STRATEGIC TRADE ACT 2010

STRATEGIC TRADE (STRATEGIC ITEMS) (AMENDMENT) ORDER 2025

IN exercise of the powers conferred by section 7 of the Strategic Trade Act 2010 [*Act 708*], the Minister makes the following order:

Citation and commencement

1. (1) This order may be cited as the **Strategic Trade (Strategic Items) (Amendment) Order 2025**.

(2) This Order comes into operation on 2 June 2025.

Amendment of Schedule

2. The Strategic Trade (Strategic Items) Order 2010 [*P.U. (A) 485/2010*], which is referred to as the "principal Order" in this Order, is amended in the Schedule—

(a) in Part 1: Military Items List—

(i) in relation to Category Code ML1, in the Note column—

(A) by inserting after note d the following technical note:

"Technical Note:

A 'deactivated firearm' is a firearm that has been made incapable of firing any projectile by processes defined by the national authority of the EU Member States or the Wassenaar Arrangement Participating States. These processes irreversibly modify the essential elements of the firearm. According to national laws and regulations, deactivation of the firearm may be attested by a certificate issued by

a competent authority and may be marked on the firearm by a stamp on the essential part.";

(B) by deleting note e;

(C) in respect of item a—

(i) by substituting for the full stop at the end of note d a semi colon; and

(ii) by inserting after note d the following note:

"e. Handguns specially designed for:

1. slaughtering of domestic animals; or

2. tranquilising of animals."; and

(D) by inserting in the Note column appearing against subitem d.3 in the Items Description column the following technical note:

"Technical Note:

For the purposes of ML1.d.3, a 'gun-mounting' is a fixture designed to mount a gun onto a ground vehicle, 'aircraft', vessel or structure.";

(ii) in relation to Category Code ML2, in respect of item a, in the Items Description column, by deleting the words "and signature reduction devices therefor";

(iii) in relation to Category Code ML4, in the Note column—

(A) in respect of item a, by inserting after note b the following note:

"N.B.: For grenade or canister ammunition for weapons or projectors specified in ML1 or ML2 and submunitions specially designed for ammunition, see ML3"; and

(B) in respect of item b, in Note 1.a, by deleting the words "capable of producing 1,000 kg or more per day of gas in liquid form";

(iv) in relation to Category Code ML5 in the Items Description column, in subitem b.2, by deleting the word "and";

(v) by substituting for Category Code ML6 the following category code:

Category Code	*Items Description*	*Note*	*Relevant Authority*
"ML6	Ground vehicles and components, as follows: a. Ground vehicles and components therefor, specially designed or modified for military use;	N.B.: For guidance and navigation equipment, see ML11. Note 1: ML6.a includes: a. Tanks and other military armed vehicles and military vehicles fitted with mountings for arms or equipment for mine laying or the launching of munitions specified by ML4; b. Armoured vehicles; c. Amphibious and deep water fording vehicles; d. Recovery vehicles and vehicles for towing or transporting	Controller"

Category Code	*Items Description*	*Note*	*Relevant Authority*
		ammunition or weapon systems and associated load handling equipment; e. Trailers. Note 2: Modification of a ground vehicle for military use specified by ML6.a entails a structural, electrical or mechanical change involving one or more components that are specially designed for military use. Such components include— a. Pneumatic tyre casings of a kind specially designed to be bullet-proof; b. Armoured protection of vital parts (e.g. fuel tanks or vehicle cabs); c. Special reinforcements or mountings for weapons; d. Black-out lighting.	
	b. Other ground vehicles and components, as follows: 1. Vehicles having all of the following: a. Manufactured or fitted with materials or components to provide ballistic protection equal to or better than level III (NIJ 0108.01, September 1985), or national equivalent standards; b. A transmission to provide drive to both front and rear wheels simultaneously, including those vehicles having additional wheels for load bearing purposes whether driven or not; c. Gross Vehicle Weight Rating		

Category Code	*Items Description*	*Note*	*Relevant Authority*
	(GVWR) greater than 4,500 kg; and d. Designed or modified for off-road use; 2. Components having all of the following: a. Specially designed for vehicles specified in ML6.b.1; and b. Providing ballistic protection equal to or better than level III (NIJ 0108.01, September 1985), or national equivalent standards.	N.B.: See also ML13.a. Note 1: ML6 does not apply to civil vehicles designed or modified for transporting money or valuables. Note 2: ML6 does not apply to vehicles that meet all of the following; a. Were manufactured before 1946; b. Do not have items specified by the EU Common Military List and manufactured after 1945, except for reproductions of original components or accessories for the vehicle; and c. Do not incorporate weapons specified in ML1, ML2 or ML4 unless they are inoperable and incapable of discharging a projectile.	

;

(vi) in relation to Category Code ML8, in respect of subsubitem c.12.c, in the Note column, by inserting the following note:

"Note: ML8.c.12 includes thermites.";

(vii) in relation to Category Code ML11, in the Items Description column, by substituting for item b the following item:

"b. Jamming equipment designed or modified to hinder the reception, operation or effectiveness of positioning, navigation or timing services provided by 'satellite navigation systems', and specially designed components therefor;"; and

(viii) in relation to Category ML13—

(A) in the Item Description column—

(i) by substituting for the words "constructions and components," the words "constructions, components, and accessories,";

(ii) by substituting for item c the following item:

"c. Helmets and specially designed components and accessories therefor, as follows:

1. Helmets manufactured according to military standards or specifications, or comparable national standards;

2. Shells, liners, or comfort pads, specially designed for helmets specified in ML13.c.1;

3. Add-on ballistic protection elements, specially designed for helmets specified in ML13.c.1"; and

(iii) in subitem d.2, by substituting for the words "national equivalents" the words "national equivalent standards"; and

(B) in the Note column—

(i) in Note 4, by substituting for the word "ML13." the word "ML13.c"; and

(ii) by inserting after Note 4 the following note:

"Note 5: ML13.d.1 does not apply to protective eyewear.

