F.No. 1(4)/2016/D(EPC)
Government of India
Ministry of Defence
Department of Defence Production
D(EPC)

New Delhi, dated the June 26, 2018

Sub: Amendment of Standard Operating Procedure (SOP) for issue of Authorization by Ministry of Defence, Department of Defence Production for Export of Munitions List Items by both Private as well as Public Sector Units as notified by DGFT under Category 6 of SCOMET -

### 1. Background

The Director General of Foreign Trade (DGFT) vide Public Notice No. 4/2015-20 dated 24<sup>th</sup> April, 2017, in exercise of the powers conferred under Paragraph 1.03 of the Foreign Trade Policy, makes amendments in relevant Paras including 2.74 & 2.81 of the Handbook of Procedures, thereby notified that the Licensing Authority for items in Category 6 in Appendix-3 to Schedule 2 of ITC(HS) is Department of Defence Production(DDP). Export of items in Category 6 is governed by the extant Standard Operating Procedure (SOP) issued by the Department of Defence Production in the Ministry of Defence. Notwithstanding anything contained in Paras 2.73 to 2.80, of the Hand Book of Procedures, Export of SCOMET Category 6 items will be permitted against an Authorization issued by the Department of Defence Production. The grant of Authorization will be governed by the Standard Operating Procedure (SOP) issued for the purpose by Department of Defence Production.

Further, DGFT vide Notification No. 5/2015-2020 dated 24<sup>th</sup> April, 2017 has notified amendment in Table A of Schedule 2 and Appendix-3 of ITC(HS) Classification of Export & Import Items that the SCOMET Category 6 has been populated with Munitions List. The export of items specified in Category 6 (Munitions List) except those covered under

Notes 2 & 3 of Commodity Identification Note (CIN) of the SCOMET is governed by the extant Standard Operating Procedure issued by the Department of Defence Production (DDP), Ministry of Defence. Unless prohibited, export may be permitted against an Authorization issued by DDP.

In view of above, the Department of Defence Production hereby notifies the revised Standard Operating Procedure (SOP) for issue of Authorization for export of Munitions List Items contained in Category 6 of SCOMET (as per Appendix-I) for examination & processing of export applications. Vide this SOP, DDP also withdraws the earlier SOP for export of Military Stores notified in July 2015 based on DGFT's Notification No. 115(RE-2013)/2009-2014 dated March 13, 2015.

### 2. Mode of application

- An Exporter is required to file an on-line application at (i) www.ddpmod.gov.in for the purpose of seeking Authorization from the Ministry of Defence for export of the items contained in Category 6 of SCOMET i.e., Munitions List. The Exporter is required to keep the information handy at the time of making an on-line application as per the format at Appendix-III. It is also advised that while filing an on-line application, the exporter is required to attach a brief write-up on their letter head signed by the authorized signatory regarding the intent of application, further mentioning the relevant classification under SCOMET Category 6 i.e., 6A001, 6A002, .....6A022 etc., where the item figures. The write-up and the relevant category will help the DDP officials in examining the applications to avoid possible overlaps and take appropriate decision on the application.
  - (ii) In order to promote Ease of doing Business, the DDP proposes to explore the possibility of having similar on-line system presently in place for filing of applications for export of SCOMET items other than Category 6 to DGFT. DDP shall work in consultation with DGFT to explore the possibility of using the same system for the items under Category 6. The change will be notified separately.

# 3. Format of application

The format of application is as per Appendix-III. The DDP shall explore the possibility of having a common application and End User

Certificate Format for all categories of SCOMET items in consultation with DGFT. The change will be notified separately.

### 4. Documents required for processing the applications

The following documents are required to be uploaded while making an on-line application which also needs to be furnished in hard copy subsequently:

- (i) The copy of Purchase Order/Supply Order/relevant documents like participation in Tender Enquiry/RFI/Exhibition/Testing & Evaluation, whichever the case may be;
- (ii) Technical specification of the item(s) intended to be exported and
- (iii) End User Certificate(s) (EUC) signed and stamped by the appropriate authority, as prescribed in Para 6 below on Examination Procedure, to establish the clear chain of transaction/transmission i.e., parties involved and final end use/user. In case where the original EUC is not in English, its translated version in English, duly certified by Notary Public/Embassy/Mission of India abroad should be provided.

### 5. Competent Approval Authority

- (i) Secretary (Defence Production) for the items covered under Appendix-II of SOP and
- (ii) Joint Secretary (DIP) for the items other than in Appendix-II and the cases covered under Part F of this SOP mentioned under Para 6.5.

The applications shall be examined, on file, in consultation with stakeholders. The application shall be considered on the basis of criteria including but not limited to those specified in Para 2.74 of the Handbook of Procedures notified from time to time by the DGFT. The cases may be approved where the consensus has reached between the Stakeholders. In case there is no consensus, then a Meeting will be held within 15 days at the level of Joint Secretary to resolve the issue and arrive at a consensus. However in case consensus is still not reached, then a Meeting of Defence Export Steering Committee (DESC) headed by Secretary (DP) shall be called; and if consensus is again not reached, then the case shall be put up to Raksha Mantri for a decision.

### 6. Examination Procedure

The Procedure will be applicable for issue of Authorization for export of Munitions List Items notified under Category 6 of SCOMET also referred at Para 1 of this SOP. The applications for Authorization would require approval of the Competent Authority as per the internal guidelines issued by the Department of Defence Production from time to time. This Procedure has six parts, which are as follows:

Part-A: Export of Munitions List items as in Appendix-II

Part-B: Export of Munitions List items other than in Appendix-II

Part-C: Export of Munitions List items for exhibition purposes

Part-D: Export of Munitions List items for testing and evaluation;

Part-E: In-principle approval for Munitions List items for participation in Tenders/RFP/NIT or exploring export opportunities and

Part-F: Approval for transfer of technology/software for design, development, manufacturing, training, maintenance services, upgrade & overhaul of Munitions List Items notified under Category 6.

<u>Preliminary Examination</u>: On receipt of on-line application along with requisite documents, the D(EPC) Section shall scrutinize the application to check whether the application is in-order i.e., the item(s)/category(ies) are clearly mentioned, the scanned copies are legible, the requisite documents are up-loaded etc. If there is any discrepancy, the same shall be communicated to the Applicant. If the Section finds the application to be in order, then it shall be forwarded to the stakeholders for obtaining their comments on the application. The normal time taken for this preliminary examination by D(EPC) Section would be 02 working days;

# 6.1 Part-A: Export of Munitions List Items as in Appendix-II -

- (i) EUC is to be signed and stamped by the Government of End User/Ultimate End user Country/State;
- (ii) Consultation with Stakeholders: Application is forwarded to MEA, concerned Service HQRS., DRDO, PIC Wing of MoD and any other

concerned Agencies, who are required to offer their comments within 15 days. If the comments are not received within the stipulated time, it may be presumed that the concerned Agencies have 'No Comments' on the application and the case may be processed further, as deemed appropriate. Further, for the Munitions List items mentioned under Category 6A010 & 6A011, the comments of Indian Space Research Organization (ISRO), Department of Space, shall be obtained and

- (iii) The cases where EUC from the Government of End User/Ultimate End User Country/State is not furnished, would be examined by the Defence Export Steering Committee headed by Secretary (DP) on case-to-case basis and may be recommended for issue of Authorization only if plausible justification is provided.
- 6.2 Part B: Export of Munitions List Items other than in Appendix-II
- (i) Normally the Department may not insist upon the EUC to be signed and stamped by the Government of End User/Ultimate End User Country/State;
- (ii) Further, no consultation with various stakeholders such as MEA, concerned Service HQRS., DRDO, PIC Wing of MoD and ISRO would be required. However if the export is intended for a negative list country maintained by MEA, the latter shall be asked to give their comments within 15 days and
- (iii) DDP shall allow the legitimate export of the Munitions List Items mentioned in Category 6 [Parts, Components & Accessories of SAA (6A001, 6A002) & 6A013.D of the SCOMET] for civil use. However, prior consultation of MEA on the status of verification shall be undertaken (within the stipulated 15 days) to validate the bonafides of the End User for avoiding the possibility of diversion and misuse.
- 6.3 Part-C: Export of Munitions List Item for Exhibition Purposes and Part-D: Export of Munitions List Item for Testing & Evaluation -
- Such applications would be considered purely on case-to-case basis without insisting upon the EUC from the Government of End user/Ultimate End User Country/State;

- (ii) For the cases filed under Part C of this SOP, no consultation with Stakeholders will be undertaken. However, consultation with MEA for negative list of countries would continue;
- (iii) The Applicant is required to submit documents confirming participation in Exhibitions in case of Part-C;
- (iv) Justification for Testing/Evaluation of the items along with proof of consent from the Testing Agencies are to be submitted in case of Part-D;
- (v) If the intended item(s) figures in Appendix-II, then the procedure laid down for Part-A of the SOP as referred in Para 6.1(ii) shall be followed and if the intended item(s) is other than in Appendix-II, then the procedure laid down for Part-B of SOP referred at Para 6.2(ii) shall be followed;
- (vi) The item(s) should be non-lethal in nature and
- (vii) The item(s) should not be offered for sale.
- 6.4 Part-E : In-principle approval for Munitions List Items for participation in Tenders/RFP/NIT or for exploring export opportunities -
- Such cases would be considered purely on a case-to-case basis, without insisting upon EUC(s) from Government of End user/Ultimate End User country/State;
- (ii) If the intended item(s) figures in Appendix-II, then the procedure laid down for Part-A of the SOP as referred in Para 6.1(ii) shall be followed and if the intended item(s) is other than in Appendix-II, then the procedure laid down for Part-B of SOP referred at Para 6.2(ii) shall be followed;
- (iii) In case the consultation with MEA has been completed whenever required, then subsequent applications for issue of Authorization after conclusion of contract for actual export would be processed without referring/re-obtaining comments of MEA as the process would have been completed at the time of in-principle clearance. However, Foreign Policy considerations/National Security objectives may require that the in-principle approval issued earlier be reviewed. In such cases, DDP would seek a revised comments from MEA and convey the decision to the applicant;

- (iv) Submission of valid documents for export of samples for participation in Tenders such as Request for Proposals (RFP) or Notice Inviting Tenders (NIT) would be required;
- (v) The item(s) should be non-lethal in nature;
- (vi) The item(s) should not be offered for sale;
- (vii) At the time of actual export of item(s), the Applicant is required to submit a fresh on-line application for seeking Authorization for export of item(s) along with indicating the In-principle approval granted by the Department of Defence Production and

### (viii) Dispensation under Part E

The DDP delegate powers to issue authorizations to Secretary DRDO, DGOF and CMDs of all DPSUs for the items under their product lines for participation in Tenders/RFP/NIT or exploring export opportunities i.e., the cases covered under this Part subject to following same conditions as stipulated in this SOP regarding consultation process. However, they should keep the list and periodically inform DDP. This relaxation is only applicable to DRDO/DPSUs/OFB.

- 6.5 Part-F: Approval for transfer of technology/software for design, development, manufacturing, training, maintenance services, upgrade & overhaul of Munitions List Items notified under Category 6.
- (i) The Department of Defence Production shall consider the application for export of technology/software as mentioned under Munitions List Items under Category 6A021 & 6A022 for design, development, manufacturing, testing, evaluation, maintenance services, upgrade, repair & overhaul of the Munitions List Items notified under Category 6 by Individuals, Organizations/Institutions etc.;
- (ii) The applicant is required to file an on-line/off-line application only for this Part, if the applicant desires so. The application may be send to D(EPC) Section under the Department of Defence Production along with complete details;
- (iii) The level of technology/knowhow/software proposed to be transferred, exported/shared is to be furnished along with the application, in detail;

- (iv) Consultation with Stakeholders shall be held as per details given in Para 6.1(ii);
- (v) The Department shall make efforts to demarcate different stages for ToT/Software Cases into Appendix-II (full technology) or other than Appendix-II (for part technology).
- (vi) JS(DIP) shall be the competent authority for the cases covered under this part i.e., Part F subject to fulfillment of the requirement of SOP.
- (vii) For cases of Intra-Company Transfer, the respective Companies should be permitted to submit EUCs signed by their parent companies. The Certificate from the Company shall also include their internal compliance programmes and technology compliance plans as per WA's best practices. The EUC should contain the kind of service that Indian subsidiary is providing by attaching a Letter of Explanation regarding the outsourced work/service contract.
- (viii) The EUC to be signed & stamped by the Government of End User/Ultimate End user Country/State and;
- (ix) The application should be furnished along with the End user Certificate provided at Appendix-IV(b).

