# DEFENSE DEMILITARIZATION CODING TABLES AND FIGURES

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**Originating Component:** Office of the Under Secretary of Defense for Acquisition and Sustainment

**Effective:** November 21, 2023

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**Purpose:** This guidance for Demilitarization (DEMIL) of DoD personal property supports the requirement of DoD Manual 4160.28 Volume 2, Defense Demilitarization: Demilitarization Procedures, November 1, 2022.

Changes to this guidance must be coordinated and approved by the DoD DEMIL Program Manager (DDPM), Mr. James L. Reed, (James.L.reed@dla.mil)

| CHANGE HISTORY | | | |
|---|---|---|---|
| **Data Change** | **Date** | **Change Description** | **Change Number** |
| N/A | 14 Jul 2020 | Changed cover page due to extraction of Tables and Figures from DoD Manual 4160.28, Volume 2, Defense Demilitarization: Coding as agreed upon by PMO; added Change History. | 1 |
| N/A | 01 Sep 2020 | Changes to tables 3, 4 & 5 within the 'Defense Demilitarization Coding Tables and Figures' | 2 |
| 01 Nov 2022 | 09 Dec 2022 | Change to Purpose with new Vol 2 reference | 3 |
| 01 Nov 2022 | 09 Dec 2022 | Table 5, Part 2, ECCN 0A505, expanded para e. to include spent shell casings | 4 |
| 01 Nov 2022 | 09 Dec 2022 | Table 5, Interpretations, added a note the 0A505 para (e). is not reflected on the CCL but added for DOD purposes | 5 |
| 01 Nov 2022 | 09 Dec 2022 | Table 9, Interpretations, added ECCN 2B007 for EOD robots | 6 |
| 08 Nov 2023 | 21 Nov 2023 | Changed Table numbers to match Category numbers | 7 |
| 08 Nov 2023 | 21 Nov 2023 | Add (*) for additional notes in the ITAR and the CCL | 8 |

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## DEMIL Coding Tables
## Table 1 - Firearms and Related Articles



| Part 1. Firearms and Related Articles described in the USML Category I | |
|---|---|
| **Description of items for DEMIL coding** | **DEMIL Code** |
| ♦ (a) Firearms using caseless ammunition. | D |
| ♦ (b) Fully automatic firearms to .50 caliber (12.7 mm) inclusive. | D |
| ♦ (c) Firearms specially designed to Integrate fire control, automatic tracking, **or** automatic firing (e.g., Precision Guided Firearms (PGFs)). (*) | D |
| ♦ (d) Fully automatic shotguns regardless of gauge. | D |
| ♦ (e) Silencers, mufflers, and sound suppressors. | D |
| (f) Reserved. | |
| (g) Barrels, receivers (frames), bolts, bolt carriers, slides, or sears specially designed for the articles in paragraphs (a), (b), and (d) of this category; | D |
| (h) Parts, components, accessories, and attachments, as follows: | |
| (1) Drum and other magazines for firearms to .50 caliber (12.7 mm) inclusive with a capacity greater than 50 rounds, regardless of jurisdiction of the firearm, and specially designed parts and components therefor; | D |
| (2) Parts and components specially designed for conversion of a semi-automatic firearm to a fully automatic firearm; | D |
| (3) Parts and components specially designed for defense articles described in Paragraphs (c) and (e) of this category; **or** | D |
| (4) Accessories or attachments specially designed to automatically stabilize aim (other than gun rests) or for automatic targeting, and specially designed parts and components therefor. | D |
| (i) Decals, labels, and technical manuals containing technical data directly related to the items listed in this category described as either; | |
| (i) Classified **or** | P |
| (ii) Unclassified. | D |
| (j) Through (w) [Reserved] | |
| (*) Additional notes located in the ITAR | |

## Table 1. Firearms and Related Articles, Continued

| Part 2. Military items described in the CCL | |
|---|---|
| **Firearms (except 0A502 shotguns) and related commodities as follows** | **ECCN 0A501** |
| **Description of items for DEMIL coding** | **DEMIL Code** |
| (a) Non-automatic and semi-automatic firearms less than or equal to .50 caliber (12.7 mm) or less. (*) | D |
| (b) Non-automatic and non-semi-automatic rifles, carbines, revolvers or pistols with a caliber greater than .50 inches (12.7 mm) but less than or equal to .72 inches (18.0 mm). | D |
| (c) The following types of parts and components if "specially designed" for an item listed in Paragraphs (a) or (b) of this ECCN, or Part 1 of Table 1 (unless listed in Paragraphs (g) or (h) of Part 1 of Table 1. (*) | |
| (1) Barrels | D |
| (2) Cylinders | D |
| (3) Barrel extensions | D |
| (4) Mounting blocks (trunnions) | D |
| (5) Bolts | D |
| (6) Bolt carriers | D |
| (7) Operating rods | D |
| (8) Gas pistons | D |
| (9) Trigger housings | D |
| (10) Triggers | D |
| (11) Hammers/Striker | D |
| (12) Sears | D |
| (13) Disconnectors | D |
| (14) Pistol grips that contain fire control parts or components (e.g., triggers, hammers/Striker, sears, disconnectors) | D |
| (15) Buttstocks that contain fire control "parts" or "components". | D |
| (d) Detachable magazines with a capacity of 17 to 50 rounds "specially designed" for a commodity controlled by paragraph (a) or (b) of this entry. (*) | D |
| (e) Receivers (frames) and "complete breech mechanisms", including castings, forgings stampings, or machined items, "specially designed" for a commodity controlled by paragraph (a) or (b) of this entry. (*) | D |
| (f) through (w) Reserved. | |
| (x) " Parts" and "components" that are "specially designed" for an item listed in paragraphs (a) through (c) of this ECCN or in Part 1 of Table 1. This includes all parts for receivers. | Q |

**Table 1. Firearms and Related Articles, Continued**

| Description of items for DEMIL coding | DEMIL Code |
|---|---|
| (y) Specific "parts", "components", "accessories" and "attachments" "specially designed" for an item listed in this ECCN or common to an item listed in part 1 of Table 1 and "specially designed parts", "components", "accessories" and "attachments" "specially designed" therefore. | |
| (1) Stocks (including adjustable, collapsible, blades and braces), grips, handguards, or forends, that do not contain any fire control "parts" or "components" (e.g., triggers, hammers/striker, sears, disconnectors); | A |
| (2) Scope mounts or accessory rails; | A |
| (3) Iron sights; | A |
| (4) Sling swivels; | A |
| (5) Butt plates or recoil pads; | A |
| (6) Bayonets; and | A |
| (7) Firearms manufactured from 1890 to 1898 and reproductions thereof. | A |
| (*) Additional notes located in the CCL | |
| **Test, inspection, and production "equipment" and related commodities for the "development" or "production" of commodities enumerated or otherwise described in ECCN 0A501 or Table 1 Part 1 as follows.** | **ECCN 0B501** |
| **Description of items for DEMIL coding** | **DEMIL Code** |
| (a) Small arms chambering machines. | Q |
| (b) Small arms deep hole drilling machines and drills therefor. | Q |
| (c) Small arms rifling machines. | Q |
| (d) Small arms boring/reaming machines. | Q |
| (e) Production equipment (including dies, fixtures, and other tooling) "specially designed" for the "production" of the items controlled in 0A501.a through .x. or USML Category I. | Q |
| **Shotguns; shotguns "parts" and "components", consisting of complete trigger mechanisms; magazines and magazine extension tubes; "complete breech mechanisms"; except equipment used exclusively to treat or tranquilize animals, and except arms designed solely for signal, flare, or saluting use.** | **ECCN 0A502** |
| **Description of items for DEMIL coding** | **DEMIL Code** |
| (a) The ECCN heading contains the list of items. (*) | D |
| (*) Additional notes located in the CCL | |

## Table 1. Firearms and Related Articles, Continued

| **Discharge type arms; non-lethal or less-lethal grenades and projectiles, and "specially designed" "parts" and "components" of those projectiles; and devices to administer electric shock, for example, stun guns, shock batons, shock shields, electric cattle prods, immobilization guns and projectiles; except equipment used exclusively to treat or tranquilize animals, and except arms designed solely for signal, flare, or saluting use; and "specially designed" "parts" and "components", n.e.s.** | **ECCN 0A503** |
|---|---|
| **Description of items for DEMIL coding** | **DEMIL Code** |
| (a) The ECCN heading contains the list of items. | Q |
| **Optical sighting devices for firearms (including shotguns controlled by 0A502); and "components" as follows** | **ECCN 0A504** |
| **Description of items for DEMIL coding** | **DEMIL CODE** |
| (a) Telescopic sights. | Q |
| (b) Holographic sights. | Q |
| (c) Reflex or "red dot" sights. | Q |
| (d) Reticle sights. | Q |
| (e) Other sighting devices that contain optical elements. | Q |
| (f) Laser aiming devices or laser illuminators specially designed for use on firearms and having an operational wavelength exceeding 400 nm but not exceeding 710 nm.(*) | Q |
| (g) Lenses, other optical elements and adjustment mechanisms for items listed in Paragraphs a, b, c, d, e, or i. | Q |
| (h) Reserved | |
| (i) Riflescopes that were not "subject to the EAR" as of March 8, 2020, and are "specially designed" for use in firearms that are "subject to the ITAR." Riflescopes (*) | D |
| (*) Additional notes located in the CCL | |

## Table 2. Guns and Armament



| Part 1. Guns and armament described in USML Category II | |
|---|---|
| **Description of items for DEMIL coding** | **DEMIL Code** |
| (a) Guns and armament greater than .50 caliber (12.7 mm), as follows: (*) | |
| ♦ (1) Guns, howitzers, artillery, and cannons; | D |
| ♦ (2) Mortars; | D |
| ♦ (3) Recoilless rifles; | D |
| ♦ (4) Grenade launchers; **or** | D |
| (5) Developmental guns and armament greater than .50 caliber (12.7 mm) funded by the Department of Defense and specially designed parts and components therefor. (*) | D |
| (b) Flamethrowers with an effective range greater than or equal to 20 meters. | D |
| (c) Reserved. | |
| ♦ (d) Kinetic energy weapon systems specially designed for destruction or rendering mission-abort of a target. (*) | D |
| (e) Signature reduction devices specially designed for the guns and armament controlled in paragraphs (a), (b), and (d) of this category (e.g., muzzle flash suppression devices). | D |
| (f) through (i) Reserved. | |
| (j) Parts, components, accessories, and attachments, as follows: | |
| (1) Gun barrels, rails, tubes, and receivers specially designed for the weapons controlled in paragraphs (a) and (d) of this category; | D |
| (2) Sights specially designed to orient indirect fire weapons; | D |
| (3) Breech blocks for the weapons controlled in paragraphs (a) and (d) of this category; | D |
| (4) Firing mechanisms for the weapons controlled in paragraphs (a) and (d) of this category and specially designed parts and components therefor; | D |
| (5) Systems for firing superposed or stacked ammunition and specially designed parts and components therefor; | D |

**Table 2. Guns and Armament, Continued**

| Description of items for DEMIL coding | DEMIL Code |
|---|---|
| (6) Servo-electronic and hydraulic elevation adjustment mechanisms; | D |
| (7) Muzzle brakes; | D |
| (8) Bore evacuators; | D |
| (9) Independent ammunition handling systems for the guns and armament controlled in paragraphs (a), (b), and (d) of this category; | D |
| (10) Components for independently powered ammunition handling systems and platform interface, as follows: (*) | |
| (i) Mounts; | D |
| (ii) Carriages; | D |
| (iii) Gun pallets; | D |
| (iv) Hydro-pneumatic equilibration cylinders; **or** | F |
| (v) Hydro-pneumatic systems capable of scavenging recoil energy to power howitzer functions; | F |
| (11) Ammunition containers/drums, ammunition chutes, ammunition conveyor elements, ammunition feeder systems, and ammunition container/drum entrance and exit units, specially designed for the guns and armament controlled in paragraphs (a), (b), and (d) of this category; | D |
| (12) Systems and equipment for the guns and armament controlled in paragraphs (a) and (d) of this category for use in programming ammunition, and specially designed parts and components therefor; | D |
| (13) Aircraft/gun interface units to support gun systems with a designed rate of fire greater than 100 rounds per minute and specially designed parts and components therefor: | D |
| (14) Recoil systems specially designed to mitigate the shock associated with the firing process of guns integrated into air platforms and specially designed parts and components therefor; | F |
| (15) Prime power generation, energy storage, thermal management, conditioning, switching, and fuel-handling equipment, and the electrical interfaces between the gun power supply and other turret electric drive components specially designed for kinetic weapons controlled in paragraph (d) of this category ; | D |
| (16) Kinetic energy weapon target acquisition, tracking fire control, and damage assessment systems and specially designed parts and components therefor; **or** | D |

**Table 2. Guns and Armament, Continued**

| Description of items for DEMIL coding | DEMIL Code |
|---|---|
| ♦ (17) Any part, component, accessory, attachment, equipment, or system that: | |
| (i) Is classified; | P |
| (ii) Contains classified software; **or** | P |
| (iii) Is unclassified but being developed using classified information. | D |
| (k) Decals, labels, and technical manuals containing technical data directly related to the items controlled in this category described as either; | |
| (i) Classified | P |
| (ii) Unclassified **or** | D |
| (iii) Is unclassified but being developed using classified information. | D |
| (l) through (w) Reserved | |
| (*) Additional notes located in the ITAR | |
| **Part 2. Military items described in the CCL** | |
| **Guns and Armament** | **ECCN 0A602** |
| **Description of items for DEMIL coding** | **DEMIL Code** |
| (a) Guns and armament manufactured between 1890 and 1919. | D |
| (b) Military flame throwers with an effective range less than 20 meters. | D |
| (c) through (w) Reserved. | |
| (x) "Parts", and "components", that are "specially designed" for an item listed in Paragraphs (a) or (b) of this ECCN or a defense article in USML Category II and not elsewhere specified on the USML (*) | Q |
| (*) Additional notes located in the CCL | |
| **Test, inspection, and production "equipment" and related commodities "specially designed" for the "development" or "production" of commodities enumerated or otherwise described in ECCN 0A602 or USML Category II as follows (see List of Items Controlled).** | **ECCN 0B602** |
| **Description of items for DEMIL coding** | **DEMIL Code** |
| (a) The following items if specially designed for the development or production of items listed in Paragraph (a) of this ECCN or in Part 1 of Table 4: | |
| (1) Gun barrel rifling and broaching machines and tools therefor; | Q |
| (2) Gun barrel rifling machines; | Q |
| (3) Gun barrel trepanning machines; | Q |
| (4) Gun boring and turning machines; | Q |
| (5) Gun honing machines of 6 feet (183 cm) stroke or more; | Q |
| (6) Gun jump screw lathes; | Q |
| (7) Gun rifling machines; and | Q |
| (8) Barrel straightening presses. | Q |

## Table 2. Guns and Armament, Continued

| Description of items for DEMIL coding | DEMIL Code |
|---|---|
| (b) Jigs and fixtures and other metal-working implements or accessories of the kinds of items in ECCN exclusively designed for use in the manufacture 0A602 or in Part 1 of Table 2. | Q |
| (c) Other tooling and equipment, "specially designed" for the "production" of items in ECCN 0A602 or in Part 1 of Table 2. | Q |
| (d) Test and evaluation equipment and test models, including diagnostic instrumentation and physical test models, specially designed for items in ECCN 0A602 or in Part 1 of Table 2. | Q |

## Table 3. Ammunition and Ordnance



| Part 1 Ammunition and ordnance as described in USML Category III | |
|---|---|
| **Description of items for DEMIL coding** | **DEMIL Code** |
| (a) Ammunition, as follows: | |
| ♦ (1) Ammunition that incorporates a projectile controlled in paragraph (d)(1) or (3) of this category; | G |
| ♦ (2) Ammunition preassembled into links or belts; | G |
| ♦ (3) Shotgun ammunition that incorporates a projectile controlled in paragraph (d)(2) of this category; | G |
| ♦ (4) Caseless ammunition manufactured with smokeless powder; (*) | G |
| ♦ (5) Ammunition, except shotgun ammunition, based on non-metallic cases, or non-metallic cases that have only a metallic base, which result in a total cartridge mass 80% or less than the mass of a brass- or steel-cased cartridge that provides comparable ballistic performance; | G |
| ♦ (6) Ammunition employing pyrotechnic material in the projectile base or any ammunition employing a projectile that incorporates tracer materials of any type having peak radiance above 710 nm and designed to be observed primarily with night vision optical systems; | G |
| ♦ (7) Ammunition for fully automatic firearms that fire superposed or stacked projectiles or for guns that fire superposed or stacked projectiles; | G |
| ♦ (8) Electromagnetic armament projectiles or billets for weapons with a design muzzle energy exceeding 5 MJ; | D |
| ♦ (9) Ammunition, not specified above, for the guns and armaments controlled in Category II; **or** | G |
| (10) Developmental ammunition funded by the Department of Defense and specially designed parts and components therefor. (*) | G |
| (b) Ammunition/ordnance handling equipment specially designed for the articles controlled in this category, as follows: | |
| (1) Belting, linking, and de-linking equipment; **or** | D |
| (2) Fuze setting devices. | D |

## Table 3. Ammunition and Ordnance

| Description of items for DEMIL coding | DEMIL Code |
|---|---|
| (c) Reserved. | |
| (d) Parts and components for the articles in this category, as follows: | |
| (1) Projectiles that use pyrotechnic tracer materials that incorporate any material having peak radiance above 710 nm or are incendiary or explosive; | G |
| (2) Shotgun projectiles that are flechettes, incendiary, tracer, or explosive; (*) | G |
| (3) Projectiles of any caliber produced from depleted uranium; | D |
| (4) Projectiles not specified above, guided or unguided, for the items controlled in USML Category II, and specially designed parts and components therefore (e.g., fuzes, rotating bands, cases, liners, fins, boosters) as follows; | |
| (a) With fuzes; **or** | G |
| (b) Without fuzes. | D |
| (5) Canisters or sub-munitions (e.g., bomblets or minelets), and specially designed parts and components therefore, for the guns or armament controlled in USML Category II; | G |
| (6) Projectiles that employ tips (e.g., M855A1 Enhanced Performance Round (EPR)) or cores regardless of caliber, produced from one or a combination of the following: Tungsten, steel, or beryllium copper alloy; | D |
| (7) Cartridge cases, powder bags, or combustible cases specially designed for the items controlled in USML Category II; | G |
| (8) Non-metallic cases, including cases that have only a metallic base, for the ammunition controlled in paragraph (a)(5) of this category; | D |
| (9) Cartridge links and belts for fully automatic firearms and guns controlled in USML Categories I or II; | D |
| (10) Primers other than Boxer, Berdan, or shotshell types; (*) | G |
| (11) Safing, arming, and fuzing components (to include target detection and proximity sensing devices) for the ammunition in this category and specially designed parts therefor; | |
| (a) With fuze energetic components. | G |
| (b) Without fuze energetic components. | D |
| (12) Guidance and control components for the ammunition in this category and specially designed parts therefor; | D |
| (13) Terminal seeker assemblies for the ammunition in this category and specially designed parts and components therefor; | D |
| (14) Illuminating flares or target practice projectiles for the ammunition controlled in paragraph (a)(9) of this category; **or** | G |