N.B: For laser protective eyewear, see ML17.o";

(b) in Part 2: Dual-Use Items List—

(i) in relation to General Notes to Part 2, in Note 4, by substituting for the words "(including hydrates)" the words "(including hydrates, isotopically-labelled forms or all possible stereoisomers)";

(ii) in relation to Category 1 – Special materials and related equipment—

(A) in respect of Category Code 1A004, in the Note column, in Technical Note, by substituting for the words " 'Trace detection' " the words "'For the purposes of 1A004.d., 'trace detection' ";

(B) in respect of Category Code 1A008, in the Note column, in the Technical Note, by substituting for the words " 'Shaped charges' " the words "For the purposes of 1A008.a., 'shaped charges' ";

(C) in respect of Category Code 1B001, in the Note column, in Technical Note 1, by substituting for the word "program" the word ' "programme" ';

(D) in respect of Category Code 1C001, in the Note column, in Technical Note—

(i) by substituting for the words "Absorption test sample for 1C001.a Note: 1.c.1." the words "For the purposes of 1C001.a. Note: 1.c.1., absorption test sample";

(ii) by substituting for the words ' "Open-cell foams" ' the words "For the purposes of 1C001.a. Note 1.e., 'open-cell foams' "; and

(iii) by substituting for the words " 'Bulk electrical conductivity' " the words "For the purposes of 1C001.c., 'bulk electrical conductivity' ";

(E) in respect of Category Code 1C002, in the Note column—

(i) by substituting for Technical Note 1 the following technical note—

"1. For the purposes of 1C002, metal alloys are those containing a higher percentage by weight of the stated metal than of any other element.";

(ii) by deleting Technical Notes 2 and 3;

(iii) by inserting against item b the following technical note:

"Technical Note:

For the purposes of 1C002.b.:

1. 'Stress-rupture life' should be measured in accordance with ASTM standard E-139 or national equivalent standards.

2. 'Low cycle fatigue life' should be measured in accordance with ASTM standard E-606 'Recommended Practice for Constant-Amplitude Low-Cycle Fatigue Testing' or national equivalent standards. Testing should be axial with an average stress ratio equal to 1 and a stress-concentration factor (K_t) equals to 1. The average stress ratio is defined as maximum stress minus minimum stress divided by maximum stress.";

(iv) in the Technical Note, in item c, by substituting for the word "X" the words "For the purposes of 1C002.c.1., X";

(v) by substituting for item:

"Technical Note:

1. "Vacuum atomization" is a process to reduce a molten stream of metal to droplets of a diameter of 500 μm or less by the rapid evolution of a dissolved gas upon exposure to a vacuum."

the following item:

"Technical Note:

For the purposes of 1C002:

1. "Vacuum atomization" is a process to reduce a molten stream of metal to droplets of a diameter of 500 μm or less by the rapid evolution of a dissolved gas upon exposure to a vacuum."; and

(vi) In Technical Note 10, by substituting for the words ' "Solidify rapidly" ' the words "For the purposes of 1C002 Technical Notes, "solidify rapidly" ";

(F) in respect of Category Code 1C003, in the Note column, in the Technical Note—

(i) by substituting for the words "Measurement of initial relative permeability" the words "For the purposes of 1C003.a., measurement of initial relative permeability"; and

(ii) by substituting for the words " 'Nanocrystalline' materials in 1C003.c." the words "For the purposes of 1C003.c., 'nanocrystalline' materials";

(G) in respect of Category Code 1C008, in the column Note, by substituting for the Technical Note the following technical note:

"Technical Notes:

1. For the purposes of 1C008.a.2. thermoplastic materials, 1C008.a.4. materials and 1C008.f. materials, the 'glass transition temperature (T_g)' is determined using the method described in ISO 11357-2:1999 or national equivalent standards.

2. For the purposes of 1C008.a.2. thermosetting materials and 1C008.a.3. materials, the 'glass transition temperature (T_g)' is determined using the 3-point bend method described in ASTM D 7028-07 or national equivalent standards. The test is to be performed using a dry test specimen which has attained a minimum of 90% degree of cure as specified in ASTM E 2160-04 or national equivalent standards, and was cured using the combination of standard and post-cure processes that yield the highest T_g.";

(H) in respect of Category Code 1C010, in the Note column—

(i) in Technical Note 1, by substituting for the words " 'specific tensile strength', 'specific modulus' or specific weight of 'fibrous or filamentary materials' " the words ' "specific tensile strength", "specific modulus" or specific weight of "fibrous or filamentary materials" ';

(ii) in Technical Note 2, by substituting for the words "Assessing the 'specific tensile strength', 'specific modulus' or specific weight of non-unidirectional 'fibrous or filamentary materials' " the words "For the purpose of assessing the "specific tensile strength", "specific modulus" or specific weight of non-unidirectional "fibrous or filamentary materials" ";

(iii) in the Technical Note, in subitem d.2, by substituting for the word ' "Commingled" ' the words "For the purposes of 1C010.d.2., 'commingled' ";

(iv) in Technical Note 1, in item e, by substituting for the words ' "Carbon fibre preforms" ' the words 'For the purposes of 1C010.e. and Note 1, "carbon fibre preforms" '; and