### 7. Repeat Orders

- (i) In cases of Repeat Order of same item, the Stakeholders consultation i.e., with Service HQRS. & DRDO once done for a particular product/service/technology would not be re-done if the same product proposes to be exported to different entities. However, consultation with MEA alone would be done in such cases.
- (ii) For all cases of Repeat Order of the same item to the same country/entities under Part A, C, D, E, F where consultation with Stakeholders has already been done, re-consultation will not be undertaken again.

# 8. Other major requirements for all Parts A, B, C, D, E& F.

 (i) Legible scanned copy of End User Certificate(s) along with other requisite documents should be attached while making an on-line application. The original copy/copies of EUC(s) should reach D(EPC)

- Section DDP, prior to issuance of Authorization as per the format of EUC provided at Para 10 of this SOP;
- (ii) The EUC(s) would be required from each intermediary user(s) to establish a clear chain of transaction/transmission/supply of export product until it reaches the ultimate end user. The EUC(s) shall be signed and stamped by the designated Officer from each intermediary;
- (iii) EUC declarations can be verified by the Government as deemed necessary, both before and after export;
- (iv) The item(s) exported should not be used for purposes other than those declared in EUC;
- (v) The item(s) should not be subsequently transferred (re-exported) without the prior Authorization of the original exporting Government;
- (vi) The item(s) should not be diverted, sold or transferred to any third party whatsoever, except as indicated in EUC;
- (vii) If required, verification/certification that the possession of the item(s) has occurred would be provided;
- (viii) The item(s) should not be used for any purpose that relates to development of weapons of mass destruction and their delivery system;
- (ix) The quantity exported under each consignment shall be endorsed by the Custom Authorities on the original Authorization issued by the Department of Defence Production at the time of each consignment;
- (x) The Authorization will be issued for the Port of Loading/shipment indicated in the application. If there is any subsequent change, prior endorsement would have to be taken by the exporter Department of Defence Production;
- (xi) The Shipping Bill shall indicate the Number and date of Authorization of Department of Defence Production;
- (xii) The issue of this SOP does not preclude the Department of Defence Production from requiring fulfillment of any other condition(s), if considered necessary in specific cases and
- (xiii) The applications for seeking Export Authorizations to UN Sanctioned Countries will be done in prior consultation with MEA. Especially the export to DPRK (Democratic People Republic of Korea) will be subject to conditions stipulated vide DGFT's Notification No. 201652/2015-2020 dated 07/03/2018 & Notification No. 13/2015-2020 dated 29/06/ respectively. MEA

may periodically intimate the list of countries in the negative list for cognizance of DDP.

### 9. Validity of Authorization

- (i) 02 years (24 months) from the date of issue of Authorization or date of completion of the Order, whichever is earlier for the cases covered under Parts 'A' & 'B' of SOP;
- (ii) 06 Months from the date of Authorization for the cases covered under Part 'C' of SOP. The Exporter is required to import back the item(s) to India within 06 months from the date of export. However, the proof of import (such as Bill of Entry) would be provided by the Exporter within 02 months of import (i.e., within 08 months from the date of issue of Authorization) to the Department of Defence Production;
- (iii) 01 year (12 months) from the date of Authorization for the cases covered under Part 'D' of SOP. The Exporter is required to import back the item(s) to India within 12 months from the date of export. However, the proof of import (such as Bill of Entry) would be provided by the Exporter within 02 months of import (i.e., within 14 months from the date of issue of Authorization) to the Department of Defence Production;
- (iv) 02 years (24 months) from the date of issue of Authorization or for the period covered under the application, whichever is less for the cases covered under Part 'E' of SOP. The Exporter is required to import back the item(s) to India within a period of 06 months from the date of export. However, the proof of Import (such as Bill of Entry) would be provided by the Exporter within 02 months from the date of import or 08 months from the date of export to the Department of Defence Production. Whereas it is not feasible for the item(s) to be imported, the Exporter shall obtain an undertaking from the End User that the item(s) would not be diverted, sold or transferred to any third party;
- (v) The approval for transfer of technology under Part 'F' shall be for 02 years (24 Months) from the date of issue of approval or the date of completion of contract/order, whichever is earlier and
- (vi) The validity of Authorization may be extended from time to time based on the requirements & merits by the Competent Authority.

#### 10. Time Frame

The following time frame shall be followed while issuing Authorization by the Ministry of Defence for export of Munitions List Item contained in Category 6 of SCOMET:

- (i) 04 weeks for the items contained in Appendix-II of SOP and
- (ii)02 weeks for the items other than in Appendix-II.

Note-1: Additional 02 weeks, if the country of export falls in MEA's negative list of countries and

Note-2: An Exporter is required to send the requisite documents attached with on-line application including EUC(s) signed and stamped by the appropriate authority for issuing Authorization by the Ministry within the above stated time frame.

### 11. Format for End User Certificate (EUC)

- a) The format of End User Certificate (EUC) for export of items/systems/sub-systems/platform/weapons/equipments etc. notified in Category 6 of SCOMET is as per Appendix-IV(a).
- b) The format of End User Certificate (EUC) for export/ transfer of intangible technology/ know-how/ software by individuals/ organizations/ institutions etc. notified in Category 6 of SCOMET is as per Appendix-IV(b).

# 12. Signing authority for Authorization & marking copies of Authorizations

- (i) On approval, the Authorization would invariably be signed and stamped by 02 Officers in the Department of Defence Production [Director/Deputy Secretary (DIP), Under Secretary (EPC), Section Officer (EPC) based on the availability of senior-most officers (among these) in the Department] and a copy to be marked to the O/o Director General of Foreign Trade (DGFT), Indian Customs, Ministry of External Affairs (MEA) & Embassy of India/Mission abroad in the respective country.
- (ii) The Authorization shall be communicated to the Exporter by Post, however, a scanned copy shall also be sent to the Exporter on the E-Mail provided in the application and
- (iii) DDP shall mark a copy for all denial cases to CBEC [Risk Management Division]/DRI to prevent unauthorized export.

### 13. Record Keeping

The Exporter shall maintain records in manual or electronic form for a period of 05 years from the date of export. The detailed guidelines in this regard may be referred to at Para 3 i.e. Maintenance of Records, notified by DGFT vide Public Notice No. 4/2015-20 dated 24<sup>th</sup> April 2017 (referred to at Para 1 of this SOP). However, if required for reasons such as the normal expected lifetime of the export item, the exporter may be notified separately by the Department of Defence Production about the need to maintain records for a longer period.

### 14. Appeal against Denial

In case the Authorization for export is denied/refused by the Ministry of Defence, an Exporter can appeal against the rejection/denial by representing to the Ministry within 30 days of such denial/rejection. The request shall be examined in the manner specified in Para 5 of this SOP.

### 15. Prohibition on brokering

Brokering is prohibited in terms of provisions of the Foreign Trade Development and Regulation (FTDR) Act 1992 and the Weapons of Mass Destruction and Their Delivery Systems (Prohibition of Unlawful Activities) Act 2005.

#### 16. Penal Provisions

The relevant penal provisions shall be attracted for any wrongdoing, submission of incorrect information & forged/fraudulent documents, which may warrant cancellation of IE Code, financial penalties as well as criminal prosecution as per the extant provisions of FTDR Act, 1992 as amended Customs Act, 1962 and any other Act as may be applicable.

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(Kuldeep Parwal)
Deputy Secretary to the Govt. of India

### Category 6 Munitions List

- Note 1 Terms in "quotations" are defined terms. Refer to 'Glossary'
- Note 2 In some instances chemicals are listed by name and CAS number. The list applies to chemicals of the same structural formula (including hydrates) regardless of name or CAS number. CAS numbers are shown to assist in identifying a particular chemical or mixture, irrespective of nomenclature. CAS numbers cannot be used as unique identifiers because some forms of the listed chemical have different CAS numbers, and mixtures containing a listed chemical may also have different CAS numbers.
- Note 3 Subject to Notes 4-6 below, an authorization from Department of Defence Production, Ministry of Defence would be required for export of items in this Munitions list. This is as per the Standard Operating Procedures issued by Department of Defence Production.
- Note 4 Notwithstanding anything contained in Note 3 above, the following items will be classified under the relevant description in category 0 and would be subject to authorisation by Department of Atomic Energy(refer a) to d) of Commodity Identification Note 2 of SCOMET):-
  - a) Radioactive materials covered under 6A007;
  - b) 'Reactive material' powders and shapes and any material containing Beryllium or "Zirconium with Hafnium content less than 2000 ppm" as the major constituent covered under 6A008;
  - c) Nuclear power generating equipment or propulsion equipment, including "nuclear reactors", and specially designed for military use and components therefor specially designed or 'modified for military use' covered under 6A017;
  - d) Simulators specially designed for military "nuclear reactors" covered under 6A017;
- Note 5 Notwithstanding anything contained in Note 3 above, items corresponding to Schedule 1 of the Chemical Weapons Convention as specified in Category 6A007.b are prohibited for exports.
- Note 6 Notwithstanding anything contained in Note 3 above, licence applications for Items in 6A008 a.13 and 6A008.a 21 would normally be denied.
- 6A001 Smooth-bore weapons with a calibre of less than 20 mm, other arms and automatic weapons with a calibre of 12.7 mm (calibre 0.50 inches) or less and accessories, as follows, and specially designed components therefor:

Note 6A001 does not apply to:

- Firearms specially designed for dummy ammunition and which are incapable of discharging a projectile;
- Firearms specially designed to launch tethered projectiles having no high explosive charge or communications link, to a range of less than or equal to 500 m;
- c. Weapons using non-centre fire cased ammunition and which are not of the fully automatic firing type;
- d. "Deactivated firearms".
- 6A001 a. Rifles and combination guns, handguns, machine, sub-machine and volley guns;

Note 6A001.a does not apply to the following:

- a. Rifles and combination guns, manufactured earlier than 1938;
- Reproductions of rifles and combination guns, the originals of which were manufactured earlier than 1890;
- Handguns, volley guns and machine guns, manufactured earlier than 1890, and their reproductions;
- d. Rifles or handguns, specially designed to discharge an inert projectile by compressed air or CO<sub>2</sub>.
- 6A001 b. Smooth-bore weapons as follows:
  - 1. Smooth-bore weapons specially designed for military use;

- 2. Other smooth-bore weapons as follows:
  - Fully automatic type weapons;
  - Semi-automatic or pump-action type weapons;

<u>Note</u> 6A001.b.2 does not apply to weapons specially designed to discharge an inert projectile by compressed air or CO<sub>2</sub>.

Note 6A001.b. does not apply to the following:

- a. Smooth-bore weapons manufactured earlier than 1938;
- Reproductions of smooth-bore weapons, the originals of which were manufactured earlier than 1890.
- Smooth-bore weapons used for hunting or sporting purposes. These weapons must not be specially designed for military use or of the fully automatic firing type;
- d. Smooth-bore weapons specially designed for any of the following:
  - 1. Slaughtering of domestic animals;
  - 2. Tranquilizing of animals;
  - 3. Seismic testing;
  - 4. Firing of industrial projectiles; or
  - Disrupting Improvised Explosive Devices (IEDs).