## Table 3. Ammunition and Ordnance, Continued

| Description of items for DEMIL coding | DEMIL Code |
|---|---|
| ♦ (15) Any part, component, accessory, attachment, equipment, or system that: | |
| (i) Is classified; | P |
| (ii) Contains classified software from the manufacturer; **or** | P |
| (iii) Is unclassified being developed using classified information. | D |
| (e) Decals, labels, and technical manuals containing technical data directly related to the items controlled in this category described as either; | |
| (i) Classified | P |
| (ii) Unclassified **or** | D |
| (iii) Is unclassified but being developed using classified information. | D |
| (f) through (w) Reserved. | |
| (*) Additional notes located in the ITAR | |
| **Part 2. Military items described in the CCL** | |
| **Ammunition** | **ECCN 0A505** |
| **Description of items for DEMIL coding** | **DEMIL Code** |
| (a) Ammunition for firearms listed in Part 1 of Table 1 or ECCN 0A501 in Part 2 of Table 1 and not listed in Paragraphs (b), (c) or (d) of this ECCN or in Part 1 of Table 3. | G |
| (b) Buckshot (No. 4 .24" diameter and larger) shotgun shells and shotgun shells that contain only or are for the dispersion of chemical irritants. (*) | G |
| (c) Shotgun shells (including less than lethal rounds) that do not contain buckshot; and "specially designed" "parts" and "components" of shotgun shells. | G |
| (d) Blank ammunition for firearms listed in ECCN 0A501 and not listed in Part 1 of this table. (*) | G |
| (e) Inert variants of ammunition for Parts 1 and 2 of Table 2 for projectiles over .50 caliber that have had their energetic material removed (example: artillery shell). | D |
| (f) through (w) Reserved. | |
| (x) "Parts" and "components" that are "specially designed" for an item listed in this ECCN or in Part 1 of Table 3, and not elsewhere specified on the USML or the CCL (*) | Q |
| (*) Additional notes located in the CCL | |

## Table 3. Ammunition and Ordnance, Continued

| **Test, inspection, and production "equipment" and related commodities "specially designed" for the "development" or "production" of commodities enumerated or otherwise described in ECCN 0A505 or Table 3 Part 1, except equipment for the hand loading of cartridges and shotgun shells** | **ECCN 0B505** |
|---|---|
| **Description of items for DEMIL coding** | **DEMIL Code** |
| (a) Production equipment (including tooling, templates, jigs, mandrels, molds, dies, fixtures, alignment mechanisms, and test equipment), not listed in Part 1 of Table 3 and that are "specially designed" for the production of items listed in Paragraphs (a) or (x) of ECCN 0A505 or Part 1 of Table 3. | Q |
| (b) Equipment specially designed for the production of items listed in Paragraph (b) of ECCN 0A505. | Q |
| (c) Equipment specially designed for the production of items listed in Paragraph (c) of ECCN 0A505. | Q |
| (d) Equipment specially designed for the production of items listed in Paragraph (d) of ECCN 0A505. | Q |
| (e) through (w) Reserved. | |
| (x) "Parts" and "components" "specially designed" for items listed in Paragraph (a) of this entry. | Q |

## Table 4. Launch Vehicles, Guided Missiles, Ballistic Missiles, Rockets, Torpedoes, Bombs, and Mine



| **Part 1. Launch Vehicles, Guided Missiles, Ballistic Missiles, Rockets, Torpedoes, Bombs, and Mines Items described in USML Category IV** | |
|---|---|
| **Description of items for DEMIL coding** | **DEMIL Code** |
| ♦ (a) Rockets, space launch vehicles (SLVs), missiles, bombs, torpedoes, depth charges, mines, and grenades as follows: (*) | |
| (1) Rockets, SLVs, and missiles capable of delivering at least a 500 kilogram (kg) payload to a range of at least 300 km (MT); | G |
| (2) Rockets, SLVs, and missiles capable of delivering less than a 500 kg payload to a range of at least 300 km (MT); | G |
| (3) Man-portable air defense systems (MANPADS); | G |
| (4) Anti-tank missiles and rockets; | G |
| (5) Rockets, SLVs, and missiles not meeting the criteria of paragraphs (a)(1) through (a)(4) of this category; | G |
| (6) Bombs; | G |
| (7) Torpedoes; | G |
| (8) Depth charges; | G |
| (9) Anti-personnel, anti-vehicle, or anti-armor land mines (e.g., area denial devices); | G |
| (10) Anti-helicopter mines; | G |
| (11) Naval mines; **or** | G |
| (12) Fragmentation and high explosive hand grenades. | G |
| (13) Inert, dummy, and practice rockets, missiles, bombs, torpedoes, depth charges, mines, and grenades containing no AE. | D |
| NOTE: (13) is NOT a reflection of the USML but being used for the DoD DEMIL Program to control items above. | |

## Table 4. Launch Vehicles, Guided Missiles, Ballistic Missiles, Rockets, Torpedoes, Bombs, and Mines, Continued

| Description of items for DEMIL coding | DEMIL Code |
|---|---|
| ♦ (b) Launchers for rockets, SLVs, and missiles, as follows: (*) | |
| (1) Fixed launch sites and mobile launcher mechanisms for any system enumerated in paragraphs (a)(1) and (a)(2) of this category (MT); **or** | C |
| (2) Fixed launch sites and mobile launcher mechanisms for any system enumerated in paragraphs (a)(3) through (a)(5) of this category (e.g., launch tables, Tube-Launched, Optically Tracked, Wire-Guided (TOW) missile, MANPADS). | C |
| (c) Apparatus and devices specially designed for the handling, control, activation, monitoring, detection, protection, discharge, or detonation of the articles enumerated in paragraphs (a) and (b) of this category. (MT for those systems enumerated in paragraphs (a)(1), (a)(2), and (b)(1) of this category). (*) | D |
| ♦ (d) Rocket, SLV, and missile power plants, as follows: (*) | |
| (1) Except as enumerated in paragraph (d)(2) or (d)(3) of this category, individual rocket stages for the articles enumerated in paragraph (a)(1), (a)(2), or (a)(5) of this category. (MT for those stages usable in systems enumerated in paragraphs (a)(1) and (a)(2) of this category); | G |
| (2) Solid propellant rocket motors, hybrid or gel rocket motors, or liquid propellant rocket engines having a total impulse capacity equal to or greater than $1.1 \times 10^6$ Newton second (N•s) (MT); | G |
| (3) Solid propellant rocket motors, hybrid or gel rocket motors, or liquid propellant rocket engines having a total impulse capacity equal to or greater than $8.41 \times 10^5$ N•s, but less than $1.1 \times 10^6$ N•s (MT); | G |
| (4) Combined cycle, pulsejet, ramjet, or scramjet engines (MT); | D |
| (5) Air-breathing engines that operate above Mach 4 not enumerated in paragraph (d)(4) of this category; | C |
| (6) Pressure gain combustion-based propulsion systems not enumerated in paragraphs (d)(4) and (d)(5) of this category; **or** | C |
| (7) Rocket, SLV, and missile engines and motors not otherwise enumerated in paragraphs (d)(1) through (d)(6) of this category or USML Category XIX. | C |
| (e) through (f) Reserved. | |
| ♦ (g) Non-nuclear warheads for rockets, bombs, and missiles (e.g., explosive, kinetic, electromagnetic pulse (EMP), thermobaric, shape charge, and fuel air explosive (FAE)). | G |

## Table 4. Launch Vehicles, Guided Missiles, Ballistic Missiles, Rockets, Torpedoes, Bombs, and Mines, Continued

| Description of items for DEMIL coding | DEMIL Code |
|---|---|
| (h) Systems, subsystems, parts, components, accessories, attachments, or associated equipment, as follows; | |
| (1) Flight control and guidance systems (including guidance sets) specially designed for defense articles enumerated in paragraph (a) of this category (MT for those articles enumerated in paragraphs (a)(1) and (a)(2) of this category); (*) | D |
| (2) Seeker systems specially designed for articles enumerated in paragraph (a) of this category (e.g., radiofrequency, infrared) (MT for articles enumerated in paragraphs (a)(1) and (a)(2) of this category); | D |
| (3) Kinetic kill vehicles and specially designed parts and components therefor; | D |
| (4) Missile or rocket thrust vector control systems (MT for those thrust vector control systems usable in articles enumerated in paragraph (a)(1) of this category); | D |
| (5) MANPADS grip stocks and specially designed parts and components therefor; | D |
| (6) Rocket or missile nozzles and nozzle throats, and specially designed parts and components therefor (MT for those nozzles and nozzle throats usable in systems enumerated in paragraphs (a)(1) and (a)(2) of this category); | D |
| (7) Rocket or missile nose tips, nose fairings, or aerospikes, and specially designed parts and components therefor (MT for those articles enumerated in paragraphs (a)(1) and (a)(2) of this category); | D |
| (8) Re-entry vehicle or warhead heat shields (MT for those re-entry vehicles and heat shields usable in systems enumerated in paragraph (a)(1) of this category); | D |
| (9) Missile and rocket safing, arming, fuzing, and firing (SAFF) components (to include target detection and proximity sensing devices) and specially designed parts therefor (MT for those SAFF components usable in systems enumerated in paragraph (a)(1) of this category); | D |
| (10) Self-destruct systems specially designed for defense articles enumerated in paragraph (a) of this category (MT for those articles enumerated in paragraphs (a)(1) and (a)(2) of this category); | D |
| (11) Separation mechanisms, staging mechanisms, and interstages useable for articles enumerated in paragraph (a) of this category, and specially designed parts and components therefor (MT for those separation mechanisms, staging mechanisms, and interstage usable in systems enumerated in paragraph (a)(1) of this category); | D |
| (12) Post-boost vehicles (PBV)(MT); | D |
| (13) Engine or motor mounts specially designed for articles enumerated in paragraphs (a) and (b) of this category (MT for those articles enumerated in paragraphs (a)(1), (a)(2), and (b)(1) of this category); | D |

**Table 4. Launch Vehicles, Guided Missiles, Ballistic Missiles, Rockets, Torpedoes, Bombs, and Mines, Continued**

| Description of items for DEMIL coding | DEMIL Code |
|---|---|
| (14) Combustion chambers specially designed for articles enumerated in paragraphs (a) and (d) of this category and specially designed parts and components therefor (MT for those articles enumerated in paragraphs (a)(1), (a)(2), (b)(1), and (d)(1) through (d)(5) of this category); | D |
| (15) Injectors specially designed for articles controlled in this category (MT for those injectors specially designed which are usable in systems enumerated in paragraph (a)(1) of this category); | D |
| (16) Solid rocket motor or liquid engine igniters; | G |
| (17) Re-entry vehicles and specially designed parts and components not elsewhere specified in this category (MT); (*) | D |
| (18) Specially designed parts and components for articles controlled in paragraph (g) not elsewhere specified in this category; | D |
| (19) Penetration aids and specially designed parts and components therefor (e.g., physical or electronic countermeasure suites, re-entry vehicle replicas or decoys, or submunitions); | D |
| (20) Rocket motor cases and specially designed parts and components therefor (e.g., flanges, flange seals, end domes) (MT for those rocket motor cases usable in systems enumerated in paragraphs (a)(1) and (a)(2) of this category and for specially designed parts and components for hybrid rocket motors enumerated in paragraphs (d)(2) and (d)(3) of this category); | D |
| (21) Solid rocket motor liners and rocket motor insulation (MT for those solid rocket motor liners usable in systems enumerated in paragraph (a)(1) of this category or specially designed for systems enumerated in paragraph (a)(2) of this category; and rocket motor insulation usable in systems enumerated in paragraphs (a)(1) and (a)(2) of this category); | D |
| (22) Radomes, sensor windows, and antenna windows specially designed for articles enumerated in paragraph (a) of this category (MT for those radomes usable in systems enumerated in paragraph (a)(1) of this category and for any radomes, sensor windows, or antenna windows manufactured as composite structures or laminates specially designed for use in the systems and components enumerated in paragraph (a)(1), (a)(2), (d)(1), (h)(8), (h)(9), (h)(17), or (h)(25) of this category); | D |
| (23) Rocket or missile payload fairings; | D |
| (24) Rocket or missile launch canisters (MT for those rocket or missile launch canisters designed or modified for systems enumerated in paragraphs (a)(1) and (a)(2) of this category); | D |
| (25) Fuzes specially designed for articles enumerated in paragraph (a) of this category (e.g., proximity, contact, electronic, dispenser proximity, airburst, variable time delay, or multi-option) (MT for those fuzes usable in systems enumerated in paragraph (a)(1) of this category); | G |

## Table 4. Launch Vehicles, Guided Missiles, Ballistic Missiles, Rockets, Torpedoes, Bombs, and Mines, Continued

| Description of items for DEMIL coding | DEMIL Code |
|---|---|
| (26) Rocket or missile liquid propellant tanks (MT for those rocket or missile liquid propellant tanks usable in systems enumerated in paragraph (a)(1) of this category); | G |
| (27) Rocket or missile altimeters specially designed for use in articles enumerated in paragraph (a)(1) of this category (MT); | D |
| (28) Pneumatic, hydraulic, mechanical, electro-optical, or electromechanical flight control systems (including fly-by-wire systems) and attitude control equipment specially designed for use in the rockets or missiles enumerated in paragraph (a)(1) of this category (MT for these systems which have been designed or modified for those enumerated in paragraph (a)(1) of this category); | D |
| (29) Umbilical and interstage electrical connectors specially designed for use in the rockets or missiles enumerated in paragraph (a)(1) or (a)(2) of this category (MT); **or** (8) (*) | D |
| ♦ (30) Any part, component, accessory, attachment, equipment, or system that: | |
| (i) Is classified. | P |
| (ii) Contains classified software from the manufacturer; **or** | P |
| (iii) Is unclassified but being developed using classified information. | D |
| (i) Decals, labels and technical manuals containing technical data directly related to the items enumerated in this category described as either: | |
| (i) Classified **or** | P |
| (ii) Unclassified. | D |
| (j) through (w) Reserved. | |
| (*) Additional notes located in the ITAR | |
| **Part 2. Military items described in the CCL** | |
| **Commodities related to military explosive devices and charges** | **ECCN 0A604** |
| **Description of items for DEMIL coding** | **DEMIL Code** |
| (a) Demolition blocks, and detonators designed, modified, or adapted therefore. (*) | G |
| (b) Military explosive excavating devices. (*) | G |
| (c) Smoke hand grenades and stun hand grenades (e.g., flashbangs) not described in ECCN 1A984. | G |
| (d) through (w) Reserved. | |
| (x) "Parts," "components," "accessories," and "attachments" that are "specially designed" for a commodity subject to control in paragraphs .a through .c of this ECCN, or for a defense article controlled under USML Category IV, and not specified elsewhere on the USML. (*) | Q |
| (*) Additional notes located in the CCL | |

## Table 4. Launch Vehicles, Guided Missiles, Ballistic Missiles, Rockets, Torpedoes, Bombs, and Mines, Continued

| Commodities related to launch vehicles, missiles, and rockets | ECCN 9A604 |
|---|---|
| **Description of items for DEMIL coding** | **DEMIL Code** |
| (a) Thermal batteries "specially designed" for systems described under Part 1 capable of a range equal to or greater than 300 km: | |
| (1) U.S. Department of Transportation (USDOT) hazardous material (HazMat) rating of 1.4 or higher (e.g., 1.3, 1.2 are higher ratings) are considered explosive (as defined in the Class 1 Definitions in Part 173.50 of Title 49, CFR). | G |
| (2) USDOT HazMat rating of less than 1.4. | F |
| (b) Thermal batteries, except for thermal batteries described by Paragraph (a) of this ECCN, that are "specially designed" for systems described under Part 1: | |
| (1) USDOT HazMat rating of 1.4 or higher (e.g., 1.3, 1.2 are higher ratings) are considered explosive (as defined in the Class 1 Definitions in Part 173.50 of Title 49, CFR.) | G |
| (2) USDOT HazMat rating of less than 1.4. | F |
| (c) "Components" "specially designed" for ramjet, scramjet, pulse jet, or combined cycle engines described under Part 1, including devices to regulate combustion in such commodities. | Q |
| (d) "Components" "specially designed" for hybrid rocket motors described in Part 1 usable in rockets, missiles, or unmanned aerial vehicles (UAV) capable of a range equal to or greater than 300 km. | Q |
| (e) "Components" "specially designed" for pressure gain combustion-based propulsion systems described in Part 1. | Q |
| (f) Composite structures, laminates, and manufactures thereof "specially designed" for the following items described in Part 1: | |
| (1) Systems capable of a range equal to or greater than 300 km; | Q |
| (2) Individual rocket stages usable in ECCN 9A604, Paragraph (f)(1) systems; | Q |
| (3) Solid propellant rocket motors or hybrid rocket motors having a total impulse capacity equal to or greater than $8.41 \times 10^5$ Ns. **or** | Q |
| (4) Liquid propellant rocket engines integrated, or designed, or modified to be integrated, into a liquid propellant propulsion system which has a total impulse capacity equal to or greater than $8.41 \times 10^5$ Ns. | Q |
| (5) Thrust vector control systems usable in rockets, Space Launch Vehicles (SLVs), and missiles capable of delivering at least a 500 kg payload to a range of at least 300 km. | Q |
| (6) Re-entry vehicles or warhead heat shields usable in rockets, SLVs, and missiles capable of delivering at least a 500 kg payload to a range of at least 300 km. | Q |
| (7) Safing, arming, fuzing, and firing components usable in rockets, SLVs, and missiles capable of delivering at least a 500 kg payload to a range of at least 300 km. | Q |

**Table 4. Launch Vehicles, Guided Missiles, Ballistic Missiles, Rockets, Torpedoes, Bombs, and Mines, Continued**

| Description of items for DEMIL coding | DEMIL Code |
|---|---|
| (g) through (w) Reserved. | |
| (x) Specially designed "parts", "components", "accessories", and "attachments" for a commodity subject to control in paragraphs .a through .d of this ECCN, or a defense article controlled under USML Category IV, and not specified elsewhere on the USML . (*) | Q |
| (*) Additional notes located in the CCL | |
| **Test, inspection, and production "equipment" and related commodities "specially designed" for the "development", "production", repair, overhaul, or refurbishing of commodities in ECCN 0A604 or related defense articles in USML Category IV** | **ECCN 0B604** |
| **Description of items for DEMIL coding** | **DEMIL Code** |
| (a) Test, inspection, and other production "equipment" that are "specially designed" for the "development", production, repair, overhaul, or refurbishing of commodities listed in Part 2 or for bombs, torpedoes, depth charges, mines, and hand grenades, and parts, components, accessories, and attachments therefor, controlled under USML Category IV. | Q |
| (b) through (w) Reserved. | |
| (x) Specially designed "parts", "components", "accessories", and "attachments" that are "specially designed" for a commodity subject to control in paragraph .a of this ECCN. | Q |
| **Test, inspection, and production "equipment" and related commodities "specially designed" for the "development"," production", repair, overhaul, or refurbishing of commodities in ECCN 9A604 or related defense articles in USML Category IV** | **ECCN 9B604** |
| **Description of items for DEMIL coding** | **DEMIL Code** |
| (a) "Production facilities" "specially designed" for items that are described in Paragraphs (a)(1) or (a)(2) of Part 1. | Q |
| (b) Test, calibration, and alignment equipment "specially designed" for items that are described in Paragraph (h)(28) of Part 1. | Q |
| (c) Test, inspection, and other production "equipment" that is "specially designed" for the "development," "production," repair, overhaul, or refurbishing of commodities described in ECCN 9A604, Part 2, or defense articles described under Part 1, and not specified in ECCN 0B604 in Paragraph (a) or in ECCN 9B604 Paragraphs (a), (b), or (d) of Part 2. | Q |
| (d) "Specially designed" "production facilities" or production equipment for systems, sub-systems, and components described in Paragraphs (d)(1), (d)(7), (h)(1), (h)(4), (h)(6), (h)(7), (h)(8), (h)(9), (h)(11), (h)(20), (h)(21), (h)(26), or (h)(28) in Part 1. | Q |
| (e) through (w) Reserved. | |
| (x) "Parts", "components", "accessories", and "attachments" that are "specially designed" for an commodity subject to control in paragraph (a) or (b) of this ECCN. | Q |