(v) in Technical Note 2, in item e, by substituting for the words 'The "Dynamic Mechanical Analysis glass transition temperature (DMA T_g)" ' the words "For the purposes of 1C010.e.2., the 'Dynamic Mechanical Analysis glass transition temperature (DMA T_g)' ";

(I) in respect of Category Code 1C011, in the Note column, by substituting for the words "The natural content of hafnium" the words "For the purposes of 1C011.a., the natural content of hafnium"; and

(J) in respect of Category Code 1C012, in the Note column, in the Technical Note, by substituting for the words "These materials are typically used" the words "For the purposes of 1C012, these materials are typically used";

(iii) in relation to Category 2 – Material processing—

(A) in respect of Category Code 2A001, in the Note column, by substituting for the words "Technical Notes:" the following words:

"Technical Notes:

For the purposes of 2A001.a.:";

(B) in respect of Category Code 2B, in the Note column, in Technical Note 1, by substituting for the words "Secondary parallel contouring axes" the words "For the purposes of 2B, secondary parallel contouring axes,";

(C) in respect of Category Code 2B004, in the Note column, in Technical Note, by substituting for the words "The inside chamber dimension" the words "For the purposes of 2B004, the inside chamber dimension";

(D) in respect of Category Code 2B006, in the Note column, in Technical Note, by substituting for the words "The $E_{0, MPE}$" the words "For the purposes of 2B006.a., the $E_{0,MPE}$";

(E) in respect of Category Code 2B008, in the Note column, by substituting for the words "A 'compound rotary table' " the words "For the purposes of 2B008.c., a 'compound rotary table' ";

(F) in respect of Category Code 2B209, in the Items Description column, in item b, by substituting for the word "400mm" the words "650 mm";

(G) in respect of Category Code 2B228, in the Note column, in Technical Note 1, by substituting for the word "400mm" the words "650 mm"; and

(H) in respect of Category Code 2E003—

(i) in the Items Description column, by substituting for subitem b.2 the following subitem:

"2. Not used.";

(ii) in the Note column, by substituting for the Technical Note the following technical note:

"Technical Note:

For the purposes of 2E003.b.1.c., "direct-acting hydraulic pressing" is a deformation process which uses a fluid-filled flexible bladder in direct contact with the workpiece."; and

(iii) by inserting in the Note column appearing against subitem b.2 in the Items Description column the following note:

"N.B. For "technology" for metal-working manufacturing processes for gas turbine engines and components, see 9E003 and the Military Items List.";

(iv) in relation to Category 3 – Electronics—

(A) in respect of Category Code 3A001, in the Note column—

(i) in the Technical Note, in subitem a.2, by substituting for the words ' "Non-volatile Memories" ' the words "For the purposes of 3A001.a.2., 'non-volatile memories' ";

(ii) in the Technical Note, in subsubitem a.5.a, by substituting for the words "Technical Note:" the following words:

"Technical Note:

For the purposes of 3A001.a.5.a.:";

(iii) in the Technical Note, in subsubitem a.5.b, by substituting for the words "Technical Note:" the following words:

"Technical Note:

For the purposes of 3A001.a.5.b.:";

(iv) in the Technical Note, in subitem a.7, by substituting for the words "Technical Note:" the following words:

"Technical Note:

For the purposes of 3A001.a.7.:";

(v) in the Technical Note, in subitem a.12, by substituting for the words "When N is equal to 1,024 points" the words "For the purposes of 3A001.a.12., when N is equal to 1,024 points,";

(vi) in the Technical Note, in subitem a.13, by substituting for the words "The DAC clock frequency" the words "For the purposes of 3A001.a.13., the DAC clock frequency";

(vii) in the Technical Note, in subitem a.14, by substituting for the words "Technical Note:" the following words:

"Technical Note:

For the purposes of 3A001.a.14.:";

(viii) in the Technical Note, in subsubitem b.1.d, by substituting for the words " 'Dual mode' " the words "For the purposes of 3A001.b.1.d., 'dual mode' ";

(ix) in the Technical Note, in subitem b.9, by substituting for the words "Technical Note:" the following words:

"Technical Note:

For the purposes of 3A001.b.9.:";

(x) in the Technical Note, in subitem b.10, by substituting for the words "In 3A001.b.10.," the words "For the purposes of 3A001.b.10.;";

(xi) in the Technical Note, in subitem b.11, by substituting for the words "A 'frequency synthesiser' " with the words "For the purposes of 3A001.b.11., a 'frequency synthesiser' ";

(xii) in the Technical Note, in subitem b.12, by substituting for the words "Technical Note:" the following words:

"Technical Note:

For the purposes of 3A001.b.12.:";

(xiii) in the Technical Note, in subitem c.1, by substituting for the words " 'Frequency side-lobe rejection' " the words "For the purposes of 3A001.c.1., 'frequency side-lobe rejection' "; and

(xiv) in the Technical Note, in subitem e.4., by substituting for the word ' "AM0" ' the word "For the purposes of 3A001.e.4., "AMO" ";

(B) in respect of Category Code 3A002, in the Note column—

(i) in the Technical Note, in subitem a.6, by substituting for the words "Technical Notes:" the following words:

"Technical Notes:

For the purposes of 3A002.a.6.:";

(ii) in Technical Note 1, in subsubitem c.4.a, by substituting for the words " 'Real-time bandwidth' " the words "For the purposes of 3A002.c.4.a., 'real-time bandwith' ";

(iii) in Technical Note 2, in subsubsubitem c.4.b.1, by substituting for the words "Probability of discovery in 3A002.c.4.b." the words "For the purposes of 3A002.c.4.b.1., probability of discovery";