N.B. For disruptors, see 6A004 and 8A106.

- 6A001 c. Weapons using caseless ammunition;
- 6A001 d. Detachable cartridge magazines, sound suppressors or moderators, special gun-mountings, optical weaponsights and flash suppressors, for arms specified by 6A001.a, 6A001.b, or 6A001.c.
  - Note 6A001.d does not apply to optical weapon-sights without electronic image processing, with a magnification of 9 times or less, provided they are not specially designed or modified for military use, or incorporate any reticles specially designed for military use.
- 6A002 Smooth-bore weapons with a calibre of 20 mm or more, other weapons or armament with a calibre greater than 12.7 mm (calibre 0.50 inches), projectors and accessories, as follows, and specially designed components therefor:
  - Guns, howitzers, cannon, mortars, anti-tank weapons, projectile launchers, military flame throwers, rifles, recoilless rifles, smooth-bore weapons and signature reduction devices therefor;
    - Note I 6A002.a includes injectors, metering devices, storage tanks and other specially designed components for use with liquid propelling charges for any of the equipment specified by 6A002.a.
    - Note 2 6A002.a does not apply to weapons as follows:
      - Rifles, smooth-bore weapons and combination guns, manufactured earlier than 1938;
      - Reproductions of rifles, smooth-bore weapons and combination guns, the originals of which were manufactured earlier than 1890;
      - c. Guns, howitzers, cannons, mortars, manufactured earlier than 1890;
      - Smooth-bore weapons used for hunting or sporting purposes. These weapons must not be specially designed for military use or of the fully automatic firing type;
      - e. Smooth-bore weapons specially designed for any of the following:
        - Slaughtering of domestic animals;
        - 2. Tranquilizing of animals;
        - 3. Seismic testing;
        - 4. Firing of industrial projectiles; or
        - Disrupting Improvised Explosive Devices (IEDs);
          - N.B. For disruptors, see 6A004 and 8A106
      - f. Hand-held projectile launchers specially designed to launch tethered projectiles having no high explosive charge or communications link, to a range of less than or equal to 500 m.

6A002
 b. Smoke, gas and pyrotechnic projectors or generators, specially designed or modified for military use;

Note 6A002.b does not apply to signal pistols.

6A002

- c. Weapons sights and weapon sight mounts, having all of the following:
- 1. Specially designed for military use; and
- Specially designed for weapons specified in 6A002.a;
- 6A002 d. Mountings and detachable cartridge magazines, specially designed for the weapons specified in 6A002.a.
- 6A003 a. Ammunition and fuze setting devices, as follows, and specially designed components therefor:
  - Ammunition for weapons specified by 6A001, 6A002, or 6A012;
  - Fuze setting devices specially designed for ammunition specified by 6A003.a.
  - Note 1 Specially designed components specified by 6A003 include:
    - Metal or plastic fabrications such as primer anvils, bullet cups, cartridge links, rotating bands and munitions metal parts;
    - b. Safing and arming devices, fuzes, sensors and initiation devices;
    - c. Power supplies with high one-time operational output;
    - d. Combustible cases for charges;
    - e. Submunitions including bomblets, minelets and terminally guided projectiles.
  - Note 2 6A003.a does not apply to any of the following:
    - a. Ammunition crimped without a projectile (blank star);
    - b. Dummy ammunition with a pierced powder chamber;
    - c. Other blank and dummy ammunition, not incorporating components designed for live ammunition; or
    - Components specially designed for blank or dummy ammunition, specified in this Note 2.a, b. or
       c.
  - Note 3 6A003.a does not apply to cartridges specially designed for any of the following purposes:
    - a. Signalling;
    - b. Bird scaring; or
    - c. Lighting of gas flares at oil wells.
- 6A004 Bombs, torpedoes, rockets, missiles, other explosive devices and charges and related equipment and accessories, as follows, and specially designed components therefor:
  - N.B.1. For guidance and navigation equipment, see 6A011.
  - N.B.2. For Aircraft Missile Protection Systems (AMPS), see 6A004.c.
- 6A004 a. Bombs, torpedoes, grenades, smoke canisters, rockets, mines, missiles, depth charges, demolition-charges, demolition-devices, demolition-kits, "pyrotechnic" devices, cartridges and simulators (i.e, equipment simulating the characteristics of any of these items), specially designed for military use;

Note 6A004.a includes.

- Smoke grenades, fire bombs, incendiary bombs and explosive devices;
- Missile rocket nozzles and re-entry vehicle nosetips.
- 6A004 b. Equipment having all of the following:
  - 1. Specially designed for military use; and
  - Specially designed for 'activities' relating to any of the following:
    - a. Items specified by 6A004.a; or
    - b. Improvised Explosive Devices (IEDs).

#### Technical Note

For the purpose of 6A004.b.2 'activities' applies to handling, launching, laying, controlling, discharging, detonating, activating, powering with one-time operational output, decoying, jamming, sweeping, detecting, disrupting or disposing.

#### Note 1 6A004.b includes:

 Mobile gas liquefying equipment capable of producing 1,000 kg or more per day of gas in liquid form;

b. Buoyant electric conducting cable suitable for sweeping magnetic mines.

Note 2 6A004.b does not apply to hand-held devices limited by design solely to the detection of metal objects and incapable of distinguishing between mines and other metal objects.

6A004. c. Aircraft Missile Protection Systems (AMPS).

Note 6A004.c does not apply to AMPS having all of the following:

- a. Any of the following missile warning sensors:
  - 1. Passive sensors having peak response between 100-400 nm; or
  - Active pulsed Doppler missile warning sensors;
- Countermeasures dispensing systems;
- c. Flares, which exhibit both a visible signature and an infrared signature, for decoying surface-to-air missiles; and
- d. Installed on "civil aircraft" and having all of the following:
  - The AMPS is only operable in a specific "civil aircraft" in which the specific AMPS is installed and for which any of the following has been issued:
    - a. A civil Type Certificate issued by civil aviation authority of India; or
    - An equivalent document recognised by the International Civil Aviation Organisation (ICAO);
  - 2. The AMPS employs protection to prevent unauthorised access to "software"; and
  - The AMPS incorporates an active mechanism that forces the system not to function when it is removed from the "civil aircraft" in which it was installed.
- 6A005 Fire control, and related alerting and warning equipment, and related systems, test and alignment and countermeasure equipment, as follows, specially designed for military use, and specially designed components and accessories therefor:
  - a. Weapon sights, bombing computers, gun laying equipment and weapon control systems;
  - Target acquisition, designation, range-finding, surveillance or tracking systems; detection, data fusion, recognition or identification equipment; and sensor integration equipment;
  - c. Countermeasure equipment for items specified by 6A005.a or 6A005.b;
    - Note For the purposes of 6A005.c, countermeasure equipment includes detection equipment.
  - d. Field test or alignment equipment, specially designed for items specified by 6A005.a, 6A005.b, or 6A005.c.

6A006

Ground vehicles and components, as follows:

N.B. For guidance and navigation equipment, see 6A011.

Ground vehicles and components therefor, specially designed or modified for military use;

#### Technical Note

For the purposes of 6A006.a the term ground vehicles includes trailers.

6A006

- Other ground vehicles and components, as follows:
- 1. Vehicles having all of the following:
  - Manufactured or fitted with materials or components to provide ballistic protection to level III (NIJ 0108.01, September 1985) or better;
  - 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 (GVWR) greater than 4,500 kg; and
  - d. Designed or modified for off-road use;
  - e. Mine-Protected vehicles
- 2. Components having all of the following:
  - a. Specially designed for vehicles specified in 6A006.b.1; and
  - Providing ballistic protection to level III (NIJ 0108.01, September 1985) or better.

#### N.B. See also 6A013.a.

Note 1 6A006.a includes:

- 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 6A004;
- b. Armoured vehicles;
- Amphibious and deep water fording vehicles;
- Recovery vehicles and vehicles for towing or transporting ammunition or weapon systems and associated load handling equipment.
- Note 2 Modification of a ground vehicle for military use specified by 6A006.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);
  - Special reinforcements or mountings for weapons;
  - d. Black-out lighting.
- Note 3 6A006 does not apply to civil vehicles designed or modified for transporting money or valuables.
- Note 4 6A006 does not apply to vehicles that meet all of the following;
  - Were manufactured before 1946;
  - Do not have items specified in category 6 and manufactured after 1945, except for reproductions of original components or accessories for the vehicle; and
  - c. Do not incorporate weapons specified in 6A001, 6A002, or 6A004 unless they are inoperable and incapable of discharging a projectile.
- Note 5 6A006.b does not include soft skinned vehicles i.e. the vehicles which are neither armoured nor intended to be modified as an armoured vehicle in future.

6A007 Chemical agents, "biological agents", "riot control agents", radioactive materials, related equipment, components and materials, as follows:

### N.B (See Commodity Identification Note of SCOMET list)

- a. "Biological agents" or radioactive materials selected or modified to increase their effectiveness in producing casualties in humans or animals, degrading equipment or damaging crops or the environment;
- b. Chemical warfare (CW) agents including:
  - CW nerve agents:
    - a. O-Alkyl (equal to or less than C<sub>10</sub>, including cycloalkyl) alkyl (Methyl, Ethyl, n-Propyl or Isopropyl) phosphonofluoridates, such as:
       Sarin (GB):O-Isopropyl methylphosphonofluoridate (CAS 107-44-8); and Soman (GD):O-Pinacolyl methylphosphonofluoridate (CAS 96-64-0);
    - O-Alkyl (equal to or less than C10, including cycloalkyl)
       N,N-dialkyl (Methyl, Ethyl, n-Propyl or Isopropyl) phosphoramidocyanidates, such as: Tabun (GA):O-Ethyl
       N,N-dimethylphosphoramidocyanidate (CAS 77-81-6):
    - c. O-Alkyl (H or equal to or less than C10, including cycloalkyl) S-2-dialkyl (Methyl, Ethyl, n-Propyl or Isopropyl)-aminoethyl alkyl (Methyl, Ethyl, n-Propyl or Isopropyl) phosphonothiolates and corresponding alkylated and protonated salts, such as: VX: O-Ethyl S-2-diisopropylaminoethyl methyl phosphonothiolate (CAS 50782-69-9);
- 6A007 b. 2. CW vesicant agents:
  - Sulphur mustards, such as:
    - 2-Chloroethylchloromethylsulphide (CAS 2625-76-5);
    - 2. Bis(2-chloroethyl) sulphide (CAS 505-60-2);
    - Bis(2-chloroethylthio) methane (CAS 63869-13-6);
    - 1,2-bis (2-chloroethylthio) ethane (CAS 3563-36-8);
    - 1,3-bis (2-chloroethylthio) -n-propane (CAS 63905-10-2);
    - 6. 1,4-bis (2-chloroethylthio) -n-butane (CAS 142868-93-7);
    - 1,5-bis (2-chloroethylthio) -n-pentane (CAS 142868-94-8);
    - Bis (2-chloroethylthiomethyl) ether (CAS 63918-90-1);
    - Bis (2-chloroethylthioethyl) ether (CAS 63918-89-8);
    - b. Lewisites, such as:
      - 2-chlorovinyldichloroarsine (CAS 541-25-3);
      - Tris (2-chlorovinyl) arsine (CAS 40334-70-1);
      - Bis (2-chlorovinyl) chloroarsine (CAS 40334-69-8);
    - c. Nitrogen mustards, such as:
      - 1. HN1: bis (2-chloroethyl) ethylamine (CAS 538-07-8);
      - HN2: bis (2-chloroethyl) methylamine (CAS 51-75-2);
      - 3. HN3: tris (2-chloroethyl) amine (CAS 555-77-1);
- 6A007 b. 3. CW incapacitating agents, such as:
  - a. 3-Quinuclidinyl benzilate (BZ) (CAS 6581-06-2);
- 6A007 b. 4. CW defoliants, such as:
  - a. Butyl 2-chloro-4-fluorophenoxyacetate (LNF);
  - 2,4,5-trichlorophenoxyacetic acid (CAS 93-76-5) mixed with 2,4-dichlorophenoxyacetic acid (CAS 94-75-7) (Agent Orange (CAS 39277-47-9));
- 6A007 c. CW binary precursors and key precursors, as follows:
  - Alkyl (Methyl, Ethyl, n-Propyl or Isopropyl) Phosphonyl Difluorides, such as: DF: Methyl Phosphonyldifluoride (CAS 676-99-3);
  - O-Alkyl (H or equal to or less than C<sub>10</sub>, including cycloalkyl) O-2-dialkyl (Methyl, Ethyl, n-Propyl or Isopropyl)-aminoethyl alkyl (Methyl, Ethyl, n-Propyl or Isopropyl) phosphonites and corresponding alkylated and protonated salts, such as:

