

[^{F1}ANNEX

Textual Amendments

- F1** Substituted by [Commission Directive \(EU\) 2019/514 of 14 March 2019 amending Directive 2009/43/EC of the European Parliament and of the Council as regards the list of defence-related products \(Text with EEA relevance\)](#).

DEFINITIONS OF TERMS USED IN THIS LIST

The following are definitions of the terms used in this List, in alphabetical order.

Note 1 Definitions apply throughout the List. The references are purely advisory and have no effect on the universal application of defined terms throughout the List.

Note 2 Words and terms contained in this List of Definitions only take the defined meaning where this is indicated by their being enclosed in "double quotations mark"s. Definitions of terms between 'single quotation marks' are given in a Technical note to the relevant item. Elsewhere, words and terms take their commonly accepted (dictionary) meanings.

"Additives"

Substances used in explosive formulations to improve their properties.

"Aircraft"

A fixed wing, swivel wing, rotary wing (helicopter), tilt rotor or tilt-wing airborne vehicle.

"Airship"

A power-driven airborne vehicle that is kept buoyant by a body of gas (usually helium, formerly hydrogen) which is lighter than air.

"Automated Command and Control Systems"

Electronic systems, through which information essential to the effective operation of the grouping, major formation, tactical formation, unit, ship, subunit or weapons under command is entered, processed and transmitted. This is achieved by the use of computer and other specialised hardware designed to support the functions of a military command and control organisation. The main functions of an automated command and control system are: the efficient automated collection, accumulation, storage and processing of information; the display of the situation and the circumstances affecting the preparation and conduct of combat operations; operational and tactical calculations for the allocation of resources among force groupings or elements of the operational order of battle or battle deployment according to the mission or stage of the operation; the preparation of data for appreciation of the situation and decision-making at any point during operation or battle; computer simulation of operations.

"Basic scientific research"

Experimental or theoretical work undertaken principally to acquire new knowledge of the fundamental principles of phenomena or observable facts, not primarily directed towards a specific practical aim or objective.

"Biocatalysts"

'Enzymes' for specific chemical or biochemical reactions or other biological compounds which bind to and accelerate the degradation of CW agents.

Technical Note

'Enzymes' means "biocatalyst"s for specific chemical or biochemical reactions.

"Biological agents"

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Pathogens or toxins, selected or modified (such as altering purity, shelf life, virulence, dissemination characteristics, or resistance to UV radiation) to produce casualties in humans or animals, degrade equipment or damage crops or the environment.

"Biopolymers"

Biological macromolecules as follows:

- a. Enzymes for specific chemical or biochemical reactions;
- b. 'Anti-idiotypic', 'monoclonal' or 'polyclonal' 'antibodies';
- c. Specially designed or specially processed 'receptors'.

Technical Notes

1. *'Anti-idiotypic antibodies' means antibodies which bind to the specific antigen binding sites of other antibodies;*
2. *'Monoclonal antibodies' means proteins which bind to one antigenic site and are produced by a single clone of cells;*
3. *'Polyclonal antibodies' means a mixture of proteins which bind to the specific antigen and are produced by more than one clone of cells;*
4. *'Receptors' means biological macromolecular structures capable of binding ligands, the binding of which affects physiological functions.*

"Civil aircraft"

Those "aircraft" listed by designation in published airworthiness certification lists by civil aviation authorities of one or more EU Member States or Wassenaar Arrangement Participating States to fly commercial civil internal and external routes or for legitimate civil, private or business use.

"Deactivated firearm"

A firearm that has been made incapable of firing any projectile by processes defined by the EU Member State's or Wassenaar Arrangement Participating State's national authority. These processes permanently modify the essential elements of the firearm. According to national laws and regulations, deactivation of the firearm may be attested by a certificate delivered by a competent authority and may be marked on the firearm by a stamp on an essential part.

"Development"

Is related to all stages prior to serial production, such as: design, design research, design analyses, design concepts, assembly and testing of prototypes, pilot production schemes, design data, process of transforming design data into a product, configuration design, integration design, layouts.

"End-effectors"

Grippers, 'active tooling units' and any other tooling that is attached to the baseplate on the end of a "robot" manipulator arm.

Technical Note

'Active tooling units' are devices for applying motive power, process energy or sensing to a workpiece.

"Energetic materials"

Substances or mixtures that react chemically to release energy required for their intended application. "Explosives", "pyrotechnics" and "propellants" are subclasses of energetic materials.

"Explosives"

Solid, liquid or gaseous substances or mixtures of substances which, in their application as primary, booster, or main charges in warheads, demolition and other applications, are required to detonate.

"Expression Vectors"

Carriers (e.g. plasmid or virus) used to introduce genetic material into host cells.

"Fibrous or filamentary materials"

Include:

- a. Continuous monofilaments;
- b. Continuous yarns and rovings;
- c. Tapes, fabrics, random mats and braids;
- d. Chopped fibres, staple fibres and coherent fibre blankets;
- e. Whiskers, either monocrystalline or polycrystalline, of any length;
- f. Aromatic polyamide pulp.

"First generation image intensifier tubes"

Electrostatically focused tubes, employing input and output fibre optic or glass face plates, multi-alkali photocathodes (S-20 or S-25), but not microchannel plate amplifiers.

"Fuel cell"

An electrochemical device that converts chemical energy directly into Direct Current (DC) electricity by consuming fuel from an external source.

"In the public domain"

This means "technology" or "software" which has been made available without restrictions upon its further dissemination.

Note: Copyright restrictions do not remove "technology" or "software" from being "in the public domain".