(iv) in Technical Note 3, in subsubsubitem c.4.b.1, by substituting for the word "3A002.c.4.b.," the word "3A002.c.4.b.1,";

(v) in Technical Note 4, in subsubsubitem c.4.b.2, by substituting for the words "A 'frequency mask trigger' " the words "For the purposes of 3A002.c.4.b.2., a 'frequency mask trigger' ";

(vi) in the Techical Note, in subitem d.4, by substituting for the words "In 3A002.d.4.," the words "For the purposes of 3A002.d.4.,";

(vii) in the Technical Note, in subitem d.5, by substituting for the words " 'RF modulation bandwidth' " the words "For the purposes of 3A002.d.5., 'RF modulation bandwidth' ";

(viii) in Technical Note 1, by substituting for the words "The maximum frequency" the words "For the purposes of 3A002.d., the maximum frequency";

(ix) in the Technical Note, in subitem e.3., by substituting for the words " 'Non-linear vector measurement functionality' " the words "For the purposes of 3A002.e.3., 'non-linear vector measurement functionality' "; and

(x) in item h, by substituting for the words "Technical Note:" the following words:

"Technical Note:

For the purposes of 3A002.h.:";

(C) in respect of Category Code 3B001—

(i) in the Note column—

(A) in Technical Note 1, by substituting for the word "3B001.e." the word "3B001.e.1.";

(B) in Technical Note 2, by substituting for the word "3B001.e." the word "3B001.e.2."; and

(C) in the Technical Note, by substituting for the words "The 'Minimum Resolvable Feature size' (MRF)" the words "For the purposes of 3B001.f.1.b., the 'Minimum Resolvable Feature size' (MRF)";

(ii) in the Items Description column—

(A) in item i, by substituting the full stop at the end of the word "3A001" a semi colon; and

(B) by inserting after item i the following item:

"j. Mask "substrate blanks" with multilayer reflector structure consisting of molybdenum and silicon, and having all of the following:

1. Specially designed for 'Extreme Ultra Violet' ('EUV') lithography; and

2. Compliant with SEMI Standard P37."; and

(iii) by inserting in the Note column appearing against item j in the Items Description column the following note:

"Technical Note:

For the purposes of 3B001.j., 'Extreme Ultra Violet' ('EUV') refers to electromagnetic spectrum wavelengths greater than 5 nm and less than 124 nm.";

(D) in respect of Category Code 3D003, in the Note column, in the Technical Note, by substituting for the words " 'Computational lithography' " the words "For the purposes of 3D003, 'computational lithography' ";

(E) by inserting after Category Code 3D005 the following category code:

Category Code	*Items Description*	*Note*	*Relevant Authority*
"3D006	'Electronic Computer-Aided Design' ('ECAD') "software" specially designed for the "development" of integrated circuits having any "Gate-All-Around Field-Effect Transistor" ("GAAFET") structure, and having any of the following: a. Specially designed for implementing 'Register Transfer Level' ('RTL') to 'Geometrical Database Standard II' ('GDSII') or national equivalent standards; or	Technical Notes: For the purposes of 3D006: 1. 'Electronic Computer-Aided Design' ('ECAD') is a category of "software" tools used for designing, analysing, optimizing, and validating the performance of integrated circuit or printed circuit board. 2. 'Register Transfer Leve' ('RTL') is a design abstraction which models a synchronous digital circuit in terms of the flow of digital	Controller"

Category Code	*Items Description*	*Note*	*Relevant Authority*
	b. Specially designed for optimisation of power or timing rules.	signals between hardware registers and the logical operations performed on those signals. 3. 'Geometrical Database Standard II' ('GDSII') is a database file format for data exchange of integrated circuit or integrated circuit layout artwork.	

;

(F) in respect of Category Code 3E001, in the Note column, in the Technical Note, by substituting for the words "A 'Process Design Kit' ('PDK')" the words "For the purposes of 3E001 Note 3, a 'Process Design Kit' ('PDK')"; and

(G) in respect of Category Code 3E002, in the Note column, in the Technical Note, by substituting for the words "A 'vector processor unit' " the words "For the purposes of 3E002.a., a 'vector processor unit' ";

(v) in relation to Category 4 – Computers—

(A) in respect of Category Code 4, in the Note column, in the Technical Note, by substituting for the words ' "Main storage" ' the words "For the purposes of Note 2, 'main storage' ";

(B) in respect of Category Code 4A004, in the Note column—

(i) in Technical Note 1, by substituting for the words ' "Systolic array computers" ' the words "For the purposes of 4A004.a., 'systolic array computers' ";

(ii) in Technical Note 2, by substituting for the words ‘ “Neural computer” ’ the words “For the purposes of 4A004.b., ‘neural computer’ ”; and

(iii) in Technical Note 3, by substituting for the words ‘ “Optical computers” ’ the words “For the purposes of 4A004.c., ‘optical computers’ ”;

(C) in respect of Category Code 4D001, in subitem b.1, in the Items Description column, by substituting for the words “15 Weighted TeraFLOPS (WT)” the words “24 Weighted TeraFLOPS (WT)”; and

(D) in respect of Category Code 4E001, in subitem b.1, in the Items Description column, by substituting for the words “15 Weighted TeraFLOPS (WT)” the words “24 Weighted TeraFLOPS (WT)”;

(vi) in relation to Category 5 – Telecommunications and “Information Security”—

(A) in respect of Category Code 5A001, in the Note column—

(i) the Technical Note, in subsubitem b.5.b, by substituting for the words “ ‘Channel switching time’ ” the words “For the purposes of 5A001.b.5.b., ‘channel switching time’ ”;