64

QL: O-Ethyl O-2-di-isopropylaminoethyl methylphosphonite (CAS 57856-11-8);

- 3. Chlorosarin: O-Isopropyl methylphosphonochloridate (CAS 1445-76-7);
- 4. Chlorosoman: O-Pinacolyl methylphosphonochloridate (CAS 7040-57-5);
- 6A007 d. "Riot control agents", active constituent chemicals and combinations thereof, including:
  - α-Bromobenzeneacetonitrile, (Bromobenzyl cyanide) (CA) (CAS 5798-79-8);
  - 2. [(2-chlorophenyl) methylene] propanedinitrile,

(o-Chlorobenzylidenemalononitrile) (CS) (CAS 2698-41-1);

2-Chloro-1-phenylethanone, Phenylacyl chloride

(ω-chloroacetophenone) (CN) (CAS 532-27-4);

- Dibenz-(b,f)-1,4-oxazephine, (CR) (CAS 257-07-8);
- 10-Chloro-5,10-dihydrophenarsazine, (Phenarsazine chloride), (Adamsite), (DM) (CAS 578-94-9);
- N-Nonanoylmorpholine, (MPA) (CAS 5299-64-9);
- Note 1 6A007.d does not apply to "riot control agents" individually packaged for personal self-defence purposes.
- Note 2 6A007.d does not apply to active constituent chemicals, and combinations thereof, identified and packaged for food production or medical purposes.
- 6A007 e. Equipment, specially designed or modified for military use, designed or modified for the dissemination of any of the following, and specially designed components therefor:
  - 1. Materials or agents specified by 6A007.a, 6A007.b, or 6A007.d;or
  - CW agents made up of precursors specified by 6A007.c;
- 6A007 f. Protective and decontamination equipment, specially designed or modified for military use, components and chemical mixtures, as follows:
  - Equipment designed or modified for defence against materials specified by 6A007.a, 6A007.b, or 6A007.d, and specially designed components therefor;
  - 2. Equipment designed or modified for decontamination of objects contaminated with materials specified by 6A007.a, or 6A007.b, and specially designed components therefor;
  - 3. Chemical mixtures specially developed or formulated for the decontamination of objects contaminated with materials specified by 6A007.a or 6A007.b;

Note 6A007.f.1 includes:

- Air conditioning units specially designed or modified for nuclear, biological or chemical filtration;
- b. Protective clothing.
- N.B. For civil gas masks, protective and decontamination equipment, see also 8A104.
- 6A007 g. Equipment, specially designed or modified for military use designed or modified for the detection or identification of materials specified by 6A007.a, 6A007.b, or 6A007.d, and specially designed components therefor;

Note 6A007.g does not apply to personal radiation monitoring dosimeters.

N.B. See also 8A104.

- h. "Biopolymers" specially designed or processed for the detection or identification of CW agents specified by 6A007.b, and the cultures of specific cells used to produce them;
- 6A007 i. "Biocatalysts" for the decontamination or degradation of CW agents, and biological systems therefor, as follows:
  - "Biocatalysts" specially designed for the decontamination or degradation of CW agents specified by 6A007.b, and resulting from directed laboratory selection or genetic manipulation of biological systems;
  - 2. Biological systems containing the genetic information specific to the production of

"biocatalysts" specified by 6A007.i.1, as follows:

- "Expression vectors";
- Ь. Viruses:
- C. Cultures of cells.

#### Note 1 6A007.b and 6A007.d do not apply to the following:

- Cyanogen chloride (CAS 506-77-4);
- b. Hydrocyanic acid (CAS 74-90-8);
- Chlorine (CAS 7782-50-5); C.
- d. Carbonyl chloride (phosgene) (CAS 75-44-5);
- Diphosgene (trichloromethyl-chloroformate) (CAS 503-38-8);
- f.
- Xylyl bromide, ortho: (CAS 89-92-9), meta: (CAS 620-13-3), para: (CAS 104-81-4); g.
- h. Benzyl bromide (CAS 100-39-0);
- i. Benzyl iodide (CAS 620-05-3);
- j. Bromo acetone (CAS 598-31-2):
- Cyanogen bromide (CAS 506-68-3); k.
- 1. Bromo methylethylketone (CAS 816-40-0);
- Chloro acetone (CAS 78-95-5);
- Ethyl iodoacetate (CAS 623-48-3); n.
- 0. Iodo acetone (CAS 3019-04-3);
- Chloropicrin (CAS 76-06-2).

#### The cultures of cells and biological systems specified by 6A007.h and 6A007.i.2 are exclusive and Note 2 these sub-items do not apply to cells or biological systems for civil purposes, such as agricultural, pharmaceutical, medical, veterinary, environmental, waste management, or in the food industry.

#### 6A008

"Energetic materials" and related substances, as follows:

- N.B.1. See also 8C111.
- N.B.2. For charges and devices, see 6A004 and 8A108.

#### Technical Notes

- For the purposes of 6A008, excluding 6A008.c.11, or 6A008.c.12, 'mixture' refers to a composition of two or more substances with at least one substance being listed in the 6A008 sub-items.
- Any substance listed in the 6A008 sub-items is subject to this list, even when utilised in an application other than that indicated. (e.g, TAGN is predominantly used as an explosive but can also be used either as a fuel or an oxidizer.)
- 3. For the purposes of 6A008, particle size is the mean particle diameter on a weight or volume basis. International standards will be used in sampling and determining particle size.

#### 6A008

- "Explosives" as follows, and 'mixtures' thereof:
- ADNBF (aminodinitrobenzofuroxan or 7-amino-4,6-dinitrobenzofurazane-1-oxide) (CAS 97096-78-1.
- BNCP (cis-bis (5-nitrotetrazolato) tetra amine-cobalt (III) perchlorate) 2. (CAS 117412-28-9);
- CL-14 (diamino dinitrobenzofuroxan or 5,7-diamino-4,6-dinitrobenzofurazane-1-oxide ) (CAS 3. 117907-74-1);
- CL-20 (HNIW or Hexanitrohexaazaisowurtzitane) (CAS 135285-90-4); chlathrates of CL-20 (see also 6A008.g.3. and g.4. for its "precursors");
- CP (2-(5-cyanotetrazolato) penta amine-cobalt (III) perchlorate) 5. (CAS 70247-32-4);
- DADE (1,1-diamino-2,2-dinitroethylene, FOX7) (CAS 145250-81-3); 6.
- DATB (diaminotrinitrobenzene) (CAS 1630-08-6); 7.
- 8. DDFP (1,4-dinitrodifurazanopiperazine);
- DDPO (2,6-diamino-3,5-dinitropyrazine-1-oxide, PZO) (CAS 194486-77-6); 9.
- DIPAM (3,3'-diamino-2,2',4,4',6,6'-hexanitrobiphenyl or dipicramide) 10. (CAS 17215-44-0);

- 11. DNGU (DINGU or dinitroglycoluril) (CAS 55510-04-8);
- 12. Furazans as follows:
  - a. DAAOF (DAAF, DAAFox, or diaminoazoxyfurazan);
  - b. DAAzF (diaminoazofurazan) (CAS 78644-90-3);
- 13. HMX and derivatives (see also 6A008.g.5. for its "precursors"), as follows:
  - a. HMX (Cyclotetramethylenetetranitramine, octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazine, 1,3,5,7-tetrazine, 1,3,
  - b. difluoroaminated analogs of HMX;
  - K-55 (2,4,6,8-tetranitro-2,4,6,8-tetraazabicyclo [3,3,0]-octanone-3, tetranitrosemiglycouril or keto-bicyclic HMX) (CAS 130256-72-3);
- 14. HNAD (hexanitroadamantane) (CAS 143850-71-9);
- 15. HNS (hexanitrostilbene) (CAS 20062-22-0);
- 16. Imidazoles as follows:
  - a. BNNII (Octahydro-2,5-bis(nitroimino)imidazo [4,5-d]imidazole);
  - b. DNI (2,4-dinitroimidazole) (CAS 5213-49-0);
  - c. FDIA (1-fluoro-2,4-dinitroimidazole);
  - NTDNIA (N-(2-nitrotriazolo)-2,4-dinitroimidazole);
  - e. PTIA (1-picryl-2,4,5-trinitroimidazole);
- 6A008 a. 17. NTNMH (1-(2-nitrotriazolo)-2-dinitromethylene hydrazine);
  - 18. NTO (ONTA or 3-nitro-1,2,4-triazol-5-one) (CAS 932-64-9);
  - 19. Polynitrocubanes with more than four nitro groups;
  - 20. PYX (2,6-Bis(picrylamino)-3,5-dinitropyridine) (CAS 38082-89-2);
  - 21. RDX and derivatives, as follows:
    - RDX (cyclotrimethylenetrinitramine, cyclonite, T4, hexahydro-1,3,5-trinitro-1,3,5-triazine, 1,3,5-trinitro-1,3,5triaza-cyclohexane, hexogen or hexogene) (CAS 121-82-4);
    - Keto-RDX (K-6 or 2,4,6-trinitro-2,4,6-triazacyclohexanone) (CAS 115029-35-1);
  - 22. TAGN (triaminoguanidinenitrate) (CAS 4000-16-2);
  - 23. TATB (triaminotrinitrobenzene) (CAS 3058-38-6) (see also 6A008.g.7 for its "precursors");
  - TEDDZ (3,3,7,7-tetrabis(difluoroamine) octahydro-1,5-dinitro-1,5-diazocine);
  - 25. Tetrazoles as follows:
    - a. NTAT (nitrotriazol aminotetrazole);
    - NTNT (1-N-(2-nitrotriazolo)-4-nitrotetrazole);
  - 26. Tetryl (trinitrophenylmethylnitramine) (CAS 479-45-8);
  - TNAD (1,4,5,8-tetranitro-1,4,5,8-tetraazadecalin) (CAS 135877-16-6) (see also 6A008.g.6. for its "precursors");
  - 28. TNAZ (1,3,3-trinitroazetidine) (CAS 97645-24-4) (see also 6A008.g.2. for its "precursors");
  - 29. TNGU (SORGUYL or tetranitroglycoluril) (CAS 55510-03-7);
  - TNP (1,4,5,8-tetranitro-pyridazino[4,5-d]pyridazine) (CAS 229176-04-9);
  - Triazines as follows:
    - DNAM (2-oxy-4,6-dinitroamino-s-triazine) (CAS 19899-80-0);
    - NNHT (2-nitroimino-5-nitro-hexahydro-1,3,5-triazine) (CAS 130400-13-4);
  - 32. Triazoles as follows:
    - a. 5-azido-2-nitrotriazole;
    - ADHTDN (4-amino-3,5-dihydrazino-1,2,4-triazole dinitramide) (CAS 1614-08-0);
    - c. ADNT (1-amino-3,5-dinitro-1,2,4-triazole);
    - d. BDNTA ((bis-dinitrotriazole)amine);
    - e. DBT (3,3'-dinitro-5,5-bi-1,2,4-triazole) (CAS 30003-46-4);
    - f. DNBT (dinitrobistriazole) (CAS 70890-46-9);
    - g. (Reserved)