## Table 5. Explosives and Energetic Materials, Propellants, Incendiary Agents, and their Constituents



| Part 1. Explosives and Energetic Materials, Propellants, Incendiary Agents described in USML Category V | |
|---|---|
| **Description of items for DEMIL coding** | **DEMIL Code** |
| ♦ (a) Explosives and mixtures thereof, as follows: (see Subpart 121.1 of Title 22, CFR for a complete list). (https://www.ecfr.gov/current/title-22/chapter-I/subchapter-M/part-121) (*) | G |
| ♦ (b) Propellants (see Subpart 121.1 of Title 22, CFR for a complete list). | G |
| (c) Pyrotechnics, fuels, and related substances, and mixtures (see Subpart 121.1 of Title 22, CFR for a complete list). (*) | G |
| (d) Oxidizers (see Subpart 121.1 of Title 22, CFR for a complete list). | G |
| ♦ (e) Binders and mixtures (see Subpart 121.1 of Title 22, CFR for a complete list). | G |
| (f) Additives (see Subpart 121.1 of Title 22, CFR for a complete list). (*) | G |
| (g) Precursors (see Subpart 121.1 of Title 22, CFR for a complete list). | G |
| ♦ (h) Any explosive, propellant, pyrotechnic, fuel, oxidizer, binder, additive, or precursor that: | |
| (1) Is classified. | G |
| (2) Is unclassified but being developed using classified information. | G |
| (i) Developmental explosives, propellants, pyrotechnics, fuels, oxidizers, binders, additives, or precursors funded by DoD via contract or other funding authorization. (*) | G |
| (j) Decals, labels, and technical manuals containing technical data directly related to the items enumerated described as either: | |
| (1) Classified **or** | P |
| (2) Unclassified. | D |
| (k) The interpretations at the end explain and amplify the terms used in this category. (*) | |
| (l) through (w) Reserved. | |
| (*) Additional notes located in the ITAR | |

## Table 5. Explosives and Energetic Materials, Propellants, Incendiary Agents, and their Constituents, Continued

| **Part 2. Military items described in the CCL** | |
|---|---|
| **Test, inspection, and production "equipment" and related commodities "specially designed" for the "development," "production," repair, overhaul, or refurbishing of commodities listed in ECCN 1C608 or USML Category V.** | **ECCN 1B608** |
| **Description of items for DEMIL coding** | **DEMIL Code** |
| (a) "Equipment" "specially designed" for the "development", "production", repair, overhaul, or refurbishing of items described in ECCN 1C608 or listed in Part 1 and not elsewhere specified on the USML. (*) | Q |
| (b) Complete installations "specially designed" for the "development", "production", repair, overhaul, or refurbishing of items described in ECCN 1C608 or listed in Part 1 and not elsewhere specified on the USML. | Q |
| (c) Environmental test facilities "specially designed" for the certification, qualification, or testing of items described in ECCN 1C608 or USML Category V. | Q |
| (d) through (w) Reserved. | |
| (x) "Parts", "components", "accessories", and "attachments" that are "specially designed" for an item described in ECCN 1B608 or a defense article listed in Part 1 and not elsewhere specified on the USML. | Q |
| **"Energetic materials" and related commodities** | **ECCN 1C608** |
| **Description of items for DEMIL coding** | **DEMIL Code** |
| (a) 'Single base', 'double base', and 'triple base' 'propellants' having nitrocellulose with nitrogen content greater than 12.6 percent in the form of either: (*) | |
| (1)'Sheetstock' or 'carpet rolls'; **or** | G |
| (2) Grains with diameter greater than 0.10 inches. | G |
| (b) Shock tubes containing greater than 0.064 kg per meter (300 grains per foot), but not more than 0.1 kg per meter (470 grains per foot) of 'controlled materials'. | G |
| (c) Cartridge power devices containing greater than 0.70 kg, but not more than 1.0 kg of 'controlled materials'. | G |
| (d) (electric or nonelectric) and specially designed assemblies containing greater than 0.01 kg, but not more than 0.1 kg of 'controlled materials'. | G |
| (e) Igniters not described in Part 1 USML Categories III or IV that contain greater than 0.01 kg, but not more than 0.1 kg of 'controlled materials'. | G |
| (f) Oil well cartridges containing greater than 0.015 kg, but not more than 0.1 kg of 'controlled materials'. | G |
| (g) Commercial cast or pressed boosters containing greater than 1.0 kg, but not more than 5.0 kg of controlled materials. | G |
| (h) Commercial prefabricated slurries and emulsions containing greater than 10 kg and less than or equal to 35 percent by weight of USML controlled materials. | G |

## Table 5. Explosives and Energetic Materials, Propellants, Incendiary Agents, and their Constituents, Continued

| Description of items for DEMIL coding | DEMIL Code |
|---|---|
| (i) Reserved. | |
| (j) "Pyrotechnic" devices "specially designed" for commercial purposes (e.g., theatrical stages, motion picture special effects, and fireworks displays), and containing greater than 3.0 kg, but not more than 5.0 kg of 'controlled materials'. | G |
| (k) Other commercial explosive devices or charges "specially designed" for commercial applications, not described in Paragraphs (c) through (g) of this ECCN, containing greater than 1.0 kg, but not more than 5.0 kg of 'controlled materials'. | G |
| (l) Propyleneimine. (2 methylaziridine) (C.A.S. #75-55-8) (*) | G |
| (m) Any oxidizer or 'mixture' thereof that is a compound composed of fluorine and one or more of the following: other halogens, oxygen, or nitrogen. (*) | G |
| (n) Any explosives, 'propellants,' oxidizers, "pyrotechnics", fuels, binders, or additives that are "specially designed" for military application and not listed or otherwise described in Part 1 or elsewhere on the USML. (*) | G |
| Website: https://www.ecfr.gov/current/title-22/chapter-I/subchapter-M/part-121 | |
| (*) Additional notes located in the CCL | |

## Table 6. Surface Vessels of War and Special Naval Equipment



| Part 1. Surface Vessels of War and Special Naval Equipment described in USML Category VI | |
|---|---|
| **Description of items for DEMIL coding** | **DEMIL Code** |
| ♦ (a) Warships and other combatant vessels (i.e., battleships, aircraft carriers, destroyers, frigates, cruisers, corvettes, littoral combat ships, mine sweepers, mine hunters, mine countermeasure ships, dock landing ships, amphibious assault ships), Coast Guard cutters (with or equivalent to those with U.S. designations as "W" for Coast Guard vessels High Endurance Cutters (WHEC), Medium Endurance Cutters (WMEC), Maritime Security Cutter, Large (WMSL), or Patrol Boats (WPB) for the purpose of this table), or foreign-origin vessels specially designed to provide functions equivalent to the vessels listed above; (*) | C |
| (b) Other vessels not controlled in paragraph (a) of this category, as follows: (*) | |
| (1) High-speed air cushion vessels for transporting cargo and personnel, ship-to-shore and across a beach, with a payload over 25 tons; | C |
| (2) Surface vessels integrated with nuclear propulsion plants or specially designed to support naval nuclear propulsion plants; | C |
| (3) Vessels armed or specially designed to be used as a platform to deliver munitions or otherwise destroy or incapacitate targets (e.g., firing lasers, launching torpedoes, rockets, missiles, or firing munitions greater than .50 caliber); **or** | C |
| (4) Vessels incorporating any mission systems described under this subchapter. (*) | C |
| (c) Developmental vessels and specially designed parts, components, accessories, and attachments therefor, funded by the Department of Defense via contract or other funding authorization. (*) | C |
| (d) Reserved. | |
| ♦ (e) Naval nuclear propulsion plants and prototypes, and special facilities for construction, support, and maintenance therefor (see also § 120.5(c) of this subchapter for nuclear related controls). | C |
| (f) Vessel and naval equipment, parts, components, accessories, attachments, associated equipment, and systems, as follows: (*) | |
| (1) Hulls or superstructures, including support structures therefor, that: | |
| (i) Are specially designed for any vessels controlled in paragraph (a) of this category. | D |

## Table 6. Surface Vessels of War and Special Naval Equipment, Continued

| Description of items for DEMIL coding | DEMIL Code |
|---|---|
| (ii) Have armor, active protection systems, or developmental armor systems; **or** | D |
| (iii) Are specially designed to survive 12.5 percent or greater damage across the length as measured between perpendiculars; | D |
| (2) Systems that manage, store, create, distribute, conserve, and transfer energy, and specially designed parts and components therefor, that have: | |
| (i) Storage exceeding 30 megajoules; | D |
| (ii) A discharge rate less than 3 seconds; **and** | D |
| (iii) A cycle time under 45 seconds; | D |
| (3) Shipborne auxiliary systems for chemical, biological, radiological, and nuclear (CBRN) compartmentalization, over-pressurization and filtration systems, and specially designed parts and components therefor; | F |
| ♦ (4) Control and monitoring systems for autonomous unmanned vessels capable of on-board, autonomous perception and decision-making necessary for the vessel to navigate while avoiding fixed and moving hazards, and obeying rules-of-the-road without human intervention; | D |
| ♦ (5) Any machinery, device, component, or equipment, including production, testing, and inspection equipment, and tooling, specially designed for plants or facilities controlled in paragraph (e) of this category. (see also § 120.5(c) of this subchapter for nuclear related controls); | D |
| (6) Parts, components, accessories, attachments, and equipment specially designed for integration of articles controlled be USML Categories II, IV or XVIII or catapults for launching aircraft or arresting gear for recovering aircraft. (MT for launcher mechanisms specially designed for rockets, space launch vehicles, or missiles capable of achieving a range greater than or equal to 300 km); (*) | D |
| (7) Shipborne active protection systems (i.e., defensive systems that actively detect and track incoming threats and launch a ballistic, explosive, energy, or electromagnetic countermeasure(s) to neutralize the threat prior to contact with a vessel) and specially designed parts and components therefor; | D |
| (8) Minesweeping and mine hunting equipment (including mine countermeasures equipment deployed by aircraft) and specially designed parts and components therefor; **or** | D |
| ♦ (9) Any component, part, accessory, attachment, equipment, or system that: | |
| (i) Is classified. | P |
| (ii) Contains classified software from the manufacturer; **or** | P |
| (iii) Is unclassified but being developed using classified information. | D |
| (g) Decals, labels, and technical manuals containing technical data directly related to the items enumerated in this category described as either: | |
| (1) Classified **or** | P |
| (2) Unclassified. | D |

**Table 6. Surface Vessels of War and Special Naval Equipment, Continued**

| Description of items for DEMIL coding | DEMIL Code |
|---|---|
| (h) through (w) Reserved. | |
| (*) Additional notes located in the ITAR | |
| **Part 2. Military items described in the CCL** | |
| **Surface vessels of war and related commodities.** | **ECCN 8A609** |
| **Description of items for DEMIL coding** | **DEMIL Code** |
| (a) Surface vessels of war "specially designed" for a military use and not listed in Part 1: (*) | |
| (1) Underway replenishment ships. | C |
| (2) Surface vessel and submarine tender and repair ships, ships, except vessels that are specially designed to support naval nuclear propulsion plants. | C |
| (3) Non-submersible submarine rescue ships. | C |
| (4) Other auxiliaries (e.g., auxiliary deep submergence support ship, auxiliary miscellaneous command ship, auxiliary missile range instrumentation ship, auxiliary organic research ship, auxiliary ocean surveillance ship, auxiliary hospital ship, auxiliary transport, auxiliary repair ship, small auxiliary aviation logistic support ship, auxiliary guided missile ship, and auxiliary aircraft landing training ship). | C |
| (5) Amphibious warfare craft except those that are armed and | C |
| (6) Unarmored and unarmed coastal, patrol, roadstead, and Coast Guard and other patrol craft with mounts or hard points for firearms of .50 caliber or less. | C |
| (b) Non-magnetic diesel engines with a power output of 50 horsepower or more and either of the following: | |
| (1) Non-magnetic content exceeding 25 percent of total weight; **or** | Q |
| (2) Non-magnetic parts other than crankcase, block, head, pistons, covers, end plates, valve facings, gaskets, and fuel, lubrication, and other supply lines. | Q |
| (c) through (w) Reserved. | |
| (x) "Specially designed" "parts," "components," "accessories," and "attachments" that are for an item listed in ECCN 8A609 in Part 2 or a defense article in Part 1 and not listed in ECCN 8A609 in paragraph (y) or ECCN 3A611 in paragraph (y), Part 2. (*) | Q |

**Table 6. Surface Vessels of War and Special Naval Equipment, Continued**

| Description of items for DEMIL coding | DEMIL Code |
|---|---|
| (y) Specific "parts", "components," "accessories," and "attachments" "specially designed" for an item described in Part 2 of this table | |
| (1) Public address (PA) systems. | A |
| (2) Filters and filter assemblies, hoses, lines, fittings, couplings, and brackets for pneumatic, hydraulic, oil, and fuel systems. | A |
| (3) Galleys. | A |
| (4) Lavatories. | A |
| (5) Magnetic compass, magnetic azimuth detector. | A |
| (6) Medical facilities. | A |
| (7) Potable water tanks, filters, valves, hoses, lines, fittings, couplings, and brackets. | A |
| (8) Panel knobs, indicators, switches, buttons, and dials whether unfiltered or filtered for use with night vision imaging systems. | A |
| (9) Emergency lighting. | A |
| (10) Gauges and indicators. | A |
| (11) Audio selector panels. | A |
| (*) Additional notes located in the CCL | |
| **Test, inspection, and production "equipment" and related commodities "specially designed" for the "development," "production," repair, overhaul, or refurbishing of commodities listed in ECCN 8A609 or USML Category VI (except for Cat VI(f)(7)).** | **ECCN 8B609** |
| **Description of items for DEMIL coding** | **DEMIL Code** |
| (a) Test, inspection, and production "equipment" "specially designed" for the "development," "production," repair, overhaul, or refurbishing of commodities listed in ECCN 8A609 (except for 8A609.y) or in USML Category VI (except for USML Cat VI(f)(7)), and "parts," "components," "accessories" and "attachments" "specially designed" therefor. | C |
| (b) Reserved. | |
| **Materials "specially designed" for the "development" or "production" of commodities described in 8A609 not elsewhere specified in the USML.** | **ECCN 8C609** |
| **Description of items for DEMIL coding** | **DEMIL Code** |
| (a) Materials not listed in Part 1 "specially designed" for commodities listed in ECCN 8A609 in Part 2 (except for 8A609.y). | Q |
| (b) Reserved. | |

## Table 7. Ground Vehicles



| Part 1. Ground Vehicles described in USML Category VII (*) | |
|---|---|
| **Description of items for DEMIL coding** | **DEMIL Code** |
| ♦ (a) Armored combat ground vehicles as follows: | |
| (1) Tanks**; or** | D |
| (2) Infantry fighting vehicles. | D |
| ♦ (b) Ground vehicles (not listed in Paragraph (a) of this table) and trailers that are armed or are specially designed to be used as a firing or launch platform to deliver munitions or otherwise destroy or incapacitate targets (e.g., firing lasers, launching rockets, firing missiles, firing mortars, firing artillery rounds, or firing other ammunition greater than .50 caliber) (MT if specially designed for rockets, space launch vehicles, missiles, drones, or unmanned aerial vehicles capable of delivering a payload of at least 500 kg to a range of at least 300 km).(*) | C |
| (c) Ground vehicles and trailers equipped with any mission systems described in Part 1 of Tables 3 to 23. (MT if specially designed for rockets, space launch vehicles, missiles, drones, or unmanned aerial vehicles capable of delivering a payload of at least 500 kg to a range of at least 300 km). (*) | C |
| (d) Reserved. | |
| ♦ (e) Armored support ground vehicles capable of off-road or amphibious use specially designed to transport or deploy personnel or materiel, or to move with other vehicles over land in close support of combat vehicles or troops (e.g., personnel carriers, resupply vehicles, combat engineer vehicles, recovery vehicles, reconnaissance vehicles, bridge launching vehicles, ambulances, and command and control vehicles). (*) | |
| (1) Armor integral to structure. | D |
| (2) Add-on armor (i.e., bolted, welded, or otherwise attached). | C |
| (f) Reserved. | |
| (g) Ground vehicle parts, components, accessories, attachments, and associated equipment, and systems as follows: (*) | |
| (1) Armored hulls, armored turrets, and turret rings; | D |
| (2) Active protection systems (i.e., defensive systems that actively detect and track incoming threats and launch a ballistic, explosive, energy, or electromagnetic countermeasure(s) to neutralize the threat prior to contact with a vehicle) and specially designed parts and components therefor; | D |

**Table 7. Ground Vehicles, Continued**

| Description of items for DEMIL coding | DEMIL Code |
|---|---|
| (3) Composite armor parts and components specially designed for the vehicles in this table; (*) | D |
| (4) Non-explosive spaced armor components and parts, including slat armor parts and components specially designed for the vehicles in this table; (*) | D |
| (5) Reactive armor parts and explosive parts and components; (*) | G |
| (6) Electromagnetic armor parts and components, including pulsed power specially designed parts and components therefor; (*) | D |
| (7) Built in test equipment (BITE) to evaluate the condition of weapons or other mission systems for vehicles described in this table, excluding equipment that provides diagnostics solely for a subsystem or component involved in the basic operation of the vehicle; | D |
| (8) Gun mount, stabilization, turret drive, and automatic elevating systems, and specially designed parts and components therefor; | D |
| (9) Self-launching bridge components rated for 60 tons or above for deployment by vehicles listed in this table; | D |
| (10) Suspension components as follows: | |
| (i) Rotary shock absorbers specially designed for the vehicles weighing more than 30 tons in this table; **or** | D |
| (ii) Torsion bars specially designed for the vehicles weighing more than 50 tons in this table; | D |
| (11) Kits specially designed to convert a vehicle in this table into either an unmanned or a driver-optional vehicle. For a kit to be describe by this paragraph, it must, at a minimum, include equipment for: | |
| (i) Remote or autonomous steering; | D |
| (ii) Acceleration and braking; **and** | D |
| (iii) A control system; | D |
| (12) Fire control computers, mission computers, vehicle management computers, integrated core processers, stores management systems, armaments control processors, vehicle-weapon interface units, and computers; | D |
| (13) Test or calibration equipment for the mission systems of the vehicles described in this table, except those listed elsewhere; or | D |
| ♦ (14) Any part, component, accessory, attachment, equipment, or system that: | |
| (i) Is classified. | P |
| (ii) Contains classified software from the manufacturer; **or** | P |
| (iii) Is unclassified but is being developed using classified information. | D |

**Table 7. Ground Vehicles, Continued**

| Description of items for DEMIL coding | DEMIL Code |
|---|---|
| (h) Decals, labels, and technical manuals containing technical data directly related to the items listed in this table described as either: | |
| (1) Classified **or** | P |
| (2) Unclassified. | D |
| (i) through (w) Reserved. | |
| (*) Additional notes located in the ITAR | |
| **Part 2. Military items described in the CCL** | |
| **Ground vehicles and related commodities.** | **ECCN 0A606** |
| **Description of items for DEMIL coding** | **DEMIL Code** |
| (a) Ground vehicles, whether manned or unmanned, "specially designed" for a military use and not listed in Part 1 of Table 7. (*) | |
| a. Pneumatic tire casings of a kind "specially designed" to be bullet-proof; | D |
| b. Armored protection of vital "parts" (e.g., fuel tanks or vehicle cabs); | D |
| c. Special reinforcements or mountings for weapons | D |
| d. Black-out lighting. | Q |
| e. Unarmored, unarmed military recovery and other support vehicles. | Q |
| f. Unarmored, unarmed vehicles with key points for DEMIL (e.g. mounts or hard points) for firearms of .50 caliber or less. | C |
| g. Trailers specially designed for use with other ground vehicles listed in Part 1 or Paragraph (a) of Part 2, and not separately listed in Part 1. | Q |
| (b) Other ground military vehicles, "parts", and "components," as follows: | |
| (1) Unarmed vehicles that are derived from civilian vehicles and that have Any of the following: | C |
| a. Manufactured or fitted with materials or "components" other than reactive or electromagnetic armor to provide ballistic protection equal to or better than level III (National Institute of Justice standard 0108.01, September 1985) or "equivalent standards"; | D |
| b. A transmission to provide drive to both front and rear wheels simultaneously, including those vehicles having additional wheels for load bearing purposes whether driven or not; | Q |
| c. Gross vehicle weight rating (GVWR) greater than 4,500 kg; **and** | Q |
| d. Designed or modified for off-road use | Q |