(ii) in the Technical Note, in item c, by substituting for the words “ ‘Proof Test’ ” the words “For the purposes of 5A001.c., ‘proof test’ ”; and

(iii) in the Technical Note, in item g, by substituting for the words "Non-radar transmitters" the words "For the purposes of 5A001.g., non-radar transmitters";

(B) in relation to Category Code 5A002, in the Note column—

(i) in the Technical Note, in Note 2.a.1.b, by substituting for the words " 'Personal Data' " the words "For the purposes of 5A002.a. Note 2.a.1.b.1., 'personal data' ";

(ii) in Note 2.a.2, by substituting for the words " 'Readers/writers' " the words "For the purposes of 5A002.a. Note 2.a.1.b.2., 'readers/writers' ";

(iii) in the Technical Note, in Note 2.b, by substituting for the words " 'Money transactions' " the words "For the purposes of 5A002.a. Note 2.b., 'money transactions' ";

(iv) in Technical Note 1, in Note 2.j, by substituting for the words ' "Connected civil industry application" ' the words "For the purposes of 5A002.a. Note 2.j., 'connected civil industry application' ";

(v) in Technical Note 2, in Note 2.j, by substituting for the words ' "Non-arbitrary data" ' the words "For the purposes of 5A002.a. Note 2.j.1.a.1., 'non-arbitrary data' ";

(vi) in the Technical Note, in item b, by substituting for the words " A 'cryptographic activation token' " the words "For the purposes of 5A002.b., a 'cryptographic activation token' "; and

(vii) in the Technical Note, in item c, by substituting for the words ' "Quantum cryptography" ' the words "For the purposes of 5A002.c., "quantum cryptography" "; and

(C) in respect of Category Code 5A004, in the Note column—

(i) in the Technical Note, in item a, by substituting for the words " 'Cryptanalytic functions' " the words "For the purposes of 5A004.a, 'cryptanalytic functions' "; and

(ii) in the Technical Note, in subitem b.1, by substituting for the words " 'Extract raw data' " the words "For the purposes of 5A004.b.1., 'extract raw data' ";

(vii) in relation to Category 6 – Sensors and lasers—

(A) in respect of Category Code 6A001, in the Note column—

(i) in Technical Note 1, in subsubsubitem a.1.a.1, by substituting for the words " 'Sounding resolution' " the words "For the purposes of 6A001.a.1.a.1.c., 'sounding resolution' ";

(ii) in Technical Note 2, in subsubsubitem a.1.a.1, by substituting for the words " 'Enhancement' " the words "For the purposes of 6A001.a.1.a., 'enhancement' ";

(iii) by substituting for the item:

"Technical Note:

The acoustic sensor pressure rating determines the depth rating of the equipment specified in 6A001.a.1.a.2."

the following item:

"Technical Note:

For the purposes of 6A001.a.1.a.2., the acoustic sensor pressure rating determines the depth rating of the equipment." ;

(iv) in the Technical Note, in subsubsubitem a.1.a.2, by substituting for the words " 'Sounding rate' " the words "For the purposes of 6A001.a.1.a.2.a.2., 'sounding rate' ";

(v) in Technical Note 1, in subsubsubitem a.1.a.3, by substituting for the words " 'Area coverage rate' (m^2/s)" the words "For the purposes of 6A001.a.1.a.3., 'area coverage rate' (m^2/s)";

(vi) in the Technical Note, in subsubsubitem a.1.c.1, by substituting for the words "The 'free-field Source Level (SL_{RMS})' " the words "For the purposes of 6A001.a.1.c.1., the 'free-field Source Level (SL_{RMS})' ";

(vii) in Technical Note 1, in subsubitem a.2.a, by substituting for the words "Hydrophones" the words "For the purposes of 6A001.a.2.a., hydrophones";

(viii) in Technical Note 2, in subsubitem a.2.a, by substituting for the words "For the purposes of 6A001.a.2.a., underwater acoustic transducers" the words "Underwater acoustic transducers";

(ix) in Technical Note 1, in subsubsubitem a.2.a.3, by substituting for the words " 'Piezoelectric polymer film' sensing elements" the words "For the purposes of 6A001.a.2.a.3.b., 'piezoelectric polymer film' sensing elements";

(x) in Technical Note 2, in subsubsubitem a.2.a.3, by substituting for the words " 'Flexible piezoelectric composite' sensing elements" the words "For the purposes of 6A001.a.2.a.3.c., 'flexible piezoelectric composite' sensing elements";

(xi) in Technical Note 3, in subsubitem a.2.a, by substituting for the words " 'Hydrophone sensitivity' " the words "For the purposes of 6A001.a.2.a., 'hydrophone sensitivity' ";

(xii) in Technical Note 1, in subsubitem a.2.g, by substituting for the words "Accelerometer-based hydro-acoustic sensors" the words "For the purposes of 6A001.a.2.g., accelerometer-based hydro-acoustic sensors"; and

(xiii) in Techincal Note 2, in subsubitem a.2.g, by substituting for the words " 'Acceleration sensitivity' " with the word 'For the purposes of 6A001.a.2.g.2., 'acceleration sensitivity' ";

(B) in respect of Category Code 6A002, in the Note column—

(i) in the Technical Note, in subitem a.2, by substituting for the words " 'Charge multiplication' " the words "For the purposes of 6A002.a.2., 'charge multiplication' ";

(ii) in the Technical Note, in subitem a.3, by substituting for the words "Linear or two-dimensional multi-element detector arrays" the words "For the purposes of 6A002.a.3., linear or two-dimensional multi-element detector arrays";