"Laser"

An item that produces spatially and temporally coherent light through amplification by stimulated emission of radiation

"Library" (parametric technical database)

A collection of technical information, reference to which may enhance the performance of relevant systems, equipment or components.

"Lighter-than-air vehicles"

Balloons and "airships" that rely on hot air or on lighter-than-air gases such as helium or hydrogen for their lift.

'Microprogram'

A sequence of elementary instructions maintained in a special storage, the execution of which is initiated by the introduction of its reference instruction into an instruction register.

"Nuclear reactor"

Includes the items within or attached directly to the reactor vessel, the equipment which controls the level of power in the core, and the components which normally contain or come into direct contact with or control the primary coolant of the reactor core.

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"Precursors"

Speciality chemicals used in the manufacture of explosives.

"Production"

Means all production stages, such as: product engineering, manufacture, integration, assembly (mounting), inspection, testing, quality assurance.

'Program'

A sequence of instructions to carry out a process in, or convertible into, a form executable by an electronic computer.

"Propellants"

Substances or mixtures that react chemically to produce large volumes of hot gases at controlled rates to perform mechanical work.

"Pyrotechnic(s)"

Mixtures of solid or liquid fuels and oxidizers which, when ignited, undergo an energetic chemical reaction at a controlled rate intended to produce specific time delays, or quantities of heat, noise, smoke, visible light or infrared radiation. Pyrophorics are a subclass of pyrotechnics, which contain no oxidizers but ignite spontaneously on contact with air.

"Required"

As applied to "technology", refers to only that portion of "technology" which is peculiarly responsible for achieving or exceeding the controlled performance levels, characteristics or functions. Such "required" "technology" may be shared by different products.

"Riot control agents"

Substances which, under the expected conditions of use for riot control purposes, produce rapidly in humans sensory irritation or disabling physical effects which disappear within a short time following termination of exposure. (Tear gases are a subset of "riot control agents".)

"Robot"

A manipulation mechanism, which may be of the continuous path or of the point-to-point variety, may use sensors, and has all the following characteristics:

- a. Is multifunctional;
- b. Is capable of positioning or orienting material, parts, tools or special devices through variable movements in three-dimensional space;
- c. Incorporates three or more closed or open loop servo-devices which may include stepping motors; and
- d. Has 'user-accessible programmability' by means of the teach/playback method or by means of an electronic computer which may be a programmable logic controller, i.e. without mechanical intervention.

'User-accessible programmability' refers to the facility allowing a user to insert, modify or replace "programs" by means other than:

- a. A physical change in wiring or interconnections; or
- b. The setting of function controls including entry of parameters.

Note The above definition does not include the following devices:

1. *Manipulation mechanisms which are only manually/teleoperator controllable;*

2. *Fixed sequence manipulation mechanisms which are automated moving devices, operating according to mechanically fixed programmed motions. The programme is mechanically limited by fixed stops, such as pins or cams. The sequence of motions and the selection of paths or angles are not variable or changeable by mechanical, electronic or electrical means;*
3. *Mechanically controlled variable sequence manipulation mechanisms which are automated moving devices, operating according to mechanically fixed programmed motions. The programme is mechanically limited by fixed, but adjustable, stops, such as pins or cams. The sequence of motions and the selection of paths or angles are variable within the fixed programme pattern. Variations or modifications of the programme pattern (e.g. changes of pins or exchanges of cams) in one or more motion axes are accomplished only through mechanical operations;*
4. *Non-servo-controlled variable sequence manipulation mechanisms which are automated moving devices, operating according to mechanically fixed programmed motions. The programme is variable but the sequence proceeds only by the binary signal from mechanically fixed electrical binary devices or adjustable stops;*
5. *Stacker cranes defined as Cartesian coordinate manipulator systems manufactured as an integral part of a vertical array of storage bins and designed to access the contents of those bins for storage or retrieval.*

"Software"

A collection of one or more "programs" or "microprograms" fixed in any tangible medium of expression.

"Spacecraft"

Active and passive satellites and space probes.

"Space-qualified"

Designed, manufactured, or qualified through successful testing, for operation at altitudes greater than 100 km above the surface of the Earth.

Note A determination that a specific item is "space-qualified" by virtue of testing does not mean that other items in the same production run or model series are "space-qualified" if not individually tested.

"Superconductive"

Refers to materials, (i.e. metals, alloys or compounds) which can lose all electrical resistance (i.e. which can attain infinite electrical conductivity and carry very large electrical currents without Joule heating).

"Critical temperature" (sometimes referred to as the transition temperature) of a specific "superconductive" material is the temperature at which the material loses all resistance to the flow of direct electrical current.

Technical Note

The "superconductive" state of a material is individually characterised by a "critical temperature", a critical magnetic field, which is a function of temperature, and a critical current density which is, however, a function of both magnetic field and temperature.

"Technology"

Specific information necessary for the "development", "production" or operation, installation, maintenance (checking), repair, overhaul or refurbishing of a product. The information takes

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the form of 'technical data' or 'technical assistance'. Specified 'technology' for the EU Common Military List is defined in ML22.

Technical Notes

1. *'Technical data' may take forms such as blueprints, plans, diagrams, models, formulae, tables, engineering designs and specifications, manuals and instructions written or recorded on other media or devices such as disk, tape, read-only memories.*
2. *'Technical assistance' may take forms such as instruction, skills, training, working knowledge, consulting services. 'Technical assistance' may involve transfer of 'technical data'.*

"Unmanned aerial vehicle" ("UAV")

Any "aircraft" capable of initiating flight and sustaining controlled flight and navigation without any human presence on board.]