoroelastomer compounds containing at least one vinyl ether monomer;

c. "Technology" for the design or "production" of the following ceramic powders or non-"composite" ceramic materials:

1. Ceramic powders having all of the following:
 - a. Any of the following compositions:
 1. Single or complex oxides of zirconium and complex oxides of silicon or aluminium;
 2. Single nitrides of boron (cubic crystalline forms);
 3. Single or complex carbides of silicon or boron; or
 4. Single or complex nitrides of silicon;
 - b. Any of the following total metallic impurities (excluding intentional additions):
 1. Less than 1 000 ppm for single oxides or carbides; or
 2. Less than 5 000 ppm for complex compounds or single nitrides; and
 - c. Being any of the following:
 1. Zirconia (CAS 1314-23-4) with an average particle size equal to or less than 1 μm and no more than 10% of the particles larger than 5 μm ; or
 2. Other ceramic powders with an average particle size equal to or less than 5 μm and no more than 10% of the particles larger than 10 μm ;

- Software example: A search for 'wind tunnel', 'flight test', or 'engine flow' will produce results in the Software subcategory (D codes) of the Controlled List, which

are not linked to any physical item in categories 9A-C:

9D004 Other "software" as follows:

[W]

[WS]

- a. 2D or 3D viscous "software", validated with wind tunnel or flight test data required for detailed engine flow modelling;
- b. "Software" for testing aero gas turbine engines, assemblies or components, having all of the following:
 1. Specially designed for testing any of the following:
 - a. Aero gas turbine engines, assemblies or components, incorporating "technology" specified in 9E003.a., 9E003.h. or 9E003.i.; or
 - b. Multi-stage compressors providing either bypass or core flow, specially designed for aero gas turbine engines incorporating "technology" specified in 9E003.a. or 9E003.h.; and
 2. Specially designed for all of the following:
 - a. Acquisition and processing of data, in real time; and
 - b. Feedback control of the test article or test conditions (e.g. temperature, pressure, flow rate) while the test is in progress;

- If you identify a relevant D or E code you will need to review how it applies. The code will state whether technology is controlled for "developing", "producing" or "using"¹ the physical item (sometimes also other uses such as design or testing). It may also have specific criteria, for example under 1E002 above the control only (e.g. for 1E002.c.1) above the criteria it sets out must be met.
- If your activity falls under the definition of the relevant D or E code (e.g. technology for the production of polybenzothiazoles will meet the criteria of 1E002.a.), the technology is controlled, and an export licence may be needed. Please contact the Research Governance Team for further information and guidance on next steps (researchgovernance@admin.cam.ac.uk)
 - Alternatively, you may wish to consider adjusting your proposed work to keep it under the controlled thresholds; this way no export licences may be required, unless your research involves technology or software.
- If your technology does not meet all the relevant criteria (e.g. a code only covers technology that supports the production of an item and your technology only supports the use of the item) then the code does not apply. **Note:** doing research usually falls under "developing".

Step 4: Indirectly Controlled technology or software

Indirectly controlled technology or software is controlled in relation to a physical good or item (i.e. the technology or software is required for the development, production, or use of a controlled good under Categories 1-9 of the Consolidated List).

¹ You can find the definitions of 'developing', 'producing' and 'using' in the pdf of the [UK Consolidated List](#).

- If you identify physical goods codes relevant to your technology or software (Step 2), you then need to establish whether there is an associated technology (D code) or software (E code) entry.
- Relevant E and D controls are always in the same category. If you identify a code in category 9, e.g. 9A012, the relevant E or D controls must be under codes in 9E or 9D. Please note that some D and E codes control whole sections of the control lists. So they might control technology or software for the development of items listed under 9A.
- If you identify a relevant D or E code you will need to review how it applies. The code will state whether technology is controlled for “developing”, “producing” or “using” the physical item (sometimes also other uses such as design or testing). If a code only covers technology that supports the production of an item and your technology only supports the use of the item then the code does not apply. **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 an export licence may be needed. Please contact the Research Governance Team for further information and guidance on next steps (researchgovernance@admin.cam.ac.uk)
 - Alternatively, you may wish to consider adjusting your proposed work to keep it under the controlled thresholds; this way no export licences may be required, unless your research involves technology or software.
- Example: The corresponding E control for an item in category 9A would be found in category 9E.
 - 9E101.b. and 9E102 reference the development, use and production of 9A012 (UAVs).
 - UAVs are controlled under 9E101.b. and 9E102 *only* where they are capable of a range exceeding 300km.

9E101 a. "Technology" according to the General Technology Note for the
[M*] "development" of goods specified in 9A101, 9A102, 9A104 to 9A111, 9A112.a.
[IV*] or 9A115 to 9A121.

[M*] b. "Technology" according to the General Technology Note for the "production"
[IV*] of 'UAV's specified in 9A012 or goods specified in 9A101, 9A102, 9A104 to
9A111, 9A112.a. or 9A115 to 9A121.

Technical Note:

In 9E101.b. 'UAV' means unmanned aerial vehicle systems capable of a range exceeding 300 km.

9E102 "Technology" according to the General Technology Note for the "use" of space
[M*] launch vehicles specified in 9A004, goods specified in 9A005 to 9A011, 'UAV's
[IV*] 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.

Technical Note:

In 9E102 'UAV' means unmanned aerial vehicle systems capable of a range exceeding 300 km.

GENERAL SOFTWARE NOTE (GSN)

- The General Software Note² applies where your research concerns software rather than, or in addition to, technology and overrides any control within section D

² GENERAL SOFTWARE NOTE (GSN)

(This note overrides any control within section D of Categories 1 to 9)

Categories 1 to 9 of this list do not control "software" which is any of the following:

a. Generally available to the public by being:

1. Sold from stock at retail selling points, without restriction, by means of:

a. Over-the-counter transactions;

b. Mail order transactions;

c. Electronic transactions; or

d. Telephone call transactions; and

2. Designed for installation by the user without further substantial support by the supplier;

Note: Entry a. of the General Software Note does not release "software" specified in Category 5 - Part 2 ("Information Security").

b. "In the public domain"; or

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

Note: Entry c. of the General Software Note does not release "software" specified in Category 5 - Part 2 ("Information Security").

(software controls) of Categories 1 to 9 (see exemption notes below).

- Categories 1 to 9 do not control “software” which is:
 - a) Generally available to the public by being:
 - (1) Sold from stock at retail selling points, without restriction, by means of physical, electronic, or telephonic transaction, **and**
 - (2) Designed for installation by the user without further substantial support by the supplier.

Note: this does not release or decontrol “software” specified in Category 5 – Part 2 (“Information Security”)

- b) “In the public domain”, **or**
- c) The minimum necessary “object code” for the installation, operation, maintenance or repair of authorised export items.

Note: this does not release or decontrol “software” specified in Category 5 – Part 2 (“Information Security”).

RECAP

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 an export licence may be needed.³
- If your search identifies relevant controlled physical items and your research relates to a good that falls within the control thresholds, the technology or software associated with it (i.e. required for its development, production or use) 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).
- If your technology or software is not associated with a physical good, go to step 3 above for guidance on identifying the relevant technology or software code.
- To establish whether associated technology or software is controlled, note the code of the controlled item (e.g. 9A012) and go to step 4 (above) for guidance on how to identify the technology code associated with this controlled physical good.

³ Remember that the control applies to the **capability** of the technology or software and not its intended end use, e.g. if the technology or 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.

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