- h. NTDNT (1-N-(2-nitrotriazolo) 3,5-dinitrotriazole);
- i. PDNT (1-picryl-3,5-dinitrotriazole);
- TACOT (tetranitrobenzotriazolobenzotriazole) (CAS 25243j. 36-1);
- Explosives not listed elsewhere in 6A008.a and having any of the 33. following:
  - Detonation velocity exceeding 8,700 m/s, at maximum density, or a.
  - b. Detonation pressure exceeding 34 GPa (340 kbar);
- 34. (Reserved)
- 35. DNAN (2,4-dinitroanisole) (CAS 119-27-7);
- 36. TEX (4,10-Dinitro-2,6,8,12-tetraoxa-4,10-diazaisowurtzitane)
- GUDN (Guanylurea dinitramide) FOX-12 (CAS 217464-38-5) 37.
- Tetrazines as follows: 38.
  - BTAT (Bis(2,2,2-trinitroethyl)-3,6-diaminotetrazine);
  - LAX-112 (3,6-diamino-1,2,4,5-tetrazine-1,4-dioxide);
- 39. Energetic ionic materials melting between 343 K (70°C) and 373 K (100°C) and with detonation velocity exceeding 6,800 m/s or detonation pressure exceeding 18 GPa (180 kbar);
- 40. BTNEN (Bis(2,2,2-trinitroethyl)-nitramine) (CAS 19836-28-3);
- 41. FTDO (5,6-(3',4'-furazano)- 1,2,3,4-tetrazine-1,3-dioxide);

6A008.a includes 'explosive co-crystals'. Note

#### Technical Note

An 'explosive co-crystal' is a solid material consisting of an ordered three dimensional arrangement of two or more explosive molecules, where at least one is specified in 6A008.a.

#### 6A008

- "Propellants" as follows: b.
- Any solid "propellant" with a theoretical specific impulse (under standard conditions) of more than:
  - 240 seconds for non-metallized, non-halogenized "propellant";
  - 250 seconds for non-metallized, halogenized "propellant"; or
  - 260 seconds for metallized "propellant";
- "Propellants" having a force constant of more than 1,200 kJ/kg;
- "Propellants" that can sustain a steady-state linear burning rate of more than 38 mm/s under standard conditions (as measured in the form of an inhibited single strand) of 6.89 MPa (68.9 bar) pressure and 294K (21°C);
- Elastomer Modified Cast Double Base (EMCDB) "propellants" with extensibility at maximum stress of more than 5% at 233K (-40°C);
- Any "propellant" containing substances specified by 6A008.a; 6.
- "Propellants", not specified elsewhere in Category 6, specially designed for military use;

#### "Pyrotechnics", fuels and related substances, as follows, and 'mixtures' thereof: 6A008.c.

"Aircraft" fuels specially formulated for military purposes; 1.

"Aircraft" fuels specified by 6A008.c.1 are finished products, not their constituents. Note

- 2. Alane (aluminium hydride) (CAS 7784-21-6);
- 3. Boranes, as follows, and their derivatives:
  - a. Carboranes:
  - b. Borane homologues, as follows:
  - Decaborane (14) (CAS 17702-41-9);
  - Pentaborane (9) (CAS 19624-22-7);
  - Pentaborane (11) (CAS 18433-84-6);
- 4. Hydrazine and derivatives, as follows (see also 6A008.d.8. and d.9. for oxidising hydrazine derivatives):
- Hydrazine (CAS 302-01-2) in concentrations of 70% or more;
- Monomethyl hydrazine (CAS 60-34-4);
- Symmetrical dimethyl hydrazine (CAS 540-73-8);
- Unsymmetrical dimethyl hydrazine (CAS 57-14-7);

Note 6A008.c.4.a does not apply to hydrazine 'mixtures' specially formulated for corrosion control.

- 6A008 c. 5. Metal fuels, fuel 'mixtures' or "pyrotechnic" 'mixtures', in particle form whether spherical, atomized, spheroidal, flaked or ground, manufactured from material consisting of 99 % or more of any of the following:
  - a. Metals as follows and 'mixtures' thereof:
    - Beryllium (CAS 7440-41-7) in particle sizes of less than 60 μm;
    - Iron powder (CAS 7439-89-6) with particle size of 3 μm or less produced by reduction of iron oxide with hydrogen;
  - b. 'Mixtures' containing any of the following:
    - Zirconium (CAS 7440-67-7), magnesium (CAS 7439-95-4) or alloys of these in particle sizes of less than 60 µm; or
    - Boron (CAS 7440-42-8) or boron carbide (CAS 12069-32-8) fuels of 85% purity or higher and particle sizes of less than 60 μm;
  - Note 1 6A008.c.5 applies to "explosives" and fuels, whether or not the metals or alloys are encapsulated in aluminium, magnesium, zirconium, or beryllium.
  - Note 2 6A008.c.5.b only applies to metal fuels in particle form when they are mixed with other substances to form a 'mixture' formulated for military purposes such as liquid "propellant" slurries, solid "propellants", or "pyrotechnic" 'mixtures'.
  - Note 3 6A008.c.5.b.2 does not apply to boron and boron carbide enriched with boron-10 (20% or more of total boron-10 content.)
- 6A008 c. 6. Military materials, containing thickeners for hydrocarbon fuels, specially formulated for use in flame throwers or incendiary munitions, such as metal stearates (e.g, octal (CAS 637-12-7)) or palmitates;
  - Perchlorates, chlorates and chromates, composited with powdered metal or other high energy fuel components;
  - Spherical or spheroidal aluminium powder (CAS 7429-90-5) with a particle size of 60 μm or less and manufactured from material with an aluminium content of 99% or more;
  - Titanium subhydride (TiH<sub>n</sub>) of stoichiometry equivalent to n= 0.65-1.68;
  - 10. Liquid high energy density fuels not specified in 6A008.c.1, as follows:
  - Mixed fuels, that incorporate both solid and liquid fuels (e.g, boron slurry), having a mass-based energy density of 40 MJ/kg or greater;
  - Other high energy density fuels and fuel additives (e.g, cubane, ionic solutions, JP-7, JP-10), having a volume-based energy density of 37.5 GJ per cubic meter or greater, measured at 293 K (20°C) and one atmosphere (101.325 kPa) pressure;
    - Note 6A008.c.10.b does not apply to JP-4, JP-8, fossil refined fuels or biofuels, or fuels for engines certified for use in civil aviation.
- 6A008 c. 11. "Pyrotechnic" and pyrophoric materials as follows:
  - a. "Pyrotechnic" or pyrophoric materials specifically formulated to enhance or control the production of radiated energy in any part of the IR spectrum;
  - Mixtures of magnesium, polytetrafluoroethylene (PTFE) and a vinylidene difluoridehexafluoropropylene copolymer (e.g, MTV);
  - Fuel mixtures, "pyrotechnic" mixtures or "energetic materials", not specified elsewhere in 6A008, having all of the following:
    - Containing greater than 0.5% of particles of any of the following:
      - 1. Aluminium;
      - 2. Beryllium;
      - 3. Boron;
      - 4. Zirconium;
      - Magnesium; or
      - 6. Titanium;
    - b. Particles specified by 6A008.c.12.a with a size less than 200 nm in any direction; and
    - Particles specified by 6A008.c.12.a with a metal content of 60% or greater;
- 6A008 d. Oxidizers as follows, and 'mixtures' thereof:

- ADN (ammonium dinitramide or SR 12) (CAS 140456-78-6); 1...
- 2 AP (ammonium perchlorate) (CAS 7790-98-9);
- Compounds composed of fluorine and any of the following:
  - Other halogens:
  - b. Oxygen; or
  - C. Nitrogen:

Note 1 6A008.d.3 does not apply to chlorine trifluoride (CAS 7790-91-2).

6A008.d.3 does not apply to nitrogen trifluoride (CAS 7783-54-2) in its gaseous state. Note 2

- DNAD (1,3-dinitro-1,3-diazetidine) (CAS 78246-06-7); 4.
- HAN (hydroxylammonium nitrate) (CAS 13465-08-2);
- HAP (hydroxylammonium perchlorate) (CAS 15588-62-2);
- HNF (hydrazinium nitroformate) (CAS 20773-28-8);
- 8. Hydrazine nitrate (CAS 37836-27-4);
- Hydrazine perchlorate (CAS 27978-54-7);
- Liquid oxidisers comprised of or containing inhibited red fuming nitric acid (IRFNA) (CAS 8007-58-10. 7);

Note 6A008.d.10 does not apply to non-inhibited fuming nitric acid.

6A008

- Binders, plasticizers, monomers and polymers, as follows:
- AMMO (azidomethylmethyloxetane and its polymers) (CAS 90683-29-7) 1. (see also 6A008.g.1. for its "precursors");
- 2. BAMO (3,3-bis(azidomethyl)oxetane and its polymers) (CAS 17607-20-4) (see also 6A008.g.1. for its "precursors");
- BDNPA (bis (2,2-dinitropropyl)acetal) (CAS 5108-69-0);
- BDNPF (bis (2,2-dinitropropyl)formal) (CAS 5917-61-3);
- BTTN (butanetrioltrinitrate) (CAS 6659-60-5). (see also 6A008.g.8 for its "precursors");
- Energetic monomers, plasticizers or polymers, specially formulated for military use and containing any 6. of the following:
  - Nitro groups:
  - h. Azido groups;
  - C. Nitrate groups:
  - d. Nitraza groups; or
  - Difluoroamino groups; e.
- FAMAO (3-difluoroaminomethyl-3-azidomethyl oxetane) and its polymers;
- FEFO (bis-(2-fluoro-2,2-dinitroethyl) formal) (CAS 17003-79-1);
- FPF-1 (poly-2,2,3,3,4,4-hexafluoropentane-1,5-diol formal) (CAS 376-90-9); 9
- FPF-3 (poly-2,4,4,5,5,6,6-heptafluoro-2-tri-fluoromethyl-3-oxaheptane-1,7-diol formal); 10.
- GAP (glycidylazide polymer) (CAS 143178-24-9) and its derivatives; 11.
- HTPB (hydroxyl terminated polybutadiene) with a hydroxyl functionality equal to or greater than 2.2 12. and less than or equal to 2.4, a hydroxyl value of less than 0.77 meq/g, and a viscosity at 30°C of less than 47 poise (CAS 69102-90-5);
- Alcohol functionalised poly(epichlorohydrin) with a molecular weight less than 10,000, as follows: 13.
  - Poly(epichlorohydrindiol);
  - Poly(epichlorohydrintriol).
- NENAs (nitratoethylnitramine compounds) (CAS 17096-47-8, 85068-73-1, 82486-83-7, 82486-82-6And 14. 85954-06-9);
- PGN (poly-GLYN, polyglycidylnitrate or poly(nitratomethyl oxirane)) (CAS 27814-48-8); 15.
- Poly-NIMMO (poly nitratomethylmethyloxetane), poly-NMMO or poly(3-Nitratomethyl-3-16. methyloxetane)) (CAS 84051-81-0);
- 17. Polynitroorthocarbonates;
- TVOPA (1,2,3-tris[1,2-bis(difluoroamino)ethoxy] propane or tris vinoxy propane adduct) (CAS 53159-18.
- 19. 4,5 diazidomethyl-2-methyl-1,2,3-triazole (iso- DAMTR);
- PNO (Poly(3-nitrato oxetane)); 20.
- 6A008 f "Additives" as follows:

- 1. Basic copper salicylate (CAS 62320-94-9);
- 2. BHEGA (bis-(2-hydroxyethyl) glycolamide) (CAS 17409-41-5);
- 3. BNO (butadienenitrileoxide);
- Ferrocene derivatives as follows:
  - Butacene (CAS 125856-62-4);
  - b. Catocene (2,2-bis-ethylferrocenyl propane) (CAS 37206-42-1);
  - c. Ferrocene carboxylic acids and ferrocene carboxylic acid esters;
  - d. n-butyl-ferrocene (CAS 31904-29-7);
  - Other adducted polymer ferrocene derivatives not specified elsewhere in 6A008.f.4;
  - f. Ethyl ferrocene (CAS 1273-89-8);
  - g. Propyl ferrocene;
  - h. Pentyl ferrocene (CAS 1274-00-6);
  - i. Dicyclopentyl ferrocene;
  - Dicyclohexyl ferrocene;
  - k. Diethyl ferrocene (CAS 1273-97-8);
  - Dipropyl ferrocene;
  - m. Dibutyl ferrocene (CAS 1274-08-4);
  - n. Dihexyl ferrocene (CAS 93894-59-8);
  - Acetyl ferrocene (CAS 1271-55-2)/1,1'-diacetyl ferrocene (CAS 1273-94-5);
- Lead beta-resorcylate (CAS 20936-32-7);
- Lead citrate (CAS 14450-60-3);
- Lead-copper chelates of beta-resorcylate or salicylates (CAS 68411-07-4);
- 8. Lead maleate (CAS 19136-34-6);
- 9. Lead salicylate (CAS 15748-73-9);
- 10. Lead stannate (CAS 12036-31-6);
- MAPO (tris-1-(2-methyl)aziridinyl phosphine oxide)
   (CAS 57-39-6); BOBBA 8 (bis(2-methyl aziridinyl) 2-(2-hydroxypropanoxy) propylamino phosphine oxide); and other MAPO derivatives;
- 12. Methyl BAPO (bis(2-methyl aziridinyl) methylamino phosphine oxide) (CAS 85068-72-0);
- N-methyl-p-nitroaniline (CAS 100-15-2);
- 3-Nitraza-1,5-pentane diisocyanate (CAS 7406-61-9);
- Organo-metallic coupling agents as follows:
  - Neopentyl[diallyl]oxy, tri[dioctyl]phosphato-titanate (CAS 103850-22-2); also known as titanium IV, 2,2[bis 2-propenolato-methyl, butanolato, tris (dioctyl) phosphato] (CAS 110438-25-0); or LICA 12
    - (CAS 103850-22-2);
  - Titanium IV, [(2-propenolato-1) methyl, n-propanolatomethyl] butanolato-1, tris[dioctyl] pyrophosphate or KR3538;
  - c. Titanium IV, [(2-propenolato-1)methyl, n-propanolatomethyl] butanolato-1, tris(dioctyl)phosphate;
- Polycyanodifluoroaminoethyleneoxide;
- 17. Bonding agents as follows:
  - a. 1,1R,1S-trimesoyl-tris(2-ethylaziridine) (HX-868, BITA) (CAS 7722-73-8);
  - Polyfunctional aziridine amides with isophthalic, trimesic, isocyanuric or trimethyladipic backbone also having a 2-methyl or 2-ethyl aziridine group;

Note Item 6A008.f.17.b. includes:

- a. 1,1H-Isophthaloyl-bis(2-methylaziridine)(HX-752) (CAS 7652-64-4);
- b. 2,4,6-tris(2-ethyl-1-aziridinyl)-1,3,5-triazine (HX-874) (CAS 18924-91-9);
- c. 1,1'-trimethyladipoyl-bis(2-ethylaziridine) (HX-877) (CAS 71463-62-2).
- 18. Propyleneimine (2-methylaziridine) (CAS 75-55-8);
- Superfine iron oxide (Fe<sub>2</sub>O<sub>3</sub>) (CAS 1317-60-8) with a specific surface area more than 250 m<sup>2</sup>/g and an average particle size of 3.0 nm or less;
- TEPAN (tetraethylenepentaamineacrylonitrile) (CAS 68412-45-3); cyanoethylated polyamines and their salts;
- 21. TEPANOL (tetraethylenepentaamineacrylonitrileglycidol) (CAS 68412-46-4); cyanoethylated

- polyamines adducted with glycidol and their salts;
- TPB (triphenyl bismuth) (CAS 603-33-8);
- 23. TEPB (Tris (ethoxyphenyl) bismuth) (CAS 90591-48-3);

#### 6A008

- g. "Precursors" as follows:
- N.B. In 6A008.g the references are to specified "Energetic Materials" manufactured from these substances.
- BCMO (3,3-bis(chloromethyl)oxetane) (CAS 78-71-7) (see also 6A008.e.1 and e.2);
- 2. Dinitroazetidine-t-butyl salt (CAS 125735-38-8) (see also 6A008.a.28);
- Hexaazaisowurtzitane derivates including HBIW (hexabenzylhexaazaisowurtzitane) (CAS 124782-15-6) (see also 6A008.a.4) and TAIW (tetraacetyldibenzylhexaazaisowurtzitane) (CAS 182763-60-6) (see also 6A008.a.4);
- 4. (Reserved)
- 5. TAT (1,3,5,7 tetraacetyl-1,3,5,7,-tetraaza cyclo-octane) (CAS 41378-98-7) (see also 6A008.a.13);
- 1,4,5,8-tetraazadecalin (CAS 5409-42-7) (see also 6A008.a.27);
- 7. 1,3,5-trichlorobenzene (CAS 108-70-3) (see also 6A008.a.23);
- 8. 1,2,4-trihydroxybutane (1,2,4-butanetriol) (CAS 3068-00-6) (see also 6A008.e.5);
- DADN (1,5-diacetyl-3,7-dinitro-1, 3, 5, 7-tetraaza-cyclooctane) (see also 6A008.a.13).

#### 6A008

- h. 'Reactive material' powders and shapes, as follows:
- 1. Powders of any of the following materials, with a particle size less than 250  $\mu m$  in any direction and not specified elsewhere by 6A008:
  - a. Aluminium;
  - b. Niobium;
  - c. Boron;
  - d. Zirconium;
  - e. Magnesium;
  - f. Titanium;
  - g. Tantalum;
  - h. Tungsten;
  - i. Molybdenum; or
  - j. Hafnium;
- Shapes, not specified by 6A003, 6A004, 6A012 or 6A016, fabricated from powders specified by 6A008.h.1.

#### Technical Notes

- 'Reactive materials' are designed to produce an exothermic reaction only at high shear rates and for use as liners or casings in warheads.
- 2. 'Reactive material' powders are produced by, for example, a high energy ball milling process.
- 3. 'Reactive material' shapes are produced by, for example, selective laser sintering.

Note 1 6A008 does not apply to the following substances unless they are compounded or mixed with the "energetic material" specified by 6A008.a. or powdered metals specified by 6A008.c:

- a. Ammonium picrate (CAS 131-74-8);
- b. Black powder;
- Hexanitrodiphenylamine (CAS 131-73-7);
- Difluoroamine (CAS 10405-27-3);
- e. Nitrostarch (CAS 9056-38-6);
- f. Potassium nitrate (CAS 7757-79-1);
- g. Tetranitronaphthalene;
- h. Trinitroanisol;
- i. Trinitronaphthalene;
- Trinitroxylene;
- k. N-pyrrolidinone; 1-methyl-2-pyrrolidinone (CAS 872-50-4);
- Dioctylmaleate (CAS 142-16-5);
- m. Ethylhexylacrylate (CAS 103-11-7);

- Triethylaluminium (TEA) (CAS 97-93-8), trimethylaluminium (TMA) (CAS 75-24-1), and other pyrophoric metal alkyls and aryls of lithium, sodium, magnesium, zinc or boron;
- o. Nitrocellulose (CAS 9004-70-0);
- Nitroglycerin (or glyceroltrinitrate, trinitroglycerine) (NG) (CAS 55-63-0);
- q. 2,4,6-trinitrotoluene (TNT) (CAS 118-96-7);
- r. Ethylenediaminedinitrate (EDDN) (CAS 20829-66-7);
- s. Pentaerythritoltetranitrate (PETN) (CAS 78-11-5);
- Lead azide (CAS 13424-46-9), normal lead styphnate (CAS 15245-44-0) and basic lead styphnate (CAS 12403-82-6), and primary explosives or priming compositions containing azides or azide complexes;
- u. Triethyleneglycoldinitrate (TEGDN) (CAS 111-22-8);
- v. 2,4,6-trinitroresorcinol (styphnic acid) (CAS 82-71-3);
- w. Diethyldiphenylurea; (CAS 85-98-3); dimethyldiphenylurea; (CAS 611-92-7), methylethyldiphenylurea; [Centralites]
- x. N,N-diphenylurea (unsymmetrical diphenylurea) (CAS 603-54-3);
- y. Methyl-N,N-diphenylurea (methyl unsymmetrical diphenylurea) (CAS 13114-72-2);
- Ethyl-N,N-diphenylurea (ethyl unsymmetrical diphenylurea) (CAS 64544-71-4);
- aa. 2-Nitrodiphenylamine (2-NDPA) (CAS 119-75-5);
- bb. 4-Nitrodiphenylamine (4-NDPA) (CAS 836-30-6);
- cc. 2,2-dinitropropanol (CAS 918-52-5);
- dd. Nitroguanidine (CAS 556-88-7) (see 8C111.d.).
- Note 2 6A008 does not apply to ammonium perchlorate (6A008.d.2), NTO (6A008.a.18) or catocene (6A008.f.4.b), and meeting all of the following:
  - a. Specially shaped and formulated for civil-use gas generation devices;
  - Compounded or mixed, with non-active thermoset binders or plasticizers, and having a mass of less than 250 g:
  - c. Having a maximum of 80% ammonium perchlorate (6A008.d.2) in mass of active material;
  - d. Having less than or equal to 4 g of NTO (6A008.a.18); and
  - e. Having less than or equal to 1 g of catocene (6A008.f.4.b).

6A009 Vessels of war (surface or underwater), special naval equipment, accessories, components and other surface vessels, as follows:

- N.B. For guidance and navigation equipment, see 6A011.
- a. Vessels and components, as follows:
  - Vessels (surface or underwater) specially designed or modified for military use, regardless of current state of repair or operating condition, and whether or not they contain weapon delivery systems or armour, and hulls or parts of hulls for such vessels, and components therefor specially designed for military use;
  - Surface vessels, other than those specified in 6A009.a.1, having any of the following, fixed or integrated into the vessel:
    - Automatic weapons specified in 6A001 or weapons specified in 6A002, 6A004, 6A012, or 6A019, or 'mountings' or hard points for weapons having a calibre of 12.7 mm or greater;

#### Technical Note

'Mountings' refers to weapon mounts or structural strengthening for the purpose of installing weapons.