## Table 7. Ground Vehicles, Continued

| Description of items for DEMIL coding | DEMIL Code |
|---|---|
| (2) "Parts" and "components" having all of the following: | |
| a. "Specially designed" for vehicles specified in Paragraph (b)(1) of Part 2. **and** | Q |
| b. Providing ballistic protection equal to or better than level III (National Institute of Justice standard 0108.01, September 1985) or "equivalent standards". (*) | D |
| (c) Air-cooled diesel engines and engine blocks for armored vehicles that weigh more than 40 tons. | Q |
| (d) Fully automatic continuously variable transmissions for tracked combat vehicles. | D |
| (e) Deep water fording kits "specially designed" for ground vehicles described in Part 1 or for ECCN 0A606 in Paragraph (a), Part 2. | Q |
| (f) Self-launching bridge "components" not listed in Paragraph (g), Part 1, "specially designed" for deployment by ground vehicles listed in Part 1 or in ECCN 0A606, Part 2. | Q |
| (g) through (w) Reserved. | |
| (x) "Specially designed" "parts," "components," "accessories," and "attachments" that are for a defense article in Part 1 or for an item listed in ECCN 0A606 (other than Paragraph (b) or (y)) of Part 2. (*) | Q |
| (y) Specific "parts", "components," "accessories," and "attachments" "specially designed" for an item listed in this ECCN (other than Paragraph (b)) or a defense article in Part 1, and "parts" "components," "accessories," and "attachments" "specially designed" therefor: | |
| (1) Brake discs, rotors, drums, calipers, cylinders, pads, shoes, lines, hoses, vacuum boosters, and parts therefor; | A |
| (2) Alternators and generators; | A |
| (3) Axles; | A |
| (4) Batteries; | A |
| (5) Bearings (e.g., ball, roller, wheel); | A |
| (6) Cables, cable assembles, and connectors; | A |
| (7) Cooling system hoses; | A |
| (8) Hydraulic, fuel, oil, and air filters, other than those described in ECCN 1A004; | A |
| (9) Gaskets and O-rings; | A |
| (10) Hydraulic system hoses, fittings, couplings, adapters, and valves; | A |

**Table 7. Ground Vehicles, Continued**

| Description of items for DEMIL coding | DEMIL Code |
|---|---|
| (11) Latches and hinges; | A |
| (12) Lighting systems, fuses, and components; | A |
| (13) Pneumatic hoses, fittings, adapters, couplings, and valves; | A |
| (14) Seats, seat assemblies, seat supports, and harnesses; | A |
| (15) Tires, except combat vehicle run flat (i.e. LAV, Striker) | A |
| (16) Windows, except those for armored vehicles. | A |
| **Test, inspection, and production "equipment" and related commodities, not listed on the USML, "specially designed" for the "development" or "production," repair, overhaul, or refurbishing of commodities listed in ECCN 0A606 or USML Category VII.** | **ECCN 0B606** |
| **Description of items for DEMIL coding** | **DEMIL Code** |
| (a) Test, inspection, and production "equipment" "specially designed" for the "development," "production," repair, overhaul, or refurbishing of commodities listed in this table except ECCN 0A606 Paragraphs (b) and (y), and "parts," "components," "accessories," and "attachments" "specially designed" therefor. | |
| (i) Armor plate drilling machines, other than radial drilling machines; | Q |
| (ii) Armor plate planning machines; | Q |
| (iii) Armor plate quenching presses and; | Q |
| (iv) Tank turret bearing grinding machines. | Q |
| (b) Environmental test facilities "specially designed" for the certification, qualification, or testing of commodities listed in ECCN 0A606 in Part 2 (except for Paragraph (b)), or in Part 1, and "equipment" "specially designed" therefor. | Q |
| **Materials "specially designed" for commodities described by 0A606 not elsewhere specified the USML.** | **ECCN 0C606** |
| **Description of items for DEMIL coding** | **DEMIL Code** |
| (a) Materials "specially designed" for commodities listed in ECCN 0A606 or Part 1, not elsewhere specified in the USML or the CCL. (*) | Q |
| (*) Additional notes located in the CCL | |
| Robots (i.e. EOD robot) may be covered by ECCN 2B007: "Robots" having any of the following characteristics described in the List of Items Controlled and "specially designed" controllers and "end-effectors" therefor "Specially designed" to comply with national safety standards applicable to potentially explosive munitions environment. | |

## Table 8. Aircraft and Related Articles



| Part 1. Aircraft and Related Articles described in USML Category VIII | |
|---|---|
| **Description of items for DEMIL coding** | **DEMIL Code** |
| (a) Aircraft, whether manned, unmanned, remotely piloted, or optionally piloted, as follows: (MT if the aircraft, excluding manned aircraft, has a range equal to or greater than 300 km): (*) | |
| ♦ (1) Bombers; | C |
| ♦ (2) Fighters, fighter bombers, and fixed wing attack aircraft; | C |
| ♦ (3) Turbofan- or turbojet-powered trainers used to train pilots for fighter, attack, or bomber aircraft; | C |
| ♦ (4) Attack helicopters; | C |
| ♦ (5) Unmanned aerial vehicles (UAVs) specially designed to incorporate a defense article; | C |
| ♦ (6) Reserved. | |
| ♦ (7) Aircraft specially designed to incorporate a defense article, for the purpose of performing an intelligence, surveillance, and reconnaissance function; | C |
| ♦ (8) Aircraft specially designed to incorporate a defense article for the purpose of performing an electronic warfare function; airborne warning and control Air craft or aircraft specially designed to incorporate a defense article for the purpose of performing command, control, and communications function; | C |
| (9) Aircraft specially designed to incorporate a defense article for the purpose of performing an air refueling function; | C |
| (10) Target drones; | C |
| (11) Reserved | |
| (12) Aircraft capable of being refueled in flight including hover-in-flight refueling (HIFR); | C |
| (13) Reserved | |
| (14) Aircraft with a roll-on / roll-off ramp, capable of airlifting payloads over 35,000 pounds to ranges over 2,000 nautical miles (nm) without being refueled in-flight, and landing onto short or unimproved airfields, other than L-100 and LM-100J aircraft; | C |

## Table 8. Aircraft and Related Articles, Continued

| Description of items for DEMIL coding | DEMIL Code |
|---|---|
| ♦ (15) Aircraft not listed in Paragraphs (a)(1) through (a)(14) as follows: | |
| (i) U.S.-origin aircraft that bear an original military designation of A, B, E, F, K, M, P, R, or S; **or** | C |
| (ii) Foreign-origin aircraft specially designed to provide functions equivalent to those of the aircraft listed in Paragraph (a)(15)(a) of this table **or** | C |
| (16) Aircraft that are armed or are specially designed to be used as a platform to deliver munitions or otherwise destroy targets (e.g., firing lasers, launching rockets, firing missiles, dropping bombs, or strafing); | C |
| (b) through (c) Reserved. | |
| (d) Launching and recovery equipment specially designed to allow an aircraft described in Paragraph (a) of this table to take off or land on a vessel described in Table 8 Part 1 Paragraphs (a) through (c). (MT if the launching and recovery equipment is for an aircraft, excluding manned aircraft, that has a range equal to or greater than 300 km). (*) | D |
| (e) Reserved. | |
| (f) Developmental aircraft and specially designed parts, components, accessories, and attachments funded by the DoD. (*) | C |
| (g) Reserved. | |
| (h) Aircraft parts, components, accessories, attachments, associated equipment, and systems, as follows: | |
| (1) Parts, components, accessories, and attachments specially designed for the following U.S.-origin aircraft: **The B–1B, B–2, B–21, F–15SE, F/A–18 E/F, EA–18G, F–22, F–35**, and future variants thereof; or the **F–117** or U.S. Government technology demonstrators. Parts, components, accessories, and attachments of the **F–15SE and F/A–18 E/F** that are common to earlier models of these aircraft, unless listed in paragraph (h) of this category, are subject to the EAR; (*) | D |
| (2) Rotorcraft gearboxes with internal pitch line velocities exceeding 20,000 feet per minute and operating 30 minutes with loss of lubrication without an emergency or auxiliary lubrication system and specially designed parts and components therefor; (*) | D |
| (3) Tail boom folding systems, stabilator folding systems, or automatic rotor blade folding systems, and specially designed parts and components therefor; | D |
| (4) Wing folding systems and specially designed parts and components therefor, for: (*) | D |

**Table 8. Aircraft and Related Articles, Continued**

| Description of items for DEMIL coding | DEMIL Code |
|---|---|
| (5) On-aircraft arresting gear (e.g. tail hooks and drag chutes) and specially designed parts and components therefor; | D |
| (6) Bomb racks, missile or rocket launchers, missile rails, weapon pylons, pylon-to launcher adapters, Unmanned Aerial Vehicle (UAV) airborne launching systems, external stores support systems for ordnance or weapons, and specially designed parts and components therefor; (MT if the bomb rack, missile launcher, missile rail, weapon pylon, pylon-to-launcher adapter, UAV airborne launching system, or external stores support system is for an aircraft, excluding manned aircraft, or missile that has a "range" equal to or greater than 300 km); | D |
| (7) Damage or failure-adaptive flight control systems that do not consist solely of redundant internal circuitry, specially designed for aircraft described in this category; | D |
| (8) Threat-adaptive autonomous flight control systems; where a "threat-adaptive autonomous flight control system" is a flight control system that, without input from the operator or pilot, adjusts the aircraft control or flight path to minimize risk caused by hostile threats; | D |
| (9) Non-surface-based flight control systems and effectors (e.g., thrust vectoring from gas ports other than main engine thrust vector); | D |
| (10) Radar altimeters with output power management low probability of intercept (LPI) or signal modulation (i.e., frequency hopping, chirping, direct sequence-spectrum spreading) LPI capabilities; (MT if for an aircraft, excluding manned aircraft, or missile that has a "range" equal to or greater than 300 km); | D |
| (11) Air-to-air refueling systems and Hover-In-Flight Refueling (HIFR) systems, and specially designed parts and components therefor; | D |
| (12) UAV flight control systems and vehicle management systems with swarming capability (i.e., UAVs that operate autonomously (without human input) to interact with each other to avoid collisions, fly in formations, and are capable of adapting in real-time to changes in operational/threat environment, or, if weaponized, coordinate targeting) and stay together, or, if weaponized, coordinate targeting); (MT if for an aircraft, excluding manned aircraft, or missile that has a "range" equal to or greater than 300 km); | D |
| (13) Reserved; | |
| (14) Lift fans, clutches, and roll posts for Short Take-Off, Vertical Landing (STOVL) aircraft and specially designed parts and components for such lift fans and roll posts; | D |
| (15) Integrated helmets incorporating optical sights or slewing devices, which include the ability to aim, launch, track, or manage munitions (e.g., helmet mounted cueing systems, Joint Helmet Mounted Cueing Systems (JHMCS), helmet mounted displays, Display and Sight Helmets (DASH)) and specially designed parts, components, accessories, and attachments therefor; | D |

**Table 8. Aircraft and Related Articles, Continued**

| Description of items for DEMIL coding | DEMIL Code |
|---|---|
| (16) Fire control computers, stores management systems, armaments control processors, aircraft-weapon interface units and computers e.g., AGM–88 HARM Aircraft Launcher Interface Computer (ALIC)); | D |
| (17) Mission computers, vehicle management computers, and integrated core processers specially designed for aircraft described in this category or in ECCN 9A610 in Part 2; | D |
| (18) Drive systems and flight control systems, and parts and components therefor, specially designed to function after impact of a 7.62 mm or larger projectile; | D |
| (19) Thrust reversers specially designed to be deployed in flight for aircraft described in this table or in ECCN 9A610 in Part 2; | D |
| ♦ (20) Any part, component, accessory, attachment, equipment, or system that: | |
| (i) Is classified. | P |
| (ii) Contains classified software from the manufacturer; **or** | P |
| (iii) Is unclassified but being developed using classified information. | D |
| (21) through (26) Reserved. | |
| (27) Variable speed gearboxes, where a "variable speed gearbox" has the ability to vary the gearbox output speed by mechanical means within the gearbox while the gearbox input speed from the engine or other source is constant, and is capable of varying output speed by 20 percent or greater and providing power to rotors, proprotors, propellers, propfans, or lift fans; and specially designed parts and components therefor; | D |
| (28) Electrical power or thermal management systems specially designed for an engine controlled in table 21 having any of the following: | |
| (i) Electrical power generators that provide greater than 300 kilowatts (kW) of electrical power (per generator) with gravimetric power densities exceeding 2kW/pound (excluding the mass of the controller for the purpose of calculating the gravimetric power density); | D |
| (ii) Heat exchangers that exchange 60 kW/K-m3 or 1 kW/K of heat or greater into the gas turbine engine flow path; **or** | D |
| (iii) Direct-cooling thermal electronic package heat exchangers that transfer 20kW of heat or greater at 100W/cm$^2$ or greater. | D |
| (29) Any of the following equipment if specially designed for a defense article described in paragraph (h)(1): | |
| (i) Scale test models; | D |
| (ii) Full scale iron bird ground rigs used to test major aircraft systems; or | D |
| (iii) Jigs, locating fixtures, templates, gauges, molds, dies, and caul plates, for production of airframe parts and components. | D |

**Table 8. Aircraft and Related Articles, Continued**

| Description of items for DEMIL coding | DEMIL Code |
|---|---|
| (i) Decals, labels, and technical manuals containing technical data directly related to the items listed in this table described as either: | |
| (1) Classified **or** | P |
| (2) Unclassified. | D |
| (j) through (w) Reserved. | |
| (*) Additional notes located in the ITAR | |
| **Part 2. Military items described in the CCL** | |
| **Military aircraft and related commodities other than those listed in 9A991.a.** | **ECCN 9A610** |
| **Description of items for DEMIL coding** | **DEMIL Code** |
| (a) Military aircraft that are not listed in Part 1 "specially designed" for a military use that are not enumerated in USML paragraph VIII(a). (*) | C |
| (b) L100 aircraft manufactured before 2013. | C |
| (c) through (d) Reserved. | |
| (e) Mobile aircraft arresting and engagement runway systems for aircraft in this table. | D |
| (f) Pressure refueling equipment and equipment that facilitates operations in confined areas, "specially designed" for aircraft listed in this table. | C |
| (g) Aircrew life support equipment, aircrew safety equipment and other devices for emergency escape from aircraft described by either Part 1 or Part 2. | D |
| (h) Parachutes, paragliders, complete parachute canopies, harnesses, platforms, electronic release mechanisms "specially designed" for use with aircraft described by either Paragraph (a), Part 1 or Paragraph (a) of ECCN 9A610 in Part 2 and "equipment" "specially designed" for military high altitude parachutists, such as suits, special helmets, breathing systems, and navigation equipment. | D |
| (i) Controlled opening equipment or automatic piloting systems designed for parachuted loads. | D |
| (j) Ground effect machines (GEMS), including surface effect machines and air cushion vehicles, specially designed for use by a military. | C |
| (k) through (s) Reserved. | |
| (t) Composite structures, laminates, and manufactures thereof "specially designed" for UAVs described in Paragraph (a), Part 1 with a range equal to or greater than 300 km. (*) | Q |
| (u) Apparatus and devices "specially designed" for the handling, control, activation, and non-ship-based launching of UAVs or drones described by either Paragraph (a), Part 1 or ECCN 9A610, Paragraph (a), Part 2 and capable of a range equal to or greater than 300 km. (*) | D |

**Table 8. Aircraft and Related Articles, Continued**

| Description of items for DEMIL coding | DEMIL Code |
|---|---|
| (v) Radar altimeters designed or modified for use in UAVs or drones described by either Paragraph (a), Part 1 or ECCN 9A610, Paragraph (a), Part 2 and capable of delivering at least 500 kilograms payload to a range of at least 300 km. (*) | D |
| (w) (1) Pneumatic, hydraulic, mechanical, electro-optical, or electromechanical flight control systems (including fly-by-wire systems and fly-by-light systems) and attitude control equipment designed or modified for UAVs or drones described by either Paragraph (a), Part 1 or ECCN 9A610, Paragraph (a), Part 2 and capable of delivering at least 500 kilograms payload to a range of at least 300 km. (*) | D |
| (w) (2) Flight control servo valves, designed or modified for the systems in 9A610(w)(1) and designed or modified to operate in a vibration environment greater than 10g rms over the entire range between 20Hz and 2 kHz. (*) | D |
| (x) "Specially designed" "parts," "components," "accessories," and "attachments" that are for an item listed in this ECCN or in Part 1 and that are not listed in Paragraph (y), Part 2 and not listed Paragraph (h)(1), Part 1. | Q |
| (y) Specific parts, components, accessories, and attachments specially designed for an item listed in this ECCN or in Part 1, or in Table 21, Part 2, ECCN 9A619. | |
| (1) Aircraft tires; | A |
| (2) Analog gauges and indicators; | A |
| (3) Audio selector panels; | A |
| (4) Check valves for hydraulic and pneumatic systems; | A |
| (5) Crew rest equipment; | A |
| (6) Ejection seat mounted survival aids; | A |
| (7) Energy dissipating pads for cargo (for pads made from paper or cardboard); | A |
| (8) Fluid filters and filter assemblies; | A |
| (9) Galleys; | A |
| (10) Fluid hoses, straight and unbent lines (for a commodity subject to control in this entry or defense article in USML Category VIII), and fittings, couplings, clamps (for a commodity subject to control in this entry or defense article in USML Category VIII) and brackets therefor; | A |
| (11) Lavatories; | A |
| (12) Life rafts; | A |
| (13) Magnetic compass, magnetic azimuth detector; | A |
| (14) Medical litter provisions; | A |
| (15) Cockpit or cabin mirrors; | A |
| (16) Passenger seats including palletized seats; | A |
| (17) Potable water storage systems; | A |
| (18) Public address (PA) systems; | A |
| (19) Steel brake wear pads (does not include sintered mix or carbon/carbon materials); | A |

**Table 8. Aircraft and Related Articles, Continued**

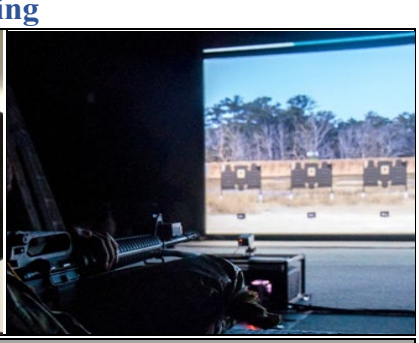
| Description of items for DEMIL coding | DEMIL Code |
|---|---|
| (20) Underwater locator beacons; | A |
| (21) Urine collection bags, pads, cups, pumps; | A |
| (22) Windshield washer and wiper systems; | A |
| (23) Filtered and unfiltered cockpit panel knobs, indicators, switches, buttons, and dials; | A |
| (24) Lead-acid and Nickel-Cadmium batteries; | A |
| (25) Propellers, propeller systems, and propeller blades used with reciprocating engines; | A |
| (26) Fire extinguishers; | A |
| (27) Flame and smoke/carbon dioxide detectors; | A |
| (28) Map cases; | A |
| (29) "Military Aircraft" that were first manufactured from 1946 to 1955 that do not incorporate defense articles listed or otherwise described on the USML, unless the items are required to meet safety or airworthiness standards of a Wassenaar Arrangement Participating State (found on website www.wassenaar.org); and do not incorporate weapons listed or otherwise described on the USML in accordance with Part 121.1 of Title 22, CFR, unless inoperable and incapable of being returned to operation; | A |
| (30) "Parts," "components," "accessories," and "attachments," other than electronic items or navigation equipment, for use in or with an item described in Paragraph (h); | A |
| (31) Identification plates and nameplates; and | A |
| (32) Fluid manifolds; | A |
| (*) Additional notes located in the CCL | |
| **Test, inspection, and production "equipment" and related commodities "specially designed" for the "development" or "production" of commodities listed in ECCN 9A610 or Part 1 USML Category VIII.** | **ECCN 9B610** |
| **Description of items for DEMIL coding** | **DEMIL Code** |
| (a) Test, inspection, and production "equipment" "specially designed" for the "production," "development," repair, overhaul, or refurbishment of commodities listed in ECCN 9A610 in Part 2 or Part 1, and "parts," "components," "accessories," and "attachments" "specially designed" therefor." | C |
| (b) Environmental test facilities "specially designed" for the certification, qualification, or testing of commodities listed in ECCN 9A610 in Part 2 or Part 1 and "parts," "components," "accessories," and "attachments" "specially designed" therefore. | C |
| (c) "Production facilities" designed or modified for UAVs or drones that are described by either Paragraph (a), Part 1 or for Paragraph (a) ECCN 9A610 and capable of a range equal to or greater than 300 km. | C |