(iii) in the Technical Note, in Note 2.c.2.a, in subitem a.3, by substituting for the words "A response limiting mechanism" the words "For the purposes of 6A002.a.3. Note 2.c.2.a., a response limiting mechanism";

(iv) in the Technical Note, in item c, by substituting for the words " 'Direct view' " the words "For the purposes of 6A002.c., 'direct view' "; and

(v) in the Technical Note., in item f, by substituting for the words "A 'Read-Out Integrated Circuit' ('ROIC')" the words "For the purposes of 6A002.f., a 'Read-Out Integrated Circuit' ('ROIC')";

(C) in respect of Category Code 6A003, in the Note column—

(i) in Technical Note 1, in item b.1, by substituting for the words "this entry" the words "6A003.b.1.";

(ii) in Technical Note 2, subitem b.1, by substituting for the words "this entry" the words "6A003.b.1.b.3.";

(iii) in Technical Note 1, in subitem b.4, by substituting for the words " 'Instantaneous Field of View (IFOV)' " the words "For the purposes of 6A003.b.4 Note 3.b.1, 'Instantaneous Field of View (IFOV)' "; and

(iv) in Technical Note 2, in subitem b.4, by substituting for the words " 'Direct view' " the words "For the purposes of 6A003.b.4. Note 3.b.3., 'direct view' ";

(D) in relation to Category Code 6A004, in the Note column—

(i) in subitem a.1, by substituting for the Technical Note the following technical note:

"Technical Note:

For the purposes of 6A004.a.1.:

"Deformable mirrors" are mirrors having any of the following:

1. a. A single continuous optical reflecting surface which is dynamically deformed by the application of individual torques or forces to compensate for distortions in the optical waveform incident upon the mirror; or

b. Multiple optical reflecting elements that can be individually and dynamically repositioned by the application of torques or forces to compensate for distortions in the optical waveform incident upon the mirror.

2. "Deformable mirrors" are also known as adaptive optic mirrors.";

(ii) in Technical Note 1, in item e, by substituting for the words "An 'aspheric optical element' " the words "For the purposes of 6A004.e., an 'aspheric optical element' "; and

(iii) in Technical Note 2, in item e, by substituting for the word "Manufacturers" the word "For the purposes of 6A004.e.2., manufacturers";

(E) in respect of Category Code 6A005—

(i) in the Note column, in Note 2, in the Technical Note, by substituting for the words " 'Non-repetitive pulsed' " the words "For the purposes of 6A005 Note 2, 'non-repetitive pulsed' ";

(ii) in the Note column, in the Technical Note, by substituting for the words "In 6A005 'Wall-plug efficiency' " the words "For the purposes of 6A005, 'wall-plug efficiency' ";

(iii) in the Items Description column, in subsubsubitem b.3.a.2, by substituting for the word "50W" the words "80 W";

(iv) in the Items Description column, by substituting for subsubitem d.1.a the following subsubitem:

"a. Individual single-transverse mode semiconductor "lasers" having any of the following:

1. Wavelength equal to or less than 1,570 nm and average or CW output power, exceeding 2.0 W; or

2. Wavelength greater than 1,570 nm and average or CW output power, exceeding 500 mW";

(v) in the Note column, in subsubitem d.1.e, by substituting for the words "Technical Note:" the following words:

"Technical Note:

For the purposes of 6A005.d.1.e.:";

(vi) in the Note column, in the Technical Note, in subsubitem d.5.c, by substituting for the words " 'Transfer lasers' " the words "For the purposes of 6A005.d.5.c., 'transfer lasers' ";

(vii) in the Note column, in the Technical Note, in subitem e.1, by substituting for the words " 'Active cooling' " the words "For the purposes of 6A005.e.1., 'active cooling' "; and

(viii) in the Note column, in the Technical Note, in item g, by substituting for the words " 'Laser acoustic detection equipment' " the words "For the purposes of 6A005.g., 'laser acoustic detection equipment' ";

(F) in respect of Category Code 6A008, in the Note column—

(i) in the Technical Note, in item b, by substituting for the words "The 'centre operating frequency' " the words "For the purposes of 6A008.b., the 'centre operating frequency' ";

(ii) in the Technical Note, in item e, by substituting for the words "Electronically scanned array antennae" the words "For the purposes of 6A008.e., electronically scanned array antennae";

(iii) in the Technical Note, in subitem l.1, by substituting for the words ' "Automatic target tracking" ' the words "For the purposes of 6A008.l.1, 'automatic target tracking' "; and

(iv) in the Technical Note, in subitem l.4, by substituting for the word 'Sensors' the word "For the purposes of 6A008.l.4., sensors";

(G) in respect of Category Code 6B007, in the Items Description column, by substituting for the word "better" the words "less (better)";

(H) in respect of Category Code 6C002, in the Note column, in subitem b.1, by substituting for the words " 'Mole fraction' " the words "For the purposes of 6C002.b.1., 'mole fraction' ";

(I) in respect of Category Code 6C005, in the Note column, in Technical Note 1, by substituting for the word "6C005" the word "6C005.b.1.b.";

(J) in respect of to Category Code 6D003, in the Technical Note, in subsubitem h.2.b, by substituting for the words " 'Average side lobe level' in 6D003.h.2.b" the words "For the purposes of 6D003.h.2.b. 'average side lobe level' "; and

(K) in respect of to Category Code 6E003, in the Note column, in the Technical Note, by substituting for the words " 'Optical thickness' " the words "For the purposes of 6E003.a.1., 'optical thickness' ";

(viii) in relation to Category 7 – Navigation and avionics—

(A) in respect of Category Code 7A003, in the Note column—

(i) by deleting Note 1;

(ii) by deleting Note 2;

(iii) by deleting the Technical Note;

(iv) by inserting after the following item:

"N.B.: SEE ALSO 7A103."

the following item:

"Note: 7A003 does not apply to 'inertial measurement equipment or systems' which are certified for use on "civil aircraft" by civil aviation authorities of one or more EU Member States or Wassenaar Arrangement Participating States.