- b. Fire control systems specified in 6A005;
- c. Having all of the following:
  - 1. 'Chemical, Biological, Radiological and Nuclear (CBRN) protection'; and
  - 2. 'Pre-wet or wash down system' designed for decontamination purposes; or

#### Technical Notes

 'CBRN protection' is a self-contained interior space containing features such as overpressurization, isolation of ventilation systems, limited ventilation openings with CBRN

- filters and limited personnel access points incorporating air-locks.
- 'Pre-wet or wash down system' is a seawater spray system capable of simultaneously wetting the exterior superstructure and decks of a vessel.
- d. Active weapon countermeasure systems specified in 6A004.b, 6A005.c or 6A011.a and having any of the following:
  - 1. 'CBRN protection';
  - 2. Hull and superstructure, specially designed to reduce the radar cross section;
  - Thermal signature reduction devices, (e.g., an exhaust gas cooling system), excluding those specially designed to increase overall power plant efficiency or to reduce the environmental impact; or
  - A degaussing system designed to reduce the magnetic signature of the whole vessel;
- 6A009 b. Engines and propulsion systems, as follows, specially designed for military use and components therefor specially designed for military use:
  - 1. Diesel engines specially designed for submarines and having all of the following:
    - a. Power output of 1.12 MW (1,500 hp) or more; and
    - Rotary speed of 700 rpm or more;
  - 2. Electric motors specially designed for submarines and having all of the following:
    - a. Power output of more than 0.75 MW (1,000 hp);
    - b. Quick reversing;
    - c. Liquid cooled; and
    - d. Totally enclosed;
  - 3. Non-magnetic diesel engines having all of the following:
    - a. Power output of 37.3 kW (50 hp) or more; and
    - Non-magnetic content in excess of 75% of total mass;
  - 4. 'Air Independent Propulsion' (AIP) systems specially designed for submarines;

#### Technical Note

'Air Independent Propulsion' (AIP) allows a submerged submarine to operate its propulsion system, without access to atmospheric oxygen, for a longer time than the batteries would have otherwise allowed. For the purposes of 6A009.b.4, AIP does not include nuclear power.

- 6A009 c. Underwater detection devices, specially designed for military use, controls therefor and components therefor specially designed for military use;
  - d. Anti-submarine nets and anti-torpedo nets, specially designed for military use;
  - e. (Reserved)
  - f. Hull penetrators and connectors, specially designed for military use, that enable interaction with equipment external to a vessel, and components therefor specially designed for military use;
  - Note 6A009.f includes connectors for vessels which are of the single-conductor, multi-conductor, coaxial or waveguide type, and hull penetrators for vessels, both of which are capable of remaining impervious to leakage from without and of retaining required characteristics at marine depths exceeding 100 m; and fibre-optic connectors and optical hull penetrators, specially designed for "laser" beam transmission, regardless of depth. 6A009.f. does not apply to ordinary propulsive shaft and hydrodynamic control-rod hull penetrators.
- 6A009 g. Silent bearings having any of the following, components therefor and equipment containing those bearings, specially designed for military use:
  - Gas or magnetic suspension;
  - 2. Active signature controls; or
  - Vibration suppression controls.
- 6A010 "Aircraft", "lighter-than-air vehicles", "Unmanned Aerial Vehicles" ("UAVs"), aero-engines and "aircraft" equipment, related equipment, and components, as follows, specially designed or modified for military use:
  N.B. For guidance and navigation equipment, see 6A011.

- a. Manned "aircraft" and "lighter-than-air vehicles", and specially designed components therefor;
- b. (Reserved)
- Unmanned "aircraft" and "lighter-than-air vehicles", and related equipment, as follows, and specially designed components therefor:
  - "UAVs", Remotely Piloted Air Vehicles (RPVs), autonomous programmable vehicles and unmanned "lighter-than-air vehicles";
  - Launchers, recovery equipment and ground support equipment;
  - 3. Equipment designed for command or control;
- d. Propulsion aero-engines and specially designed components therefor;
- e. Airborne refuelling equipment specially designed or modified for any of the following, and specially designed components therefor:
  - 1. "Aircraft" specified by 6A010.a; or
  - 2. Unmanned "aircraft" specified by 6A010.c;
- f. 'Ground equipment' specially designed for "aircraft" specified by 6A010.a or aero-engines specified by 6A010.d;

#### Technical Note

'Ground equipment' includes pressure refuelling equipment and equipment designed to facilitate operations in confined areas.

 Aircrew life support equipment, aircrew safety equipment and other devices for emergency escape, not specified in 6A010.a, designed for "aircraft" specified by 6A010.a;

Note 6A010.g does not control aircrew helmets that do not incorporate, or have mountings or fittings for, equipment specified in Category 6.

N.B. For helmets see also 6A013.c.

- h. Parachutes, paragliders and related equipment, as follows, and specially designed components therefor:
  - Parachutes not specified elsewhere in Category 6;
  - Paragliders;
  - Equipment specially designed for high altitude parachutists (e.g, suits, special helmets, breathing systems, navigation equipment);
- i. Controlled opening equipment or automatic piloting systems, designed for parachuted loads.
- Note 1 6A010.a does not apply to "aircraft" and "lighter-than-air vehicles" or variants of those "aircraft", specially designed for military use and which are all of the following:
  - a. Not a combat "aircraft";
  - Not configured for military use and not fitted with equipment or attachments specially designed or modified for military use; and
  - Certified for civil use by civil aviation authority of India
- Note 2 6A010.d does not apply to:
  - a. Aero-engines designed or modified for military use which have been certified by civil aviation authority of India, for use in "civil aircraft" or specially designed components therefor;
  - Reciprocating engines or specially designed components therefor, except those specially designed for "UAVs".
- Note 3 For the purposes of 6A010.a, and 6A010.d, specially designed components and related equipment for non-military "aircraft" or aero-engines modified for military use applies only to those military components and to military related equipment required for the modification to military use.
- Note 4 For the purposes of 6A010.a, military use includes: combat, military reconnaissance, assault, military training, logistics support, and transporting and airdropping troops or military equipment.
- Note 5 6A010.a does not apply to "aircraft" that meet all of the following:
  - Were first manufactured before 1946;
  - Do not incorporate items specified by Category 6 unless the items are required to meet safety or airworthiness standards of civil aviation authority of India; and
  - c. Do not incorporate weapons specified by Category 6 unless inoperable and incapable of being

returned to operation.

- 6A011 Electronic equipment, "spacecraft" and components, not specified elsewhere on Category 6, as follows:
  - a. Electronic equipment specially designed for military use and specially designed components therefor;

#### Note 6A011.a includes:

- a. Electronic countermeasure and electronic counter-countermeasure equipment (i.e, equipment designed to introduce extraneous or erroneous signals into radar or radio communication receivers or otherwise hinder the reception, operation or effectiveness of adversary electronic receivers including their countermeasure equipment), including jamming and counter-jamming equipment;
- b. Frequency agile tubes;
- Electronic systems or equipment, designed either for surveillance and monitoring of the electromagnetic spectrum for military intelligence or security purposes or for counteracting such surveillance and monitoring;
- Underwater countermeasures, including acoustic and magnetic jamming and decoy, equipment designed to introduce extraneous or erroneous signals into sonar receivers;
- e. Data processing security equipment, data security equipment and transmission and signalling line security equipment, using ciphering processes;
- f. Identification, authentification and keyloader equipment and key management, manufacturing and distribution equipment;
- g. Guidance and navigation equipment;
- h. Digital troposcatter-radio communications transmission equipment;
- i. Digital demodulators specially designed for signals intelligence;
- j. "Automated Command and Control Systems".
- N.B. For "software" associated with military "Software" Defined Radio (SDR), see 6A021.
- 6A011 b. Global Navigation Satellite Systems (GNSS) jamming equipment and specially designed components therefor;
- 6A011 c. "Spacecraft" specially designed or modified for military use, and "spacecraft" components specially designed for military use.
- 6A012 High velocity kinetic energy weapon systems and related equipment, as follows, and specially designed components therefor:
  - a. Kinetic energy weapon systems specially designed for destruction or effecting mission-abort of a target;
  - Specially designed test and evaluation facilities and test models, including diagnostic instrumentation and targets, for dynamic testing of kinetic energy projectiles and systems.
  - <u>N.B.</u> For weapon systems using sub-calibre ammunition or employing solely chemical propulsion, and ammunition therefor, see 6A001 to 6A004.
  - Note 1 6A012 includes the following when specially designed for kinetic energy weapon systems:
    - Launch propulsion systems capable of accelerating masses larger than 0.1 g to velocities in excess of 1.6 km/s, in single or rapid fire modes;
    - Prime power generation, electric armour, energy storage (e.g, high energy storage capacitors), thermal management, conditioning, switching or fuel-handling equipment; and electrical interfaces between power supply, gun and other turret electric drive functions;
      - N.B. See also 8A301.e.2 for high energy storage capacitors.
    - c. Target acquisition, tracking, fire control or damage assessment systems;
    - d. Homing seeker, guidance or divert propulsion (lateral acceleration) systems for projectiles.

- Note 2 6A012 applies to weapon systems using any of the following methods of propulsion:
  - a. Electromagnetic;
  - Electrothermal;
  - c. Plasma;
  - d. Light gas; or
  - e. Chemical (when used in combination with any of the above).
- 6A013 Armoured or protective equipment, constructions and components, as follows:
  - a. Metallic or non-metallic armoured plate, having any of the following:
    - 1. Manufactured to comply with a military standard or specification; or
    - 2. Suitable for military use;
    - N.B. For body armour plate, see 6A013.d.2.
  - Constructions of metallic or non-metallic materials, or combinations thereof, specially designed to provide ballistic protection for military systems, and specially designed components therefor;
  - the relevant manufactured according to military standards or specifications, and specially designed helmet shells, liners, or comfort pads, therefor;
    - N.B. For other military helmet components or accessories, see the relevant Category entry.
  - d. Body armour or protective garments, and components therefor, as follows:
    - Soft body armour or protective garments, manufactured to military standards or specifications, or to their equivalents, and specially designed components therefor;
      - <u>Note</u> For the purposes of 6A013.d.1, military standards or specifications include, at a minimum, specifications for fragmentation protection.
    - Hard body armour plates providing ballistic protection equal to or greater than level III (NIJ 0101.06, July 2008).
  - <u>Note 1</u> 6A013.b includes materials specially designed to form explosive reactive armour or to construct military shelters.
  - Note 2 6A013.c does not apply to conventional steel helmets, neither modified or designed to accept, nor equipped with any type of accessory device.
  - Note 3 6A013.c and d. do not apply to helmets, body armour or protective garments, when accompanying their user for the user's own personal protection.
  - Note 4 The only helmets specially designed for bomb disposal personnel that are specified by 6A013 are those specially designed for military use.
  - N.B. 1 See also 8A105.
  - N.B. 2 For "fibrous or filamentary materials" used in the manufacture of body armour and helmets, see
- 6A014 'Specialised equipment for military training' or for simulating military scenarios, simulators specially designed for training in the use of any firearm or weapon specified by 6A001 or 6A002 and specially designed components and accessories therefor.

#### Technical Note

The term 'specialised equipment for military training' includes military types of attack trainers, operational flight trainers, radar target trainers, radar target generators, gunnery training devices, anti-submarine warfare trainers, flight simulators (including human-rated centrifuges for pilot/astronaut training), radar trainers, instrument flight trainers, navigation trainers, missile launch trainers, target equipment, drone "aircraft", armament trainers, pilotless "aircraft" trainers, mobile training units and training equipment for ground military operations.

- Note 1 6A014 includes image generating and interactive environment systems for simulators, when specially designed or modified for military use.
- Note 2 6A014 does not apply to equipment specially designed for training in the use of hunting or sporting

weapons.