**Table 8. Aircraft and Related Articles, Continued**

| **Materials "specially designed" for items described by Part 1 or Part 2 ECCN 9A610 not elsewhere specified in Tables 3 through 23 or the CCL.** | **ECCN 9C610** |
|---|---|
| **Description of items for DEMIL coding** | **DEMIL Code** |
| (a) Materials not elsewhere specified in the CCL or Part 1 of Tables 3 through 23 and specially designed for commodities listed in this table (except paragraph (y)). (*) | Q |
| (b) Reserved. | |
| (*) Additional notes located in the CCL | |

## Table 9. Military Training Equipment and Training





| Part 1. Military Training Equipment and Training described in USML Category IX | |
|---|---|
| **Description of items for DEMIL coding** | **DEMIL Code** |
| (a) Training equipment, as follows: (*) | |
| (1) Ground, surface, submersible, space, or towed airborne targets that: | |
| (i) Have an infrared, radar, acoustic, magnetic, or thermal signature that mimic a specific defense article, specific other item, or specific person; **or** | C |
| (ii) Are instrumented to provide hit or miss performance information for defense articles described in Tables 3-23; (*) | C |
| (2) Devices that are mockups of articles enumerated in this subchapter used for maintenance training or disposal training for ordnance in this subchapter, that reveal technical data or contain parts, components, accessories, or attachments controlled in this subchapter; | C |
| (3) Air combat maneuvering instrumentation and ground stations therefor; | C |
| (4) Physiological flight trainers for fighter aircraft or attack helicopters; | C |
| (5) Radar trainers specially designed for training on radar controlled by USML Category XI; | C |
| (6) Training devices specially designed to be attached to a crew station, mission system, or weapon of an article controlled on the USML; (*) | C |
| (7) Anti-submarine warfare trainers; | C |
| (8) Missile launch trainers; | C |
| (9) Radar target generators; | C |
| (10) Infrared scene generators; **or** | C |
| ♦ (11) Any training device that: | |
| (i) Is classified. | P |

**Table 9. Military Training Equipment, Continued**

| Description of items for DEMIL coding | DEMIL Code |
|---|---|
| (ii) Is classified software from the manufacturer; **or** | P |
| (iii) Is unclassified but being developed using classified information. | D |
| (b) Simulators, as follows: | |
| (1) System specific simulators that replicate the operation of an individual crew station, a mission system, or a weapon of an end item that is controlled in this subchapter; | C |
| (2) through (3) Reserved. | |
| (4) Software and associated databases not elsewhere enumerated in this subchapter that can be used to model or simulate the following: | |
| (i) Trainers enumerated in paragraph (a) of this table; | N/A |
| (ii) Battle management; | N/A |
| (iii) Military test scenarios/models; **or** | N/A |
| (iv) Effects of weapons enumerated in this subchapter; **or** | N/A |
| ♦ (5) Simulators that: | |
| (i) Are classified. | P |
| (ii) Contain classified software from the manufacturer. | P |
| (iii) Are being developed using classified information. | D |
| (c) through (d) Reserved. | |
| (e) Decals, labels, and technical manuals containing technical data directly related to the items listed described as either: | |
| (i) Classified **or** | P |
| (ii) Unclassified. | D |
| (f) through (w) Reserved. | |
| (*) Additional notes located in the ITAR | |
| **Part 2. Military items described in the CCL** | |
| **Military training "equipment," as follows** | **ECCN 0A614** |
| **Description of items for DEMIL coding** | **DEMIL Code** |
| (a) "Equipment" "specially designed" for military training that is not listed or otherwise described in Part 1. (*) | Q |
| (b) through (w) Reserved. | |
| (x) "Specially designed" "parts," "components," "accessories," and "attachments" that are for an item described in Paragraph (a) or a defense article in Part 1. | Q |
| (*) Additional notes located in the CCL | |

## Table 9. Military Training Equipment, Continued

| Description of items for DEMIL coding | DEMIL Code |
|---|---|
| **Test, inspection, and production "equipment" for military training "equipment" and "specially designed" "parts," "components," "accessories" and "attachments"** | **ECCN 0B614** |
| (a) Test, inspection, and other production "equipment" "specially designed" for the "development," "production," repair, overhaul, or refurbishing of items described in ECCN 0A614 of Part 2 or articles listed or otherwise described in Part 1. | Q |
| (b) through (w) Reserved. | |
| (x) "Parts," "components," "accessories," and "attachments" that are "specially designed" for an item described for ECCN 0B614. | Q |

## Table 10. Personal Protective Equipment



| Part 1. Personal Protective Equipment described in USML Category X | |
|---|---|
| **Description of items for DEMIL coding** | **DEMIL Code** |
| (a) Personal protective equipment, as follows: (*) | |
| (1) Body armor providing a protection level equal to or greater than NIJ Type IV; (*) | D |
| (2) Personal protective clothing, equipment, or face paints specially designed to protect against or reduce detection by radar, infrared, or other sensors at wavelengths greater than 900 nanometers (nm); (*) | D |
| (3) through (4) Reserved. | |
| (5) Integrated helmets, not specified in USML Category VIIII(h)(15) or USML Category XII, incorporating optical sights or slewing devices, which include the ability to aim, launch, track, or manage munitions; | D |
| (6) Helmets and helmet shells providing a protection level equal to or greater than NIJ Type IV; | D |
| (7) Goggles, spectacles, or visors, vision blocks, Canopies, or filters for optical sights or viewers, employing other than common broadband absorptive dyes and ultraviolet inhibitors as a means of protection (e.g., narrow band filters/ dyes or broadband limiters / coatings with high visible transparency), having an optical density greater than 3, and that protect against: (*) | |
| (i) Multiple Visible (in-band) laser wavelengths; | D |
| (ii) Thermal flashes associated with nuclear detonations, or | D |
| (iii) Near infrared or ultraviolet (out of-band) laser wavelengths; **or** | D |
| (8) Developmental personal protective equipment and specially designed parts, components, accessories, and attachments, developed for the DoD via contract or other funding authorization. (*) | D |
| (b) through (c) Reserved. | |
| (d) Parts, components, assemblies, and associated equipment for the personal protective equipment controlled in this category, as follows: (*) | |
| (1) Ceramic or composite plates that provide protection equal to or greater than NIJ Type IV; | D |
| (2) Lenses, substrates, or filters “specially designed” for the articles covered in Paragraph (a)(7) of this category; | D |

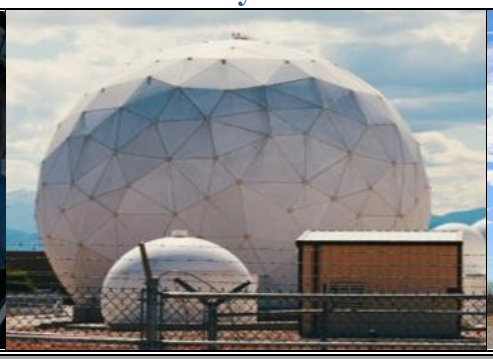
**Table 10. Personal Protective Equipment**

| Description of items for DEMIL coding | DEMIL Code |
|---|---|
| (3) Materials and coatings specially designed for the articles covered in paragraph (a)(7) of this category with optical density greater than 3, as follows; | |
| (i) Narrowband absorbing dyes; | D |
| (ii) Broadband optical switches or limiters (i.e., nonlinear material, tunable or switchable agile filters, optical power limiters, near infrared interference based filters); **or** | D |
| (iii) Narrowband interference based notch filters (i.e., multi-layer dielectric coatings, rugate, holograms or hybrid (i.e. interference with dye)) protecting against multiple laser wavelength and having high visible band transparency; **or** | D |
| ♦ (4) Any component, part, accessory, attachment, equipment, or system that: | |
| (i) Is classified. | P |
| (i) Contains classified software directly related to defense articles in this subchapter or 600 series items subject to the EAR; **or** | P |
| (ii) Is unclassified but being developed using classified information. | D |
| (e) Decals, labels, and technical manuals containing technical data directly related to the items listed in this table described as either: | |
| (i) Classified **or** | P |
| (ii) Unclassified. | D |
| (f) through (w) Reserved. | |
| (*) Additional notes located in the ITAR | |
| **Part 2. Military items described in the CCL** | |
| **Armored and protective "equipment" and related commodities.** | **ECCN 1A613** |
| **Description of items for DEMIL coding** | **DEMIL Code** |
| (a) Metallic or non-metallic armored plate "specially designed" for military use and not controlled by the USML. (*) | D |
| (b) Shelters "specially designed" to: | |
| (1) Provide ballistic protection for military systems; **or** | D |
| (2) Protect against nuclear, biological, or chemical contamination. | D |
| (c) Military helmets (other than helmets controlled under 1A613.Y.1) providing less than NIJ Type IV or "equivalent standards" protection (*) | D |
| (d) Body armor and protective garments, as follows: | |
| (1) Soft body armor and protective garments manufactured to military standards or specifications, or to their equivalents, that provide ballistic protection equal to or less than NIJ level III (NIJ 0101.06, July 2008) or "equivalent standards"; **or (*)** | D |
| (2) Hard body armor plates that provide ballistic protection equal to NIJ level III (NIJ 0101.06, July 2008) or "equivalent standards". (*) | D |
| (e) Atmospheric diving suits "specially designed" for rescue operations for submarines described in the USML or the CCL. | Q |
| (f) Other personal protective "equipment" "specially designed" for military applications not described in the USML, not elsewhere controlled on the CCL. | Q |
| (g) through (w) Reserved. | |

## Table 10. Personal Protective Equipment

| Description of items for DEMIL coding | DEMIL Code |
|---|---|
| (x) "Parts," "components," "accessories," and "attachments" that are "specially designed" for a commodity controlled by ECCN 1A613 (except for 1A613.y) or an article enumerated in USML Category X, and not controlled elsewhere in the USML. | Q |
| (*) Additional notes located in the CCL | |
| (y) Other commodities: | |
| (1) Conventional military steel helmets. | A |
| (2) Reserved | |
| **Test, inspection, and "production" "equipment" and related commodities "specially designed" for the "development," "production," repair, overhaul, or refurbishing of commodities controlled by ECCN 1A613 or USML Category X, as follows** | **ECCN 1B613** |
| **Description of items for DEMIL coding** | **DEMIL Code** |
| (a) Test, inspection, and "production" "equipment," not controlled by USML Category X(c), that is "specially designed" for the "development," "production," repair, overhaul, or refurbishing of commodities controlled by ECCN 1A613 or USML Category X. | Q |
| (b) Plasma pressure compaction (P2C) "equipment" "specially designed" for the "production" of ceramic or composite body armor plates controlled by ECCN 1A613 or USML Category X. | Q |

## Table 11. Military Electronics


| Part 1. Military electronics described in USML Category XI | |
|---|---|
| **Description of items for DEMIL coding** | **DEMIL Code** |
| (a) Electronic equipment and systems not included in Category XII of the U.S. Munitions list, as follows: (*) | |
| ♦ (1) Underwater hardware, equipment, or systems, as follows; | |
| (i). Active or passive acoustic array sensing systems or acoustic array equipment capable of real-time processing that survey or detect and also track, localize (e.i., determine range and bearing), classify, or identify, surface vessels, submarines, other undersea vehicles, torpedoes, or mines, having any of the following; | |
| (A) Multi-static capability; | D |
| (B) Operating frequency less than 20 kilohertz (kHz); **or** | D |
| (C) Operating bandwidth greater than 10 kHz; | D |
| (ii) Underwater single acoustic sensor system that distinguishes non-biologic tonals and locates the origin of the sound; (*) | D |
| (iii) Non-acoustic systems that survey or detect and also track, localize (i.e., determine range and bearing), classify, or identify, surface vessels, submarines, other undersea vehicles, torpedoes, or mines;) | D |
| (iv) Acoustic modems, networks, and communications equipment with real- time adaptive compensation or employing Low Probability of Intercept (LPI); (*) | D |
| (v) Low Frequency or Very Low Frequency (LF/VLF) electronic modems, routers, interfaces, and communications equipment, specially designed for submarine communications; **or** | D |
| (vi) Autonomous systems and equipment that enable cooperative sensing and engagement by fixed (bottom mounted or seabed) or mobile Autonomous Underwater Vehicles (AUV); | D |
| ♦ (2) Underwater acoustic countermeasures or counter-countermeasures systems or equipment; | D |

**Table 11. Military Electronics, Continued**

| Description of items for DEMIL coding | | DEMIL Code |
|---|---|---|
| ♦ (3) Radar systems and equipment, as follows: (*) | | |
| (i) | Airborne radar that maintains positional state of an object or objects of interest, other than weather phenomena, in a received radar signal through time; (*) | D |
| (ii) | Synthetic Aperture Radar (SAR) incorporating image resolution less than (better than) 0.3 meter, or incorporating Coherent Change Detection (CCD) with geo- registration accuracy less than (better than) 0.3 meter, not including concealed object detection equipment operating in the frequency range from 30 gigahertz (GHz) to 3,000 GHz and having a spatial resolution of 0.1 milliradians up to and including 1 milliradian at a standoff distance of 100 meters; | D |
| (iii) | Inverse Synthetic Aperture Radar (ISAR); | D |
| (iv) | Radar that geodetically-locates (i.e., geodetic latitude, geodetic longitude, and geodetic height) with a target location error 50 (TLESO) less than or equal to 10 meters at ranges greater than 1 km; | D |
| (v) | Any Ocean Surveillance Radar with an average-power-aperture product of greater than 50 $Wm^2$; | D |
| (vi) | Any Ocean Surveillance Radar that transmits a waveform with an instantaneous bandwidth greater than 100 megahertz (MHz) and has an antenna rotation rate greater than 60 revolutions per minute (RPM); | D |
| (vii) | Air surveillance radar with free space detection of 1 square meter Radar Cross Section (RCS) target at 85 nmi or greater range, scaled to RCS values as RCS to the 1⁄4 power; | D |
| (viii) | Air surveillance radar with free space detection of 1 square meter RCS target at an altitude of 65,000 feet and an elevation angle greater than 20 degrees (e.g., counter-battery); | D |
| (ix) | Reserved | |
| (x) | Air surveillance radar with a beam solid angle less than or equal to 16 degrees squared that performs free space tracking of 1 square meter RCS target at a range greater or equal to 25 nmi with revisit rate greater or equal to 1⁄3 Hz; | D |
| (xi) | Instrumentation radar for anechoic test facility or outdoor range that maintains positional state of an object of interest in a received radar signal through time or provides measurement of RCS of a static target less than or equal to minus 10dBsm, or RCS of a dynamic target; | D |

**Table 11. Military Electronics, Continued**

| | Description of items for DEMIL coding | DEMIL Code |
|---|---|---|
| (xii) | Radar incorporating pulsed operation with electronics steering of transmit beam in elevation and azimuth; (*) | D |
| (xiii) | Radar with mode(s) for ballistic tracking or ballistic extrapolation to source of launch or impact point of articles controlled in USML Categories III, IV, or XV; | D |
| (xiv) | Active protection radar and missile warning radar with mode(s) implemented for detection of incoming munitions; | D |
| (xv) | Over the horizon high frequency sky-wave (ionosphere) radar; | D |
| (xvi) | Radar that detects a moving object through a physical obstruction at distance greater than 0.2 m from the obstruction; | D |
| (xvii) | Radar having Moving Target Indicator (MTI) or pulse-Doppler processing where any single Doppler filter provides a normalized clutter attenuation of greater than 60dB; (*) | D |
| (xviii) | Radar having electronic protection or Electronic Counter-Counter-measures (ECCM) other than manual gain control, automatic gain control, radio frequency selection, constant false alarm rate, and pulse repetition interval jitter; | D |
| (xix) | Radar employing Electronic Attack (EA) mode(s) using the radar transmitter and antenna; | D |
| (xx) | Radar employing electronic support (ES) mode(s) (*i.e.,* the ability to use a radar system for ES purposes in one or more of the following: as a high-gain receiver, as a wide-bandwidth receiver, as a multi-beam receiver, or as part of a multi-point system); | D |
| (xxi) | Radar employing Non-Cooperative Target Recognition (NCTR) (*i.e.,* the ability to recognize a specific platform type without cooperative action of the target platform); (*) | D |
| (xxii) | Radar employing Automatic Target Recognition (ATR) (*i.e.,* recognition of target using structural features (e.g., tank versus car) of the target with system resolution better than (less than) 0.3 m); | D |
| (xxiii) | Radar that sends interceptor guidance commands or provides illumination keyed to an interceptor seeker; | D |
| (xxiv) | Radar employing waveform generation for LPI other than Frequency Modulated Continuous Wave (FMCW) with linear ramp modulation; | D |
| (xxv) | Radar that sends and receives communications; | D |
| (xxvi) | Radar that tracks or discriminates ballistic missile warhead from debris or countermeasures; | D |
| (xxvii) | Bi-static/multi-static radar that exploits greater than 125 kHz bandwidth and is lower than 2 GHz center frequency to passively detect or track using radio frequency (RF) transmissions (e.g., commercial radio, television stations); | D |

**Table 11. Military Electronics, Continued**

| Description of items for DEMIL coding | DEMIL Code |
|---|---|
| (xxviii) Radar target generators, projectors, or simulators, specially designed for radars controlled by this category; **or** | D |
| (xxix) Radar and laser radar systems specially designed for defense articles in paragraph (a)(1) of USML Category IV or paragraphs (a)(5), (a)(6), or (a)(13) of USML Category VIII (MT if specially designed for rockets, space launch vehicles, missiles, drones, or unmanned aerial vehicles capable of delivering a payload of at least 500 kg to a range of at least 300 km); (*) | D |
| ♦ (4) Electronic combat (i.e., electronic warfare) systems and equipment, as follows; | |
| (i) Electronic Systems (ES) and equipment that search for, intercept and identify, or locate sources of intentional or unintentional electromagnetic energy specially designed to provide immediate threat detection, recognition, targeting, planning, or conduct of future operations; (*) | D |
| (ii) Systems and equipment that detect and automatically discriminate acoustic energy emanating from weapons fire (e.g., gunfire, artillery, rocket propelled grenades, or other projectiles), determining location or direction of weapons fire in less than two seconds from receipt of event signal, and able to operate on-the-move (e.g., operating on personnel, land vehicles, sea vessels, or aircraft while in motion); **or** | D |
| (iii) Systems and equipment specially designed to introduce extraneous or erroneous signals into radar, infrared based seekers, electro-optic based seekers, radio communication receivers, navigation receivers, or that otherwise hinder the reception, operation, or effectiveness of adversary electronics (e.g., active or passive electronic attack, electronic countermeasure, electronic counter-countermeasure equipment, jamming, and counter jamming equipment); | D |
| ♦ (5) Command, control, and communications (C3); command, control, communications, and computers (C4); command, control, communications, computers, intelligence, surveillance, and reconnaissance (C4ISR), and identification systems or equipment, that: | |
| (i) Are specially designed to integrate, incorporate, network, or employ defense articles that are controlled in paragraphs or subparagraphs of the categories of § 121.1 of this part that do not use the term specially designed; | D |
| (ii) Incorporate U.S. Government identification friend or foe (IFF) modes 4 or 5; | D |