Technical Note:

1. For the purposes of 7A003, '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 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).

2. For the purposes of 7A003, 'positional aiding references' independently provide position, and include:

a. "Satellite navigation system";
b. "Data-Based Referenced Navigation" ("DBRN").";

(v) in the Technical Note, in item a, by substituting for the words "The performance parameters in 7A003.a.1., 7A003.a.2. and 7A003.a.3." the words "For the purposes of 7A003.a.1., 7A003.a.2. and 7A003.a.3., the performance parameters"; and

(vi) in the Technical Note, in item b, by substituting for the word "7A003.b." the words "For the purposes of 7A003.b., this entry";

(B) in respect of Category Code 7A004, in the Note column, in the Technical Note, by substituting for the words " 'Star trackers' " the words "For the purposes of 7A004.a., 'star trackers' ";

(C) in respect of Category Code 7A006, in the Note column, in the Technical Note, by substituting for the words " 'Power management' " the word "For the purposes of 7A006.a., 'power management' ";

(D) in respect of Category Code 7B001, in the Note column, by substituting for the word "Technical Note:" the following words:

"Technical Note:

For the purposes of 7B001:";

(E) in respect of Category Code 7D002, in the Note column, in the Technical Note, by substituting for the word " 'AHRS' " the words "For the purposes of 7D002, 'AHRS' ";

(F) in respect of Category Code 7D004, in the Note column, by substituting for the word "program" the word ' "program" ';

(G) in respect of Category Code 7E004, in the Note column—

(i) in the Technical Note, in subitem a.5, by substituting for the words " 'Primary flight control' " the words "For the purposes of 7E004.a.5., 'primary flight control' ";

(ii) in the Technical Note, in subitem a.6, by substituting for the words "A 'flight control optical sensor array' " the words "For the purposes of 7E004.a.6., a 'flight control optical sensor array' ";

(iii) in the Technical Note, in subsubitem b.7.a, by substituting for the words " 'Inner-loop' " the words "For the purposes of 7E004.b.7.a., 'inner-loop' ";

(iv) in the Technical Note, in subsubitem b.7.b.2, by substituting for the words " 'Abnormal changes in aircraft state' " the words "For the purposes of 7E004.b.7.b.2., 'abnormal changes in aircraft state' ";

(v) in the Note, in item b, by substituting for the word "program" with the word ' "program" '; and

(vi) in the Technical Note, in subitem c.3, by substituting for the word " 'Variable geometry airfoils' " the words "For the purposes of 7E004.c.3., 'variable geometry airfoils' ";

(ix) in relation to Category 8 – Marine—

(A) in respect of Category Code 8A001, in the column Items Description, by inserting after subsubitem c.1.b, the following item:

"c. Wireless optical data or command link exceeding 1,000 m;";

(B) in respect of Category Code 8A002—

(i) in the Note column, in the Technical Note, in subitem a.4, by substituting for the words "The objective of 8A002.a.4." the words "For the purposes of 8A002.a.4., this entry";

(ii) in the Note column, in the Technical Note, in subitem i.2, by substituting for the words "Only functions having proportionally related motion control" the words "For the purposes of 8A002.i.2., only functions having proportionally related motion control";

(iii) in the Items Description column, in subsubitem o.2.b, by substituting for the word "engines" the word "motors";

(iv) in the Items Description column, in subsubitem o.2.c, by substituting for the words ' "Superconductive" propulsion engines or permanent magnet electric propulsion engines,' the words ' " Superconductive" propulsion motors,";

(v) in the Note column, in the Technical Note, in subsubitem o.3.b, by substituting for the words " 'Active noise reduction or cancellation systems' " the words "For the purposes of 8A002.o.3.b., 'active noise reduction or cancellation systems' ";

(vi) in the Items Description column, by inserting after subitem o.3 the following subitem:

"4. Permanent magnet electric propulsion motors specially designed for submersible vehicles, having a power output exceeding 0.1 MW;"; and

(vii) in the Note column, in the new subitem o.4, by inserting the following note:

"Note: 8A002.o.4. includes rim-driven propulsion systems.";

(C) in respect of Category Code 8C001, in the Note column, in the Technical Note, by substituting for the words " 'Syntactic foam' " the words "For the purposes of 8C001, 'syntactic foam' "; and

(D) in respect of Category Code 8E002, in the Note column, in the Technical Note, in subitem c.4, by substituting for the words "A 'small waterplane area vessel' " the words "For the purposes of 8E002.c.4., a 'small waterplane area vessel' ";

(x) in relation to Category 9 – Aerospace and propulsion—

(A) in respect of Category Code 9A001, in the Items Description column—

(i) by substituting for item a the following item:

"a. Incorporating any of the "technologies" specified in 9E003.a., 9E003.h. or 9E003.i.;"; and

(ii) by substituting for item b the following item:

"b. Not used.";

(B) in respect of Category Code 9A003, in the Items Description column, by substituting for the words "9E003.a., 9E003.h. or 9E003i." the words "9E003.a., 9E003.h., 9E003.i. or 9E003.k.";