- 6A015 Imaging or countermeasure equipment, as follows, specially designed for military use, and specially designed components and accessories therefor:
  - a. Recorders and image processing equipment;
  - b. Cameras, photographic equipment and film processing equipment;
  - c. Image intensifier equipment;
  - d. Infrared or thermal imaging equipment;
  - e. Imaging radar sensor equipment;
  - f. Countermeasure or counter-countermeasure equipment, for the equipment specified by 6A015.a to 6A015.e.
    - <u>Note</u> 6A015.f includes equipment designed to degrade the operation or effectiveness of military imaging systems or to minimize such degrading effects.
  - Note 1 In 6A015 the term specially designed components includes the following, when specially designed for military use:
    - a. Infrared image converter tubes:
    - Image intensifier tubes (other than first generation);
    - c. Microchannel plates;
    - d. Low-light-level television camera tubes;
    - e. Detector arrays (including electronic interconnection or read out systems);
    - f. Pyroelectric television camera tubes;
    - Cooling systems for imaging systems;
    - h. Electrically triggered shutters of the photochromic or electro-optical type having a shutter speed of less than 100 µs, except in the case of shutters which are an essential part of a high speed camera;
    - i. Fibre optic image inverters;
    - j. Compound semiconductor photocathodes.
  - Note 2 6A015 does not apply to "first generation image intensifier tubes" or equipment specially designed to incorporate "first generation image intensifier tubes".
    - N.B. For the classification of weapons sights incorporating "first generation image intensifier tubes" see 6A001, 6A002, and 6A005.a.
  - N.B. See also 8A602.a.2 and 8A602.b.
- 6A016 Forgings, castings and other unfinished products, specially designed for items specified by 6A001, to 6A004, 6A006, 6A009, 6A010, 6A012, or 6A019.
  - Note 6A016 applies to unfinished products when they are identifiable by material composition, geometry or function.
- 6A017 Miscellaneous equipment, materials and "libraries", as follows, and specially designed components therefor:
  - a. Diving and underwater swimming apparatus, specially designed or modified for military use, as follows:
    - 1. Self-contained diving rebreathers, closed or semi-closed circuit;
    - 2. Underwater swimming apparatus specially designed for use with the diving apparatus specified in 6A017.a.1;
    - N.B. See also 8A802.q.
  - Construction equipment specially designed for military use;
  - c. Fittings, coatings and treatments, for signature suppression, specially designed for military use;
  - Field engineer equipment specially designed for use in a combat zone;
  - e. "Robots", "robot" controllers and "robot" "end-effectors", having any of the following characteristics:
    - Specially designed for military use;
    - Incorporating means of protecting hydraulic lines against externally induced punctures caused by ballistic fragments (e.g., incorporating self-sealing lines) and designed to use hydraulic fluids with flash points higher than 839 K (566°C); or

17.

Specially designed or rated for operating in an electro-magnetic pulse (EMP) environment;
 Technical Note

Electro-magnetic pulse does not refer to unintentional interference caused by electromagnetic radiation from nearby equipment (e.g., machinery, appliances or electronics) or lightning.

- f. "Libraries" specially designed or modified for military use with systems, equipment or components, specified by Category 6;
- g. Nuclear power generating equipment or propulsion equipment, including "nuclear reactors", specially designed for military use and components therefor specially designed or 'modified' for military use;
- <u>N.B.</u> (See Commodity Identification Note of SCOMET list)
  - Equipment and material, coated or treated for signature suppression, specially designed for military use, other than those specified elsewhere in Category 6;
  - i. Simulators specially designed for military "nuclear reactors";
- N.B (See Commodity Identification Note of SCOMET list)
  - j. Mobile repair shops specially designed or 'modified' to service military equipment;
  - k. Field generators specially designed or 'modified' for military use;
  - 1. Containers specially designed or 'modified' for military use;
  - m. Ferries, other than those specified elsewhere in Category 6, bridges and pontoons, specially designed for military use;
  - Test models specially designed for the "development" of items specified by 6A004, 6A006, 6A009, or 6A010:
  - o. "Laser" protection equipment (e.g, eye and sensor protection) specially designed for military use;
  - "Fuel cells", other than those specified elsewhere in Category 6, specially designed or 'modified' for military use.

#### Technical Note

- 1. (Reserved)
- 2. For the purpose of 6A017, 'modified' means any structural, electrical, mechanical, or other change that provides a non-military item with military capabilities equivalent to an item which is specially designed for military use.
- 6A018 'Production' equipment and components, as follows:
  - a. Specially designed or modified 'production' equipment for the 'production' of products specified by Category
     6, and specially designed components therefor;
  - b. Specially designed environmental test facilities and specially designed equipment therefor, for the certification, qualification or testing of products specified by Category 6.

#### Technical Note

For the purposes of 6A018 the term 'production' includes design, examination, manufacture, testing and checking.

Note 6A018.a and 6A018.b include the following equipment:

- a. Continuous nitrators;
- b. Centrifugal testing apparatus or equipment, having any of the following:
  - Driven by a motor or motors having a total rated horsepower of more than 298 kW (400 hp);
  - 2. Capable of carrying a payload of 113 kg or more; or
  - Capable of exerting a centrifugal acceleration of 8 g or more on a payload of 91 kg or more;
- Dehydration presses;
- Screw extruders specially designed or modified for military "explosive" extrusion;
- e. Cutting machines for the sizing of extruded "propellants";
- f. Sweetie barrels (tumblers) 1.85 m or more in diameter and having over 227 kg product capacity;
- g. Continuous mixers for solid "propellants";
- h. Fluid energy mills for grinding or milling the ingredients of military "explosives";
- i. Equipment to achieve both sphericity and uniform particle size in metal powder listed in 64008 c.8:
- j. Convection current converters for the conversion of materials listed in 6A008.c.3.
- 6A019 Directed Energy Weapon (DEW) systems, related or countermeasure equipment and test models, as follows, and specially designed components therefor:

- a. "Laser" systems specially designed for destruction or effecting mission-abort of a target;
- Particle beam systems capable of destruction or effecting mission-abort of a target;
- c. High power Radio-Frequency (RF) systems capable of destruction or effecting mission-abort of a target;
- Equipment specially designed for the detection or identification of, or defence against, systems specified by 6A019.a to 6A019.c;
- Physical test models for the systems, equipment and components, specified by 6A019.
- f. "Laser" systems specially designed to cause permanent blindness to unenhanced vision, i.e, to the naked eye or to the eye with corrective eyesight devices.
- Note 1 DEW systems specified by 6A019 include systems whose capability is derived from the controlled application of:
  - "Lasers" of sufficient power to effect destruction similar to the manner of conventional ammunition;
  - b. Particle accelerators which project a charged or neutral particle beam with destructive power;
  - c. High pulsed power or high average power radio frequency beam transmitters, which produce fields sufficiently intense to disable electronic circuitry at a distant target.
- Note 2 6A019 includes the following when specially designed for DEW systems:
  - Prime power generation, energy storage, switching, power conditioning or fuel-handling equipment;
  - b. Target acquisition or tracking systems;
  - c. Systems capable of assessing target damage, destruction or mission-abort;
  - d. Beam-handling, propagation or pointing equipment;
  - e. Equipment with rapid beam slew capability for rapid multiple target operations;
  - f. Adaptive optics and phase conjugators;
  - g. Current injectors for negative hydrogen ion beams;
  - h. "Space-qualified" accelerator components;
  - i. Negative ion beam funnelling equipment;
  - Equipment for controlling and slewing a high energy ion beam;
  - k. "Space-qualified" foils for neutralising negative hydrogen isotope beams.
- 6A020 Cryogenic and "superconductive" equipment, as follows, and specially designed components and accessories therefor:
  - Equipment specially designed or configured to be installed in a vehicle for military ground, marine, airborne
    or space applications, capable of operating while in motion and of producing or maintaining temperatures
    below 103 K (- 170°C);
    - Note 6A020.a includes mobile systems incorporating or employing accessories or components manufactured from non-metallic or non-electrical conductive materials, such as plastics or epoxy-impregnated materials.
  - b. "Superconductive" electrical equipment (rotating machinery and transformers) specially designed or configured to be installed in a vehicle for military ground, marine, airborne or space applications and capable of operating while in motion.
    - Note 6A020.b does not apply to direct-current hybrid homopolar generators that have single-pole normal metal armatures which rotate in a magnetic field produced by superconducting windings, provided those windings are the only superconducting components in the generator.

#### 6A021 "Software" as follows:

- a. "Software" specially designed or modified for any of the following:
  - 1. "Development", "production", operation or maintenance of equipment specified by Category 6;
  - 2. "Development" or "production" of materials specified by Category 6; or
  - 3. "Development", "production", operation or maintenance of "software" specified by Category 6.
- b. Specific "software", other than that specified by 6A021.a as follows:
  - "Software" specially designed for military use and specially designed for modelling, simulating or evaluating military weapon systems;
  - "Software" specially designed for military use and specially designed for modelling or simulating military operational scenarios;

- 3. "Software" for determining the effects of conventional, nuclear, chemical or biological weapons;
- "Software" specially designed for military use and specially designed for Command, Communications, Control and Intelligence (C<sup>3</sup>I) or Command, Communications, Control, Computer and Intelligence (C<sup>4</sup>I) applications;
- c. "Software", not specified by 6A021.a or 6A021b specially designed or modified to enable equipment not specified by Category 6 to perform the military functions of equipment specified by Category 6.

#### 6A022 "Technology" as follows:

- a. "Technology", other than specified in 6A022.b which is "required" for the "development", "production", operation, installation, maintenance (checking), repair, overhaul or refurbishing of items specified in Category 6;
- b. "Technology" as follows:
  - "Technology" "required" for the design of, the assembly of components into, and the operation, maintenance and repair of, complete production installations for items specified by Category 6, even if the components of such production installations are not specified;
  - "Technology" "required" for the "development" and "production" of small arms, even if used to produce reproductions of antique small arms;
  - 3. (Reserved)
  - 4. (Reserved)
  - "Technology" "required" exclusively for the incorporation of "biocatalysts", specified by 6A007.i.1 into military carrier substances or military material.
- Note 1 "Technology" "required" for the "development", "production", operation, installation, maintenance (checking), repair, overhaul or refurbishing of items specified by Category 6 remains under control even when applicable to any item not specified by Category 6.

#### Note 2 6A022 does not apply to:

- "Technology" that is the minimum necessary for the installation, operation, maintenance (checking) or repair, of those items which are not controlled or whose export has been authorised;
- b. "Technology" that is "in the public domain", "basic scientific research" or the minimum necessary information for patent applications.
- c. "Technology" for magnetic induction for continuous propulsion of civil transport devices.

# Munitions List Item requiring EUC from the Government of the Importing Country

- 1. All items covered by 6A001 of Appendix-I except accessories and components.
- 2. All items covered by 6A002 of Appendix-1 except accessories and components.
- 3. All items covered by 6A003 of Appendix-I except components.
- 4. All items covered by 6A004 of Appendix-I except accessories and components.
- 5. All items covered by 6A006 of Appendix-I except accessories and components.
- 6. All items covered by 6A009(a) of Appendix-I except accessories and components.
- 7. All items covered by 6A010(a&c) of Appendix-I except accessories and components.
- 8. All items covered by 6A011 of Appendix-I except accessories and components.
- 9. All items covered by 6A012 of Appendix-I except components.
- 10. All items covered by 6A014 of Appendix-I except accessories and components.
- 11. All items covered by 6A015 of Appendix-I except accessories and components
- 12. All items covered by 6A019 of Appendix-I except accessories and components.
- 13. All items covered by 6A020 of Appendix-I except accessories and components.
- 14. Software (6A021) especially designed or modified for military use or for the development, production or use of equipments, materials listed in this Appendix.
- 15. Technology (6A022) required for the development, production, operation, installation, maintenance, repair, overhaul or refurbishing of items specified in this Appendix.

# Prescriptive format for filing of On-Line Application for export of Munitions List item

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Mode of	Export:		
S.No.	Description of Technology/know- how to be Exported/shared*	Classification in Indian Export Regulations	Total value involved
up in add 1. It is follows: 2. It is (a) The EUC (b) The authors (c) The execution (d) If required (e) The	hereby certified that the technology/know-how to be blitional sheet along with relevant/supporting de hereby certified that the technology/know-bwing purpose(s) only	comment need to be furnished ald how imported will be used be used for purposes other osequently transferred (re-expensed, sold or transferred to any possession of the technology shall not be used for any and their delivery system.	by the undersigned for the er than those declared in ported) without the prior third party whatsoever, know-how has occurred purpose that relates to
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			Place