**Table 11. Military Electronics, Continued**

| Description of items for DEMIL coding | DEMIL Code |
|---|---|
| (iii) Implement active or passive ECCM used to counter acts of communication disruption (e.g., radios that incorporate HAVE QUICK I/II, SINCGARS, SATURN); | D |
| (iv) Specially designed, rated, certified, or otherwise specified or described to be in compliance with U.S. government NSTISSAM TEMPEST 1–92 standards or CNSSAM TEMPEST 01–02, to implement techniques to suppress compromising emanations of information bearing signals; **or** | D |
| (v) Transmit voice or data signals specially designed to elude electromagnetic detection. | D |
| (6) Reserved. | |
| (7) Developmental electronic equipment or systems funded by the DoD via contract or other funding authorization; (*) | C |
| (8) Unattended ground sensor (UGS) systems or equipment having all of the following: | |
| (i) Automatic target detection; | D |
| (ii) Automatic target tracking, classification, recognition, or identification; | D |
| (iii) Self-forming or self-healing networks; **and** | D |
| (iv) Self-localization for geo-locating targets; | D |
| (9) Electronic sensor systems or equipment for non-Acoustic Antisubmarine Warfare (ASW) or mine warfare (e.g., magnetic anomaly detectors (MAD), electric-field, electromagnetic induction); | D |
| (10) Electronic sensor systems or equipment for detection of concealed weapons, having a standoff detection range of greater than 45 meters for personnel or detection of vehicle-carried weapons, not including concealed object detection equipment operating in the frequency range from 30 GHz to 3,000 GHz and having a spatial resolution of 0.1 milliradians up to and including 1 milliradians at a standoff distance of 100 m; | D |
| (11) Test sets specially designed for testing defense articles described in Paragraphs (a)(3), (a)(4), (a)(5), or (b); **or** | D |
| (12) Direction finding equipment for determining bearings to specific electromagnetic sources or terrain characteristics specially designed for defense articles in Paragraph (a)(1), Part 1 of Table 6 or Paragraphs (a)(5), (a)(6), or (a)(13), Part 1 of Table 10. (MT if specially designed for rockets, SLVs, missiles, drones, or UAVs capable of delivering a payload of at least 500 kg to a range of at least 300 km. See note 2 to paragraph (a)(3)(xxix) of this category). | D |

**Table 11. Military Electronics, Continued**

| Description of items for DEMIL coding | DEMIL Code |
|---|---|
| ♦ (b) Electronic systems or equipment, not elsewhere enumerated in this subchapter, specially designed for intelligence purposes that collect, survey, monitor, or exploit, or analyze and produce information from, the electromagnetic spectrum (regardless of transmission medium), or for counteracting such activities. the electromagnetic spectrum (regardless of transmission medium), or for counteracting such activities. | D |
| (c) Parts, components, accessories, attachments, and associated equipment, as follows; | |
| (1) Application specific integrated circuits (ASICs) and programmable logic devices (PLD) programmed for defense articles in this table. (*) | D |
| (2) Printed Circuit Boards (PCBs) and populated circuit card assemblies for which the layout is specially designed for defense articles in this table; (*) | D |
| (3) Multichip modules for which the pattern or layout is specially designed for defense articles in this table; (*) | D |
| (4) Transmit/receive modules, transmit/receive monolithic microwave integrated circuits (MMICs), transmit modules, and transmit MMICs having all of the following: (*) | |
| (i) A peak saturated power output (in watts), Psat, greater than 505.62 divided by the maximum operating frequency (in GHz) squared [Psat > 505.62 W * GHz2/fGHz2] for any channel; | D |
| (ii) A fractional bandwidth of 5% or greater for any channel; | D |
| (iii) Any planar side with length d (in cm) equal to or less than 15 divided by the lowest operating frequency in GHz [d ≤ 15cm * GHz/fGHz]; and | D |
| (iv) At least one electronically variable phase shifter per channel. | D |
| (5) High-energy storage capacitors that: (*) | |
| i. Are capable of operating at greater than one hundred twenty-five volts (125 V); | D |
| ii. Have a repetition rate greater than or equal to six (6) discharges per minute; | D |
| iii. Have a full energy life greater than or equal to 10,000 discharges at greater than 0.2 Amps per Joule peak current; and | D |
| iv. Have any of the following: | |
| a. Volumetric energy density greater than or equal to 1.5 J/cc; or | D |
| b. Mass energy density greater than or equal to 1.3 kJ/kg; | D |
| (6) Radio frequency circulators of any dimension equal to or less than one quarter (1⁄4) wavelength of the highest operating frequency and isolation greater than 30 dB; | D |
| (7) Polarimeter that detects and measures polarization of RF signals within a single pulse; | D |

**Table 11. Military Electronics, Continued**

| Description of items for DEMIL coding | DEMIL Code |
|---|---|
| (8) Digital RF Memory (DRFM) with RF instantaneous input bandwidth greater than 400 MHz, and 4 bit or higher resolution whose output signal is a translation of the input signal (e.g., changes in magnitude, time, frequency) and specially designed parts and components therefor; | D |
| (9) Vacuum electronic devices, as follows: | |
| i. Multiple electron beam or sheet electron beam devices rated for operation at frequencies of 16 GHz or above, and with a saturated power output greater than 10,000 W (70 decibel-milliwatts (dBm)) or a maximum average power output greater than 3,000 W (65 dBm); **or** | D |
| ii. Cross-field amplifiers with a gain of 15 dB to 17 dB or a duty factor greater than 5 percent; | D |
| (10) Antenna and specially designed parts and components therefor, that. (*) | |
| i. Employ four or more elements, electronically steer angular beams, independently steer angular nulls, create angular nulls with a null depth greater than 20 dB, and achieve a beam switching speed faster than 50 milliseconds; | D |
| ii. Form adaptive null attenuation greater than 35 dB with convergence time less than one second; | D |
| iii. Detect signals across multiple RF bands with matched left hand and righthand spiral antenna elements for determination of signal polarization; or | D |
| iv. Determine signal angle of arrival less than two degrees (e.g., interferometer antenna); | D |
| (11) Radomes or electromagnetic antenna windows that: | |
| i. Incorporate radio frequency selective surfaces; | D |
| ii. Operate in multiple non-adjacent frequency bands for radar applications; | D |
| iii. Incorporate a structure that is specially designed to provide ballistic protection from bullets, shrapnel, or blast; | D |
| iv. Have a melting point greater than 1,300° Celsius and maintain a dielectric constant less than 6 at temperatures greater than 500° Celsius; | D |
| v. Are manufactured from ceramic materials with a dielectric constant less than 6 at any frequency from 100 MHz to 100 GHz; (MT if usable in rockets, SLVs, or missiles capable of achieving a range greater than or equal to 300 km; or if usable in drones or UAVs capable of delivering a payload of at least 500 kg to a range of at least 300 km. See note 2 to paragraph (a)(3)(z) of this category); | D |
| vi. Maintain structural integrity at stagnation pressures greater than 6,000 pounds per square foot; **or** | D |

**Table 11. Military Electronics, Continued**

| Description of items for DEMIL coding | DEMIL Code |
|---|---|
| vii. Withstand combined thermal shock greater than 4.184 × 106 joules per square meter accompanied by a peak overpressure of greater than 50 kilopascal; (MT if usable in rockets, SLVs, missiles, drones, or UAVs capable of delivering a payload of at least 500 kg to a range of at least 300 km and usable in protecting against nuclear effects (e.g., Electromagnetic Pulse (EMP), X-rays, combined blast and thermal effects). See note 2 to paragraph (a)(3)(z) of this category); | D |
| (12) Underwater sensors (acoustic vector sensors, hydrophones, or transducers) or projectors, specially designed for systems described in Paragraphs (a)(1) and (a)(2) of this table, having any of the following: | |
| i. A transmitting frequency below 10 kHz for sonar systems; | D |
| ii. Sound pressure level exceeding 224 dB (reference 1 megapascal (mPa) at 1 meter) for equipment with an operating frequency in the band from 10 kHz to 24 kHz inclusive; | D |
| iii. Sound pressure level exceeding 235 dB (reference 1 mPa at 1 meter) for equipment with an operating frequency in the band between 24 kHz and 30 kHz; | D |
| iv. Forming beams of less than 1° on any axis and having an operating frequency of less than 100 kHz; | D |
| v. Designed to operate with an unambiguous display range exceeding 5,120 meters; **or** | D |
| vi. Designed to withstand pressure during normal operation at depths exceeding 1,000 m and having transducers with any of the following: | |
| A. Dynamic compensation for pressure; **or** | D |
| B. Incorporating other than lead zirconate titanate as the transduction element; | D |
| (13) Parts or components containing piezoelectric materials which are specially designed for underwater hardware, equipment, or systems described in Paragraph (c)(12) of this category; | D |
| (14) Tuners specially designed for systems and equipment in Paragraphs (a)(4) and (b) of this category; | D |
| (15) Electronic assemblies and components, capable of operation at temperatures in excess of 125° Celsius and specially designed for UAVs or drones described in Part 1 of Table 10, rockets, space launch vehicles (SLV), or missiles controlled in Part 1 of category 4 capable of achieving a range greater than or equal to 300 km; (MT) (see Note 2 to paragraph (a)(3)(xxix) of this category); | D |

**Table 11. Military Electronics, continued**

| Description of items for DEMIL coding | DEMIL Code |
|---|---|
| (16) Hybrid (combined analog and digital) computers specially designed for modeling, simulation, or design integration of systems described in Paragraphs (a)(1), (d)(1), (d)(2), (h)(1), (h)(2), (h)(4), (h)(8), and (h)(9) of USML Category IV or paragraphs (a)(5), (a)(6), or (a)(13) of USML Category VIII (MT if for rockets, SLVs, missiles, drones, or UAVs capable of delivering a payload of at least 500 kg to a range of at least 300 km or their subsystems. See note 2 to paragraph (a)(3)(xxix) of this category); | D |
| (17) Chaff and flare rounds specially designed for the systems and equipment described in Paragraph (a)(4)(iii) of this category, and parts and components therefor containing materials controlled in; | G |
| (18) Parts, components, or accessories specially designed for an information assurance/information security system or radio, listed in this table that modify its published properties (e.g., frequency range, algorithms, waveforms, CODECs, modulation or demodulation schemes); **or** | D |
| ♦ (19) Any part, component, accessory, attachment, equipment, or system that: | |
| (i) Is classified; | P |
| (ii) Contains classified software from the manufacturer; **or** | P |
| (iii) Is unclassified but being developed using classified information; | D |
| (d) Decals, labels, and technical manuals containing technical data directly related to the items described in Paragraphs (a) through (e) and items described as ECCNs 3A611 or 3B611 in Part 2: | |
| (i) Classified; | P |
| (ii) Unclassified; | D |
| (e) through (w) Reserved; | |
| (*) Additional notes located in the ITAR | |
| **Part 2. Military items described in the CCL** | |
| **Military electronics.** | **ECCN 3A611** |
| **Description of items for DEMIL coding** | **DEMIL Code** |
| (a) Electronic "equipment," "end items," and "systems" "specially designed" for a military application that are not enumerated or otherwise described in either a USML category or another "600 series" ECCN. (*) | D |
| (b) through (d) Reserved. | |
| (e) High frequency (HF) surface wave radar that maintains the positional state of maritime surface or low altitude airborne objects of interest in a received radar signal through time. (*) | D |

**Table 11. Military Electronics, continued**

| Description of items for DEMIL coding | DEMIL Code |
|---|---|
| (f) Application specific integrated circuits (ASICs) and programmable logic devices (PLD) that are not controlled by paragraph .y of this entry and that are programmed for "600 series" item (*) | D |
| (g) Printed circuit boards and populated circuit card assemblies that are not specifically identified in Paragraph (y) for which the layout is "specially designed" for "600 series" ECCN items. | D |
| (h) Multichip modules that are not specifically identified in Paragraph (y) for which the pattern or layout is "specially designed" for "600 series" ECCN items. | D |
| (i) through (w) Reserved. | |
| (x) "Parts," "components," "accessories," and "attachments" that are "specially designed" for a commodity controlled by this entry or for an article controlled by USML Category XI, and not enumerated or described in any USML category or in any paragraph other than the .x paragraph of another 600 series ECCN or in paragraph .y of this entry. (*) | Q |
| (y) Specific "parts," "components," "accessories," and "attachments" "specially designed" for a commodity subject to control in a "600 series" ECCN or a defense article and not elsewhere specified in any paragraph other than the. y paragraph of a "600 series" ECCN or the USML as follows, and "parts," "components," "accessories," and "attachments" "specially designed" therefor: | |
| (1) Electrical connectors | A |
| (2) Electric fans. | A |
| (3) Heat sinks. | A |
| (4) Joy sticks. | A |
| (5) Mica paper capacitors. | A |
| (6) Microphones. | A |
| (7) Potentiometers. | A |
| (8) Rheostats. | A |
| (9) Electric connector backshells. | A |
| (10) Solenoids. | A |
| (11) Speakers. | A |
| (12) Trackballs. | A |
| (13) Electric transformers. | A |
| (14) Application specific integrated circuits (ASICs) and programmable logic devices (PLD) that are programmed for commodities controlled in the .y paragraph of any "600 series" ECCN; | A |

## Table 11. Military Electronics, Continued

| Description of items for DEMIL coding | DEMIL Code |
|---|---|
| (15) Printed circuit boards and populated circuit card assemblies for which the lay-out is specially designed for an item described in Paragraph (y) of any "600 series" ECCN. (*) | A |
| (16) Multichip modules for which the pattern or layout is specially designed for an item described in Paragraph (y) of "any 600" series ECCN. (*) | A |
| (17) Circuit breakers. | A |
| (18) Ground fault circuit interrupters. | A |
| (19) Electrical contacts. | A |
| (20) Electrical guide pins. | A |
| (21) Filtered and unfiltered mechanical switches. | A |
| (22) Thumbwheels. | A |
| (23) Fixed resistors. | A |
| (24) Electrical jumpers. | A |
| (25) Grounding straps. | A |
| (26) Indicator dials. | A |
| (27) Contactors. | A |
| (28) Touchpads. | A |
| (29) Mechanical caps. | A |
| (30) Mechanical plugs. | A |
| (31) Finger barriers. | A |
| (32) Flip-guards. | A |
| (33) Identification plates and nameplates. | A |
| (34) Knobs. | A |
| (35) Hydraulic, pneumatic, fuel, and lubrication gauges. | A |
| (*) Additional notes located in the CCL | |

**Table 11. Military Electronics, Continued**

| **Test, inspection, and production commodities for military electronics.** | **ECCN 3B611** |
|---|---|
| **Description of items for DEMIL coding** | **DEMIL Code** |
| (a) Test, inspection, and production end items and equipment "specially designed" for the development, production, repair, overhaul, or refurbishing of items described in ECCN 3A611 (except ECCN 3A611 Paragraph (y)) or Part 1 that are not explicitly described in Part 1 or described in another 600 series ECCN. | C |
| (b) through (w) Reserved. | |
| (x) "Parts," "components," "accessories" and "attachments" that are "specially designed" for a commodity listed in this entry and that are not enumerated on the USML or controlled by another "600 series" ECCN. | Q |
| **Cryogenic and "superconductive" equipment** | **ECCN 9A620** |
| **Description of items for DEMIL coding** | **DEMIL Code** |
| (a) Equipment "specially designed" to be installed in a vehicle for military ground, marine, airborne, or space applications, and capable of operating while in motion and of producing or maintaining temperatures below 103 Kelvin (-170°Celsius). (*) | Q |
| (b) "Superconductive" electrical equipment (rotating machinery and transformers) specially designed to be installed in a vehicle for military ground, marine, airborne, or space applications, and capable of operating while in motion. (*) | Q |
| (c) through (w) Reserved. | |
| (x) "Parts," "components," "accessories" and "attachments" that are "specially designed" for a commodity controlled by ECCN 9A620. | Q |
| (*) Additional notes located in the CCL | |
| **Test, inspection, and production commodities for cryogenic and "superconductive" equipment** | **ECCN 9B620** |
| **Description of items for DEMIL coding** | **DEMIL Code** |
| (a) Test, inspection, and production end items and equipment "specially designed" for the "development," "production," repair, overhaul or refurbishing of items controlled in ECCN 9A620. | Q |
| (b) Reserved. | |

## Table 12. Fire Control, Laser, Imaging, and Guidance Equipment



| Part 1. Fire Control, Laser, Imaging, and Guidance Equipment described in USML Category XII (*) | |
|---|---|
| **Description of items for DEMIL coding** | **DEMIL Code** |
| (a) Fire control, aiming, detection, guidance, and tracking systems, as follows: | |
| ♦ (1) Fire control systems; | D |
| ♦ (2) Electronic or optical weapon positioning, laying, or spotting systems; | D |
| ♦ (3) Laser spot trackers or laser spot detection, location, or imaging systems, with an operational wavelength shorter than 400 nm or longer than 710 nm and that are for laser target designators or coded target markers listed in Paragraph (b)(1); (*) | D |
| ♦ (4) Bomb sights or bombing computers; | D |
| ♦ (5) Electro-optical systems that automatically detect and locate ordnance launch, blast, or fire; | D |
| ♦ (6) Electro-optical ordnance guidance systems; | D |
| ♦ (7) Missile or ordnance electro-optical tracking systems; | D |
| ♦ (8) Remote wind-sensing systems specially designed for ballistic-corrected aiming; **or** | D |
| (9) Helmet Mounted Display (HMD) systems or end items (e.g., Combat Vehicle Crew HMD, Mounted Warrior HMD, Integrated Helmet Assembly Subsystem, Drivers Head Tracked Vision System), other than such items controlled in USML Category VIII, that: | |
| i. Incorporate or interface (either via wired or wireless connection) with optical sights or slewing devices that aim, launch, track, or manage munitions; **or** | D |
| ii. Control infrared imaging systems or end items described in Paragraphs (a) through (d) of this category. | D |

**Table 12. Fire Control, Laser, Imaging, and Guidance Equipment, Continued**

| Description of items for DEMIL coding | DEMIL Code |
|---|---|
| ♦ (b) Laser systems and end items, as follows: | |
| (1) Laser target designators or coded target markers, that mediate the delivery of ordnance to a target; | D |
| (2) Target illumination systems having a variable beam divergence and a laser output wavelength exceeding 710 nm, to artificially light an area to search, locate, or track a target: | D |
| (3) Laser rangefinders having any of the following: | |
| i. Output wavelength of 1064 nm and any Q-switched pulse output; **or** | D |
| ii. Output wavelength exceeding 1064 nm and any of the following: | D |
| a. Single or multiple shot(s) within one second ranging capability of 3 km or greater against a standard 2.3 m x 2.3 m North Atlantic Treaty Organization target having 10 percent reflectivity and 23 km atmospheric visibility; **or** | D |
| b. Multiple shot ranging capability at 3 Hz or greater of 1 km or greater against a standard 2.3 m x 2.3 m North Atlantic Treaty Organization target having 10 percent reflectivity and 23 km atmospheric visibility. | D |
| (4) Targeting systems and target location systems, incorporating or specially designed to incorporate both of the following: | |
| i. A laser rangefinder. **And** | D |
| ii. A defense article listed in Paragraph (d) of this category; | D |
| (5) Systems specially designed to use laser energy with an output wavelength exceeding 710 nm for exploiting differential target-background retro- reflectance in order to detect optical or electro-optical equipment (e.g., optical augmentation systems); | D |
| (6) Light Detection and Ranging (LIDAR), Laser Detection and Ranging (LADAR), or range-gated systems, specially designed for a military end user; (MT if designed or modified for rockets, missiles, SLVs, drones, or unmanned aerial vehicle systems capable of delivering at least a 500 kg payload to a range of at least 300 km); **or** | D |
| (7) Developmental lasers or laser systems funded by the DoD via contract or other funding authorization. (*) | D |
| ♦ (c) Imaging systems or end items, as follows: | |
| (1) Binoculars, bioculars, monoculars, goggles, or head or helmet-mounted imaging systems (including video-based articles having a separate near-to- eye display), as follows: | |
| i. Employing an autogated third generation image intensifier tube or a higher generation image intensifier tube; | D |
| ii. Fusing output of an image intensifier tube and an infrared focal plane array having a peak response wavelength greater than 1,000 nm; **or** | D |