(C) in respect of Category Code 9A007, in the Note column, in the Technical Note, by substituting for the words " 'Strong mechanical bond' " the words "For the purposes of 9A007.e., a 'strong mechanical bond' ";

(D) in respect of Category Code 9A008, in the Note column—

(i) in the Technical Note, in item a, by substituting for the words " 'Strong mechanical bond' " the words "For the purposes of 9A008.a., 'strong mechanical bond' "; and

(ii) in the Technical Note, in item b, by substituting for the words " 'Structural efficiency ratio (PV/W)' " the words "For the purposes of 9A008.b., 'structural efficiency ratio (PV/W)' ";

(E) in respect of Category Code 9A115, in the Note column, by substituting for the Technical Note the following technical note:

'Technical Notes:

1. For the purposes of 9A115.a., 'missile' means complete rocket systems and unmanned aerial vehicle systems, capable of a range exceeding 300 km.

2. Apparatus and devices specified in 9A115.a. include those installed on a manned aircraft or an unmanned aerial vehicle.";

(F) in respect of Category Code 9B005, in the Note column, in the Technical Note, in item a, by substituting for the words " 'Test section size' " the words "For the purposes of 9B005.a. Note, 'test section size' ";

(G) in respect of Category Code 9E001, in the Items Description column, by deleting the word "9A001.b.,";

(H) in respect of Category Code 9E002, in the Items Description column, by deleting the word "9A001.b.,";

(I) in respect of Category Code 9E003—

(i) in the Items Description column, by inserting after subsubitem a.2.d the following subsubitem:

"e. Utilising 'pressure gain combustion' ";

(ii) by inserting in the Note column appearing against the new subsubitem a.2.e in the Items Description column, the following technical note:

"Technical Note:

For the purposes of 9E003.a.2.e., in 'pressure gain combustion' the bulk average stagnation pressure at the combustor outlet is greater than the bulk average stagnation pressure at the combustor inlet due primarily to the combustion process, when the engine is running in a 'steady state mode' of operation.";

(iii) in the Note column, in Technical Note 1, in subitem a.2, by substituting for the words " 'Thermally decoupled liners' " the words "For the purposes of 9E003.a.2.a., 'thermally decoupled liners' ";

(iv) in the Note column, in subitem a.2, by inserting after Technical Note 1 the following technical note:

"2. For the purposes of 9E003.a.2.d., 'combustor exit temperature' is the bulk average gas path total

(stagnation) temperature between the combustor exit plane and the leading edge of the turbine inlet guide vane (i.e., measured at engine station T40 as defined in SAE ARP 755A) when the engine is running in a "steady state mode" of operation at the certificated maximum continuous operating temperature.";

(v) in the Note column, in the Technical Note, in subsubitem a.3.c, by substituting for the words "A 'splitter duct' " the words "For the purposes of 9E003.a.3.c., a 'splitter duct' ";

(vi) by substituting Technical Note 1, in Note column, in subitem a.5 the following technical note:

"Technical Note:

For the purposes of 9E003.a.5., 'gas path temperature' is the bulk average gas path total (stagnation) temperature at the leading-edge plane of the turbine component when the engine is running in a "steady state mode" of operation at the certificated or specified maximum continuous operating temperature.";

(vii) in the Note column, in the Technical Note, in subitem a.8, by substituting for the words " 'Damage tolerant' components" the words "For the purposes of 9E003.a.8., 'damage tolerant' components";

(viii) by substituting for Technical Note 4, in the Note column, in item c, the following technical note:

"4. For the purposes of 9E003.c., methods for manufacturing holes in 9E003.c. include 'laser', beam machining, water jet machining, Electro-Chemical Machining (ECM) or Electrical Discharge Machining (EDM).";

(ix) in the Note column Note, in the Technical Note, in item e, by substituting for the words " 'Box volume' in 9E003.e." the words "For the purposes of 9E003.e., 'box volume' in 9E003.e.";

(x) in the Note column, in the Technical Note, in item g, by substituting for the words " 'High output diesel engines' " the words "For the purposes of 9E003.g., 'high output diesel engines' '";

(xi) in the Items Description column, by inserting after item j the following item:

"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 fluids used to lubricate or cool 'engine rotor supports';
5. Oil-free 'engine rotor supports'; or
6. Systems to remove heat from 'compression system' core gas path flow.'; and

(xii) by inserting in the Note column appearing against the new item k in the Items Description column, the following item:

"Technical Note:

For the purposes of 9E003.k.:

1. Propulsion inlet systems include core flow pre-coolers.

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 inlet face and the combustor that increases gas path pressure through mechanical work.

5. An 'engine rotor support' is the bearing supporting the main engine shaft that drives the compression system or turbine rotors.

NB1:

See 9E003.h. for engine control technology.

NB2:

See 9E003.i. for adjustable flow path systems technology.";

(J) in respect of Category Code 9E101, in the Items Description column, by substituting for the following item:

"a. "Technology" according to the General Technology Note for the "development" of

goods specified in 9A101, 9A102, 9A104 to 9A111, 9A112.a or 9A115 to 9A121."

the following item:

' "Technology" as follows:

a. "Technology" according to the General Technology Note for the "development" of goods specified in 9A101, 9A102, 9A104 to 9A111, 9A112.a or 9A115 to 9A121."; and

(c) by substituting for the words "Atomic Energy Licensing Board (AELB)" wherever appearing the words "Department of Atomic Energy Malaysia (Atom Malaysia)".

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TENGKU DATUK SERI UTAMA ZAFRUL BIN TENGKU ABDUL AZIZ
Minister of Investment, Trade and Indsutry