**Table 12. Fire Control, Laser, Imaging, and Guidance Equipment, Continued**

| Description of items for DEMIL coding | DEMIL Code |
|---|---|
| iii. Having an infrared focal plane array or infrared imaging camera, and specially designed for a military end user; | D |
| (2) Weapon sights (i.e., with a reticle) or aiming or imaging systems (e.g., clip-on), specially designed to mount to a weapon or to withstand weapon shock or recoil, with or without an integrated viewer or display, and also incorporating or specially designed to incorporate any of the following: | |
| i. An infrared focal plane array having a peak response wavelength exceeding 1,000 nm; | D |
| ii. Second generation with luminous sensitivity greater than 350 milliamperes lumens, third generation, or higher generation, image intensifier tubes; | D |
| iii. Ballistic computing electronics for adjusting the aim point display; **or** | D |
| iv. Infrared laser having a wavelength exceeding 710 nm; | D |
| (3) Electro-optical reconnaissance, surveillance, target detection, or target acquisition systems, specially designed for articles in this table or specially designed for a military end user (MT if for determining bearings to specific electromagnetic sources (direction finding equipment) or terrain characteristics and designed or modified for rockets, missiles, SLVs, drones, or unmanned aerial vehicle systems capable of delivering at least a 500 kg payload to a range of at least 300 km); | D |
| (4) Infrared Search and Track systems (IRST) having one of the following: | |
| i. Airborne or naval systems, that: | |
| a. Have range performance of 3 km or greater; | D |
| b. Incorporate or are specially designed to incorporate an infrared focal plane array or imaging camera, having a peak response wavelength exceeding 3 microns or greater; **and** | D |
| c. Maintain positional or angular state of a target through time; or | D |
| ii. Specially designed for a military end user; | D |
| (5) Distributed aperture systems having a peak response wavelength exceeding 710 nm specially designed for articles in this table or specially designed for a military end user; | D |
| (6) Infrared imaging systems, as follows: | |
| i. Mobile reconnaissance, scout, or surveillance systems providing real-time target recognition at ranges greater than 3 km (e.g., long range advanced scout surveillance system, commanders independent sight, horizontal technology integration, SeeSpot, meteorological measuring set); (*) | D |

**Table 12. Fire Control, Laser, Imaging, and Guidance Equipment, Continued**

| Description of items for DEMIL coding | DEMIL Code |
|---|---|
| ii. Airborne stabilized systems specially designed for military reconnaissance (e.g., DB–110, C–B4); | D |
| iii. Multispectral imaging systems that provide automated classification or identification of military or intelligence targets or characteristics; | D |
| iv. Automated missile detection or warning systems; | D |
| v. Systems hardened to withstand electromagnetic pulse (EMP), directed energy, chemical, biological, or radiological threats; | D |
| vi. Systems incorporating mechanism(s) to reduce the optical chain signature for optical augmentation; | D |
| vii. Persistent surveillance systems with a ground sample distance (GSD) of 0.5 m or better (smaller) at 10,000 ft or higher above ground level and a simultaneous coverage area of 3 square kilometer or greater; | D |
| viii. Gimbaled infrared systems, as follows: | |
| a. Having a stabilization better (less) than 30 microradians root-mean- square (RMS) and a turret with a ball diameter of 15 inches or greater; **or** | D |
| b. Specially designed for articles in Tables 3 to 23 or specially designed for a military end user; | D |
| (7) Terahertz imaging systems as follows: | |
| i. Concealed object detection systems operating in the frequency range from 30 GHz to 3000 GHz, and having a resolution less (better) than 0.1 milliradians at a standoff range of 100 m; **or** | D |
| ii. Specially designed for a military end user; | D |
| (8) Systems or equipment, incorporating an ultraviolet or infrared (IR) beacon or emitter, specially designed for Combat Identification; | D |
| (9) Systems that project radiometrically calibrated scenes at a frame rate greater than 30 Hz directly into the entrance aperture of an electro-optical or infrared (EO/IR) sensor listed in this table within either the spectral band exceeding 10 nm but not exceeding 400 nm, or the spectral band exceeding 900 nm but not exceeding 30,000 nm; | D |
| (10) Developmental electro-optical, infrared, or terahertz systems funded by the DoD. (*) | D |

**Table 12. Fire Control, Laser, Imaging, and Guidance Equipment, Continued**

| Description of items for DEMIL coding | DEMIL Code |
|---|---|
| (d) Guidance and navigation systems or end items, as follows: (*) | |
| (1) Guidance or navigation systems (e.g., inertial navigation systems, inertial reference units, attitude and heading reference systems) having any of the following: (*) | |
| i. A circular error probability at fifty percent (CEP50) of position error rate less (better) than 0.28 nautical miles per hour, without the use of positional aiding references; | D |
| ii. A heading error or true north determination of less (better) than 0.28 mrad secant (latitude) (0.016043 degrees secant (latitude)), without the use of positional aiding references; | D |
| iii. A CEP50 of position error rate less than 0.2 nautical miles in an 8 hour period, without the use of positional aiding references; **or** | D |
| iv. Meeting or exceeding specified performance at linear acceleration levels exceeding 25g (MT if designed or modified for rockets, missiles, SLVs, drones, or unmanned aerial vehicle systems capable of a range greater than or equal to 300 km or incorporating accelerometers specified in paragraph (e)(11) or gyroscopes or angular rate sensors specified in paragraph (e)(12) of this category that are designated MT); | D |
| (2) Global Navigation Satellite System (GNSS) receiving equipment, as follows (*) | |
| i. GNSS receiving equipment specially designed for military applications; | D |
| ii. Global positioning system (GPS) receiving equipment specially designed for encryption or decryption (e.g., Y-Code, M-Code) of GPS precise positioning service (PPS) signals; | D |
| iii. GNSS receiving equipment specially designed for use with an antenna described in Paragraph (c)(10) of Table 13; **or** | D |
| iv. GNSS receiving equipment specially designed for use with rockets, missiles, SLVs, drones, or unmanned air vehicle systems capable of delivering at least a 500 kg payload to a range of at least 300 km. (*) | D |
| (3) GNSS anti-jam systems specially designed for use with an antenna described in Paragraph (c)(10) of Table 13. | D |
| (4) Mobile relative gravimeters having automatic motion compensation with an in-service accuracy of less (better) than 0.4 mGal; (MT if designed or modified for airborne or marine use and having a time to steady-state registration of two minutes or less); | D |

**Table 12. Fire Control, Laser, Imaging, and Guidance Equipment, Continued**

| Description of items for DEMIL coding | DEMIL Code |
|---|---|
| (5) Mobile gravity gradiometers having an accuracy of less (better) than 10 Eotvos squared per radian per second for any component of the gravity gradient tensor and having a spatial gravity wavelength resolution of 50 m or less; (MT if designed or modified for airborne or marine use); (*) | D |
| (6) Developmental guidance or navigation systems funded by the DoD. (MT if designed or modified for rockets, missiles, SLVs, drones, or unmanned aerial vehicle systems capable of a range equal to or greater than 300 km). (*) | D |
| (e) Parts, components, accessories, or attachments, as follows: | |
| (1) Parts and components specially designed for articles described in Paragraph (a)(1) or (a)(5) of this category; | D |
| (2) Lasers specially designed for articles in subchapter; | D |
| (3) Laser stacked arrays specially designed for articles in subchapter; | D |
| (4) Night vision or infrared cameras (e.g., camera core) specially designed for articles in this subchapter; (*) | D |
| (5) Infrared focal plane arrays specially designed for articles in tables 3 to 23; | D |
| (6) Charge multiplication focal plane arrays exceeding 50 milliampere per watt for any wavelength exceeding 760 nm and specially designed for articles described in Part 1 of this table. | D |
| (7) Second generation and greater image intensifier tubes specially designed for articles in this table, and specially designed parts and components therefor; (*) | D |
| (8) Parts and components specially designed for articles described in Paragraph (c)(3), (c)(4), (c)(5) or (c)(6)(vi)-(vii) of this category; | D |
| (9) Inertial measurement units specially designed for articles in this subchapter (MT for systems incorporating accelerometers specified in paragraph (e)(11) or gyroscopes or angular rate sensors specified in paragraph (e)(12) that are designated MT) | D |
| (10) GNSS security devices (e.g., Selective Availability Anti-Spoofing Modules (SAASM), Security Modules (SM), and Auxiliary Output Chips (AOC)); | D |
| (11) Accelerometers having a bias repeatability of less (better) than 10 ug and a scale factor repeatability of less (better) than 10 parts per million, or capable of measuring greater than 100,000 g; (*) | D |
| (12) Gyroscopes or angular rate sensors as follows: (*) | |
| (i) Having an angle random walk of less (better) than 0.001 degrees per square root hour; **or** | D |
| (ii) Mechanical gyroscopes or rate sensors having a bias repeatability less (better) than 0.0015 degrees per hour (MT if having a rated drift stability of less than 0.5 degrees (1 sigma or rms) per hour in a 1 g environment or specified to function at acceleration levels greater than 100 g); | D |

**Table 12. Fire Control, Laser, Imaging, and Guidance Equipment, Continued**

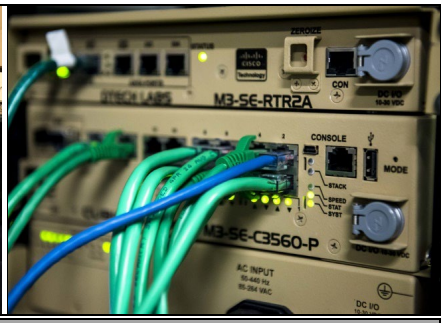
| Description of items for DEMIL coding | DEMIL Code |
|---|---|
| (13) Optical sensors having a spectral filter specially designed for systems or equipment controlled in Category xi (a)(4), or optical sensor assemblies that provide threat warning or tracking for systems or equipment controlled in Category xi (a)(4); | D |
| (14) Infrared focal plane array readout integrated circuits (ROICs) specially designed for articles in this subchapter; | D |
| (15) Integrated dewar cooler assemblies specially designed for articles in this subchapter, with or without an infrared focal plane array, and specially designed parts and components therefor; | D |
| (16) Gimbals specially designed for articles listed in this category; | D |
| (17) Infrared focal plane array Joule-Thomson (JT) self-regulating cryostats specially designed for articles controlled in this subchapter; | D |
| (18) Infrared lenses, mirrors, beam splitters or combiners, filters, and treatments and coatings, specially designed for articles described in this category; (*) | D |
| (19) Drive, control, signal, or image processing electronics, specially designed for articles described in this category; | D |
| (20) Near-to-eye displays (e.g., micro-displays) specially designed for articles described in this category; | D |
| (21) Resonators, receivers, transmitters, modulators, gain media, drive electronics, and frequency converters, specially designed for laser systems described in this category; | D |
| (22) Two-dimensional infrared scene projector emitter arrays (i.e., resistive arrays) specially designed for infrared scene generators controlled in USML Category IX (a)(10); | D |
| ♦ (23) Any part, component, accessory, attachment, or associated equipment, that: | |
| i. Is classified. | P |
| ii. Contains classified software from the manufacturer; **or** | P |
| iii. Is unclassified but being developed using classified information. | D |
| (24) Developmental image intensifier tubes, focal plane arrays, read-out integrated circuits, accelerometers, gyroscopes, angular rate sensors, and inertial measurement units funded by the DoD. (*) | D |
| (f) See Subpart 120.10 of Title 22, CFR for technical data and Subpart 120.9 of Title 22, CFF for defense services directly related to the defense articles described in Paragraphs (a) through (e) of this table and classified technical data directly related to items controlled in ECCNs 7A611, 7B611, and 7D611. See Subpart 125.4 of Title 22, CFR for exemptions. | D |
| (g) through (w) Reserved. | |
| (x) Commodities, software, and technology subject to the EAR used in or with defense articles in this table. | D |
| (*) Additional notes located in the ITAR | |

**Table 12. Fire Control, Laser, Imaging, and Guidance Equipment, Continued**

| **Part 2. Military items described in the CCL** | |
|---|---|
| **Military fire control, laser, imaging, and guidance equipment** | **ECCN 7A611** |
| **Description of items for DEMIL coding** | **DEMIL Code** |
| (a) Guidance or navigation systems, not elsewhere specified on Part 1 of Tables 3 to 23, that are "specially designed" for a defense article in Part 1 of Tables 3 to 23 or for a 600 series ECCN item described in Part 2 of Tables 3-23. | D |
| (b) through (w) Reserved. | |
| (x) "Parts," "components," "accessories," and "attachments," including accelerometers, gyros, angular rate sensors, gravity meters (gravimeters), and inertial measurement units (IMUs), that are "specially designed" for defense articles described in Part 2 of Tables 3 to 23, and that are not: | |
| (1) Enumerated or controlled in the USML or elsewhere within ECCN 7A611. | Q |
| (2) Described in ECCNs 6A007, 6A107, 7A001, 7A002, 7A003, 7A101, 7A102 or 7A103. | Q |
| (3) Elsewhere specified in paragraph (y) of ECCN 7A611 or 3A611. | Q |
| (y) Specific "parts," "components," "accessories," and "attachments" "specially designed" for a commodity subject to control in this ECCN or a defense article in Category XII and not elsewhere specified on the USML or in the CCL, as follows, and "parts," "components," "accessories," and "attachments" "specially designed" therefor: | A |
| **Test, inspection, and production equipment and related commodities "specially designed" for military fire control, laser, imaging, and guidance equipment,** | **ECCN 7B611** |
| **Description of items for DEMIL coding** | **DEMIL Code** |
| (a) Test, inspection, and production end items and equipment "specially designed" for the "development", "production", repair, overhaul, or refurbishing of commodities described in Part 2 ECCN 7A611 (except Paragraph (y) of this table or commodities in USML Category XII that are not described in Part 1 of this table or Part 2 of Tables 3 to 23. | Q |
| (b) Environmental test facilities "specially designed" for the certification, qualification, or testing of commodities controlled in ECCN 7A611 (except Paragraph (y) of 7A611) or guidance equipment in Part 1 that are not specifically described in Part 1 of this table or Part 2 of Tables 3 to 23. | N/A |
| (c) Field test equipment "specially designed" to evaluate or calibrate the operation of systems described in Paragraphs (a), (b), or (c) of Part 1 of this table. | Q |
| (d) through (w) Reserved. | |
| (x) "Parts", "components", "accessories", and "attachments" that are "specially designed" for a commodity described in this table and that are not described in Part 1 or Part 2 of Tables 3 to 23. | Q |

## Table 13. Materials and Miscellaneous Articles






| Part 1. Materials and Miscellaneous Articles described in USML Category XIII | |
|---|---|
| **Description of items for DEMIL coding** | **DEMIL Code** |
| (a) Reserved. | |
| (b) Information security or information assurance systems and equipment, cryptographic devices, software, and components, as follows; | |
| (1) Military or intelligence cryptographic (including key management) systems, equipment assemblies, modules, integrated circuits, components, and software (including their cryptographic interfaces) capable of maintaining secrecy or confidentiality of information or information systems, including equipment and software for tracking, telemetry, and control (TT&C) encryption and decryption; | D |
| (2) Military or intelligence cryptographic (including key management) systems, equipment, assemblies, modules, integrated circuits, components, and software (including their cryptographic interfaces) capable of generating spreading or hopping codes for spread spectrum systems or equipment; | D |
| (3) Military or intelligence cryptanalytic systems, equipment, assemblies, modules, integrated circuits, components, and software; | D |
| (4) Military or intelligence systems, equipment, assemblies, modules, integrated circuits, components, and software (including all previous or derived versions) authorized to control access to or transfer data between different security domains as described on the Unified Cross Domain Management Office (UCDMO) Control List (UCL); **or** | D |
| (5) Ancillary equipment specially designed for the articles in Paragraphs (b)(1)–(4) of this category. | C |
| (c) Reserved. | |

**Table 13. Materials and Miscellaneous Articles**

| Description of items for DEMIL coding | DEMIL Code |
|---|---|
| (d) Materials, as follows: (*) | |
| ♦ (1) Ablative materials fabricated or semi-fabricated from advanced composites (e.g., silica, graphite, carbon, carbon/carbon, and boron filaments) specially designed for the articles in USML Category IV or XV (MT if usable for nozzles, re-entry vehicles, nose tips, or nozzle flaps usable in rockets, space launch vehicles (SLVs), or missiles capable of achieving a range greater than or equal to 300 km); or | D |
| (2) Carbon/carbon billets and preforms that are reinforced with continuous unidirectional fibers, tows, tapes, or woven cloths in three or more dimensional planes (MT if designed for rocket, SLV, or missile systems and usable in rockets, SLVs, or missiles capable of achieving a range greater than or equal to 300 km). (*) | D |
| (e) Armor (e.g., organic, ceramic, metallic) and armor materials, as follows: | |
| (1) Spaced armor with $E_m$ greater than 1.4 and meeting NIJ Level III or better | D |
| (2) Transparent armor having $E_m$ greater than or equal to 1.3 or having $E_m$ less than 1.3 and meeting and exceeding NIJ Level III standards with areal density less than or equal to 40 pounds per square foot; | D |
| (3) Transparent ceramic plate greater than 1⁄4 inch-thick and larger than 8 inches x 8 inches, excluding glass, for transparent armor; | D |
| (4) Non-transparent ceramic plate or blanks, greater than 1⁄4 inches thick and larger than 8 inches x 8 inches for transparent armor. This includes spinel and aluminum oxynitride (ALON); | D |
| (5) Composite armor with $E_m$ greater than 1.4 and meeting or exceeding NIJ Level III; | D |
| (6) Metal laminate armor with $E_m$ greater than 1.4 and meeting or exceeding NIJ Level III; **or** | D |
| (7) Developmental armor funded by the DoD via contract or other funding authorization. (*) | D |
| ♦ (f) Any article described in this table that: | |
| i. Is classified; | P |
| ii. Contains classified software from the manufacturer; **or** | P |
| iii. Is unclassified but being developed using classified information; | D |
| ♦ (g) Concealment and deception equipment as follows (MT for applications usable for rockets, SLVs, missiles, drones, or unmanned aerial vehicles (UAVs) capable of achieving a range greater than or equal to 300 km and their subsystems. See note to paragraph (d) of this category): | |
| (1) Polymers loaded with carbonyl iron powder, ferrites, iron whiskers, fibers, flakes, or other magnetic additives having a surface resistivity of less than 5000 Ohms per square and greater than 10 Ohms per square with electrical isotropy of less than 5 percent; | D |

## Table 13. Materials and Miscellaneous Articles

| Description of items for DEMIL coding | DEMIL Code |
|---|---|
| (2) Multi-layer camouflage systems specially designed to reduce detection of platforms or equipment in the infrared or ultraviolet frequency spectrums; | D |
| (3) High temperature (greater than 300 degrees Fahrenheit operation) ceramic or magnetic radar absorbing material (RAM) specially designed for use on defense articles or military items subject to the EAR in accordance with Parts 730- 774 of Title 15, CFR; **or** | D |
| (4) Broadband (greater than 30% bandwidth) lightweight (less than 2 lbs/sq ft) magnetic radar absorbing material (RAM) specially designed for use on defense articles or military items subject to the EAR. | D |
| (h) Energy conversion devices not otherwise enumerated in this subchapter, as follows: | |
| (1) Fuel cells specially designed for platforms or soldier systems specified in this subchapter; | D |
| (2) Thermal engines specially designed for platforms or soldier systems specified in this subchapter; | D |
| (3) Thermal batteries (MT if designed or modified for rockets, SLVs, missiles, drones, or UAVs capable of achieving a range equal to or greater than 300 km. See note to paragraph (d) of this category); **or (*)** | |
| a. USDOT HazMat rating of 1.4 or higher (e,g, 1.3, 1.2 are higher ratings) are considered "Explosive" (as defined in the Class 1 Definitions of Part 173.50 of Title 49, CFR Class 1 Definitions). | G |
| b. USDOT HazMat rating of less than 1.4. | F |
| (4) Thermionic generators specially designed for platforms or soldier systems subchapter. | D |
| ♦ (i) Signature reduction software and technical data for items in this table. (MT for software specially designed for reduced observables, for applications usable for rockets, SLVs, missiles, drones, or UAVs capable of achieving a range (see note to paragraph (d) of this category) greater than or equal to 300 km, and their subsystems, including software specially designed for analysis of signature reduction; MT for technical data for the development, production, or use of equipment, materials, or software designated as such, including databases specially designed for analysis of signature reduction): (*) | D |
| (j) Equipment, materials, coatings, and treatments not elsewhere specified specially designed for the military. (*) | D |
| ♦ (k) Tooling and equipment, as follows: | |
| (1) Tooling and equipment specially designed for production of low observable components; **or** | D |
| (2) Portable platform signature field repair validation equipment (e.g., portable optical interrogator that validates integrity of a repair to a signature reduction structure). | D |

**Table 13. Materials and Miscellaneous Articles, Continued**

| Description of items for DEMIL coding | DEMIL Code |
|---|---|
| (l) Decals, labels, and technical manuals containing technical data directly related to the items listed in this table described as either: | |
| (i) Classified **or** | P |
| (ii) Unclassified. | D |
| (m) The following interpretations explain and amplify terms used in this category and elsewhere in this subchapter: (*) | |
| (n)–(w) [Reserved] | |
| (*) Additional notes located in the ITAR | |
| **Part 2. Military items described in the CCL** | |
| **Miscellaneous "equipment", materials, and related commodities.** | **ECCN 0A617** |
| **Description of items for DEMIL coding** | **DEMIL Code** |
| (a) Reserved. | |
| (b) Concealment and deception equipment "specially designed" for military application, including special paints, decoys, smoke, or obscuration equipment and simulators, and "parts", "components", "accessories", and "attachments" "specially designed", not described by Part 1. | Q |
| (c) Ferries, bridges (other than those described in Part 1 of Table 9 or in ECCN 0A606 in Part 2 of Table 9), and pontoons "specially designed" for military use. | Q |
| (d) Test models "specially designed" for the "development" of defense articles described USML Categories IV, VI, VII and VIII | Q |
| (e) Reserved. | |
| (f) "Metal embrittlement agents". | Q |
| (g) through (x) Reserved. | |
| (y) Other commodities as follows, and "parts," "components," "accessories," and "attachments" "specially designed" therefore: | |
| (1) "Specially designed" construction equipment for military use, including such equipment "specially designed" for transport in aircraft described by Paragraph (a), Part 1 of Table 10 or in ECCN 9A610 in Part 2 of Table 10. | A |
| (2) "Specially designed" "parts", "components"," accessories", and "attachments" for commodities in Paragraph (y)(1) of this table, including crew protection kits used as protective cabs. | A |
| (3) ISO intermodal containers or demountable vehicle bodies (i.e., swap bodies), not elsewhere specified, "specially designed" or 'modified' for shipping or packing defense articles or items described in Part 2 of Tables 3 to 23. Modified means any structural, electrical, mechanical, or other change that provides a non- military item with military capabilities equivalent to an item "specially designed" for military use. (*) | A |

## Table 13. Materials and Miscellaneous Articles, Continued

| Description of items for DEMIL coding | DEMIL Code |
|---|---|
| (4) Field generators "specially designed" for military use. | A |
| (5) Power controlled searchlights and control units therefor, "specially designed" for military use, and "equipment" mounting such units. | A |
| (*) Additional notes located in the CCL | |
| **Test, inspection, and production "equipment" and related commodities "specially designed" for the "development", "production", repair, overhaul, or refurbishing of commodities described in ECCN 0A617.a or USML Category XIII, and "parts", "components", "accessories", and "attachments" "specially designed" therefor.** | **ECCN 0B617** |
| **Description of items for DEMIL coding** | **DEMIL Code** |
| (a) Test, inspection, and production "equipment" not described by Paragraph (k) of this table, "specially designed" for the "production", "development", "repair", overhaul, or refurbishing of commodities described in ECCN 0A617 in Part 2 of this table or Part 1 of this table, and "parts"," components", "accessories", and "attachments" "specially designed" therefor. (*) | C |
| (b) Reserved. | |
| (*) Additional notes located in the CCL | |
| **Miscellaneous materials "specially designed" for military use.** | **ECCN 0C617** |
| **Description of items for DEMIL coding** | **DEMIL Code** |
| (a) Materials, coatings, and treatments for signature suppression, "specially designed" for military use to reduce detectability or observability and that are not described by USML Category XIII or ECCNs 1C001 or 1C101. | Q |
| (b) Reserved. | |

## Table 14. Toxicological Agents, Including Chemical Agents, Biological Agents, and Associated Equipment



| Part 1. Toxicological Agents, Including Chemical Agents, Biological Agents, and Associated Equipment described in USML Category XIV | |
|---|---|
| **Description of items for DEMIL coding** | **DEMIL Code** |
| ♦ (a) Chemical agents, as follows: (*) | |
| (1) Nerve agents (see Subpart 121.1 of Title 22, CFR for a complete list); | G |
| (2) Amiton (see Subpart 121.1 of Title 22, CFR for a complete list); | G |
| (3) Vesicant agents (see Subpart 121.1 of Title 22, CFR for a complete list); | G |
| (4) Incapacitating agents (see Subpart 121.1 of Title 22, CFR for a complete list); | G |
| (5) Chemical warfare agents not enumerated above adapted for use in war to produce casualties in humans or animals, degrade equipment, or damage crops or the environment. (See the CCL at ECCNs 1C350, 1C355, and 1C395 for control of certain chemicals not adapted for use in war.) (See Subpart 121.1 of Title 22, CFR for a complete list of exclusions); | G |
| ♦ (b) Biological agents and biologically derived substances and genetic elements thereof (see Subpart 121.1 of Title 22, CFR for a complete list); (*) | |
| (1) Genetically modified biological agents: (see Subpart 121.1 of Title 22, CFR for a complete list); | G |
| (2) Biological agent or biologically derived substances controlled in ECCNs 1C351, 1C353, or 1C354: | G |
| ♦ (c) Chemical agent binary precursors and key precursors (see Subpart 121.1 of Title 22, CFR for a complete list); (*) | |
| (1) Alkyl (Methyl, Ethyl, n-Propyl or Isopropyl) phosphonyl difluorides, such as: DF: Methyl Phosphonyldifluoride (CAS 676–99–3) (CWC Schedule 1B); Methylphosphinyldifluoride (CAS 753–59–3) (CWC Schedule 2B); (see Sub-part 121.1 of Title 22, CFR for a complete list); | G |
| (2) O-Alkyl (H or equal to or less than $C_{10}$, including cycloalkyl) O–2-dialkyl (methyl, ethyl, n-Propyl or isopropyl) aminoethyl alkyl (methyl, ethyl, N-propyl or isopropyl) phosphonite and corresponding alkylated and protonated salts, such as QL: O-Ethyl-2-di-isopropylaminoethyl methylphosphonite (CAS 57856–11–8) (CWC Schedule 1B); (see Subpart 121.1 of Title 22, CFR for a complete list); | G |

## Table 14. Toxicological Agents, Including Chemical Agents, Biological Agents, and Associated Equipment, Continued

| Description of items for DEMIL coding | DEMIL Code |
|---|---|
| (3) Chlorosarin: O-Isopropyl methylphosphonochloridate (CAS 1445–76–7) (CWC Schedule 1B); (see Subpart 121.1 of Title 22, CFR for a complete list); | G |
| (4) Chlorosoman: O-Pinacolyl methylphosphonochloridate (CAS 7040–57–5) (CWC Schedule 1B); or(see Subpart 121.1 of Title 22, CFR for a complete list); | G |
| (5) Methylphosphonyl dichloride (CAS 676–97–1) (CWC Schedule 2B); Methylphosphinyldichloride (CAS 676–83–5) (CWC Schedule 2B). (see Subpart 121.1 of Title 22, CFR for a complete list); | G |
| (d) Reserved | |
| (e) Defoliants (see Subpart 121.1 of Title 22, CFR for a complete list); | G |
| ♦ (f) Parts, components, accessories, attachments, associated equipment, materials, and systems, as follows: | |
| (1) Any equipment for the dissemination, dispersion, or testing of articles controlled in paragraphs (a), (b), (c), or (e) of this category, as follows: | |
| (i) Any equipment specially designed for the dissemination and dispersion of items described in Paragraphs (a), (b), (c), or (e) of this category; **or** | D |
| (ii) Any equipment specially designed for testing the items described in Paragraphs (a), (b), (c), (e), or (f)(4) developed under a DoD contract or other funding authorization. | D |
| (2) Any equipment containing reagents, algorithms, coefficients, software, libraries, spectral databases, or alarm set point levels developed under a DoD contract or other funding authorization for the detection, identification, warning, or monitoring of: (*) | |
| (i) Items described in Paragraphs (a) or (b) of this category; **or** | D |
| (ii) Chemical or biological agents under a DoD contract or other funding authorization. | D |
| (3) Reserved. | |
| (4) For individual protection or collective protection against the items described in Paragraphs (a) and (b) of this category, as follows: | |
| (i) M53 Chemical Biological Protective Mask or M50 Joint Service General Purpose Mask (JSGPM). | F |
| (ii) Filter cartridges containing sorbents described in Paragraph (f)(4)(iii) or (n) of this category; | F |
| (iii) Carbon meeting Military Detail Specification (MIL-DTL)-32101A specifications (e.g., ASZM-TEDA carbon); **or** | F |
| (iv) Ensembles, garments, suits, jackets, pants, boots, or socks for individual protection, and liners for collective protection that allow no more than 1% breakthrough of GD or no more than 2% breakthrough of any other chemical controlled in Paragraph (a) of Part 1 of this table, when evaluated by executing the applicable standard method(s) of testing described in the current version of Test Operating Procedures 08-2-201 or 08-2-501 and using the defined DoD-specific requirements; | F |

## Table 14. Toxicological Agents, Including Chemical Agents, Biological Agents, and Associated Equipment, Continued

| Description of items for DEMIL coding | DEMIL Code |
|---|---|
| (5) through (6) Reserved. | |
| (7) Chemical Agent Resistant Coatings that have been qualified to Military Specifications MIL-PRF-32348, MIL- DTL-64159, or MIL-C-53039A; **or** | F |
| (8) Any part, component, accessory, attachment, equipment, or system that: | |
| (i) Is classified; | P |
| (ii) Contains classified software from the manufacturer; **or** | P |
| (iii) Is unclassified but being developed using classified information; | D |
| (g) Antibodies, recombinant protective antigens, polynucleotides, biopolymers, or biocatalysts (including their expression vectors, viruses, plasmids, or cultures of specific cells modified to produce them) (see Subpart 121.1 of Title 22, CFR for a complete list) as follows: | |
| (1) When exclusively funded by a Department of Defense contract for detection of the biological agents at paragraph (b)(1)(ii) of this category even if naturally occurring; (see Subpart 121.1 of Title 22, CFR for a complete list); | F |
| (2) Joint Biological Agent Identification and Diagnostic System (JBAIDS) Freeze Dried reagents listed by JRPD–ASY–No and Description respectively as follows: (see Subpart 121.1 of Title 22, CFR for a complete list); | F |
| (3) Critical Reagent Polymerase (CRP) Chain Reactions (PCR) assay kits with Catalog-ID and Catalog-ID Product respectively as follows: (see Subpart 121.1 of Title 22, CFR for a complete list); | F |
| (4) Critical Reagent Program Antibodies with Catalog ID and Product respectively as follows: (see Subpart 121.1 of Title 22, CFR for a complete list); | F |
| (h) Vaccines exclusively funded by a DoD contract (see Subpart 121.1 of Title 22, CFR for a complete list) as follows: (*) | |
| (1) Recombinant Botulinum ToxinA/B Vaccine; | F |
| (2) Recombinant Plague Vaccine; | F |
| (3) Trivalent Filovirus Vaccine; or | F |
| (4) Vaccines specially designed for the sole purpose of protecting against biological agents and biologically derived substances identified in paragraph (b) of this category. | F |
| (i) Modeling or simulation tools, including software controlled in paragraph (m) of this category, for chemical or biological weapons design, development, or employment developed or produced under a Department of Defense contract or other funding authorization (e.g., the Department of Defense's HPAC, SCIPUFF, and the Joint Effects Model (JEM)). | D |
| (j) through (l) Reserved | |
| (m) Decals, labels, and technical manuals containing technical data directly related to the items listed in this table described as either: | |
| (i) Classified **or** | P |
| (ii) Unclassified. | D |

## Table 14. Toxicological Agents, Including Chemical Agents, Biological Agents, and Associated Equipment, Continued

| Description of items for DEMIL coding | DEMIL Code |
|---|---|
| (n) Developmental countermeasures or sorbents funded by the DoD via contract or other funding authorization;(*) | F |
| (o) through (w) Reserved | |
| (*) Additional notes located in the ITAR | |
| **Part 2. Military items described in the CCL** | |
| **Military dissemination "equipment" for riot control agents, military detection, and protection "equipment "for toxicological agents (including chemical, biological, and riot control agents), and related commodities** | **ECCN 1A607** |
| **Description of items for DEMIL coding** | **DEMIL Code** |
| (a) through (d) Reserved. | |
| (e) "Equipment" "specially designed" for military use and for the dissemination of any of the riot control agents described in ECCN 1C607, Paragraph (a), Part 2. | Q |
| (f) Protection "equipment" (including air conditioning units, protective coatings, and protective clothing): | |
| (1) Not described in Paragraph (f), Part 1 of this table and | Q |
| (2) "Specially designed" for military use and for defense against: | Q |
| a. Materials specified in Paragraphs (a) or (b) of Part 1, **or** | Q |
| b. Riot control agents described for ECCN 1C607, paragraph (a) of Part 2. | Q |
| (g) Decontamination " equipment": | |
| (1) Not described in Paragraph (f). | Q |
| (2) "Specially designed" for military use and for decontamination of objects contaminated with materials described in Part 1 paragraphs (a) or (b). | Q |
| (h) " Equipment": | |
| (1) Not described in Part 1 Paragraph (f), and | Q |
| (2) "Specially designed" for military use and for the detection or identification of: | Q |
| a. Materials described in Part 1 Paragraphs (a) or (b), **or** | Q |
| b. Riot control agents described in ECCN 1C607, paragraph (a). | Q |
| (i) Reserved. | |
| (j) "Equipment" "specially designed" to: | |
| (1) Interface with a detector, shelter, vehicle, vessel, or aircraft controlled by the USML or a "600 series" ECCN; and | Q |
| (2) Collect and process samples of articles described in Part 1 paragraphs (a) or (b). | Q |

## Table 14. Toxicological Agents, Including Chemical Agents, Biological Agents, and Associated Equipment, Continued

| Description of items for DEMIL coding | DEMIL Code |
|---|---|
| (k) Medical countermeasures that are "specially designed" for military use (including pre- and post-treatments, antidotes, and medical diagnostics) and "specially designed" to counter chemical agents described in Part 1 Paragraph (a). | Q |
| (l) through (w) Reserved. | |
| (x) "Parts", "components", "accessories", and "attachments" that are "specially designed" for an item described in ECCN 1A607 Paragraphs (e), (f), (g), or (j) or described in Paragraph (f) of Part 1 and that are not described elsewhere in Part 1 of Tables 3 to 23. | Q |
| **Military test, inspection, and production "equipment" and related commodities "specially designed" for the "development", "production", repair, overhaul, or refurbishing of commodities described in ECCN 1A607 or 1C607, or defense articles enumerated or otherwise described in USML Category XIV** | **ECCN 1B607** |
| **Description of items for DEMIL coding** | **DEMIL Code** |
| (a) "Equipment" "specially designed" for the destruction of the chemical agents described in Part 1 Paragraph (a). (*) | Q |
| (b) Test facilities and "equipment" "specially designed" for military certification, qualification, or testing of commodities described in ECCN 1A607 (e), (f), (g), or (j) or in Part 1 Paragraph (f) (except (f)(1). | Q |
| (c) Tooling and "equipment" "specially designed" for the "development," "production," repair, overhaul, or refurbishing of commodities described in ECCN 1A607 (e), (f), (g), (h), or (j) or Part 1 Paragraph (f). | Q |
| (d) through (w) Reserved. | |
| (x) "Parts", "components," "accessories," and "attachments" that are "specially designed" for a commodity described in ECCN 1B607 Paragraphs (b) or (c), or for a defense article described in Part 1 Paragraph (f), and that are not described elsewhere in Part 1 of Tables 3 to 23. | Q |
| (*) Additional notes located in the CCL | |
| **Tear Gases, Riot Control Agents, and materials for the detection and decontamination of chemical warfare agents** | **ECCN 1C607** |
| **Description of items for DEMIL coding** | **DEMIL Code** |
| (a) Tear gases and riot control agents with Chemical Abstracts Service (CAS) numbers found on the American Chemical Society website https://www.cas.org: (See CLL for a complete list "Export Administration Regulations (EAR) (doc.gov)"); | Q |
| (b) "Biopolymers" not described in Part 1 Paragraph (g) "specially designed" or processed for the detection or identification of chemical warfare agents specified in Part 1 Paragraph (a), and the cultures of specific cells used to produce them. | Q |

## Table 14. Toxicological Agents, Including Chemical Agents, Biological Agents, and Associated Equipment, Continued

| Description of items for DEMIL coding | DEMIL Code |
|---|---|
| (c) "Biocatalysts" and biological systems not described in Part 1 Paragraph (g) "specially designed" for the decontamination or degradation of chemical warfare agents described in Part 1 Paragraph (a): | |
| (1) "Biocatalysts" "specially designed" for the decontamination or degradation of chemical warfare agents described in Part 1 Paragraph (a) resulting from directed laboratory selection or genetic manipulation of biological systems; | Q |
| (2) Biological systems containing the genetic information specific to the production of "biocatalysts" described in ECCN 1C607, Paragraph (c)(1). | Q |
| a. "Expression vectors." | Q |
| b. Viruses; or (*) | Q |
| c. Cultures of cells. (*) | Q |
| (d) Chemical mixtures not described in Part 1 Paragraph (f) "specially designed" for military use for the decontamination of objects contaminated with materials specified in Part 1 Paragraphs (a) or (b). | Q |
| (*) Additional notes located in the CCL | |

## Table 15. Spacecraft and Related Articles

| Part 1. Spacecraft and Related Articles described in USML Category XV | |
|---|---|
| **Description of items for DEMIL coding** | **DEMIL Code** |
| (a) Spacecraft, including satellites and space vehicles, whether designated developmental, experimental, research, or scientific, or having a commercial, civil, or military end-use, that: (*) | |
| ♦ (1) Are specially designed to mitigate effects (e.g., scintillation) of or for detection of a nuclear detonation; | D |
| ♦ (2) Autonomously detect and track moving ground, airborne, missile, or space objects other than celestial bodies, in real-time using imaging, infrared, radar, or laser systems; | D |
| ♦ (3) Conduct signals intelligence (SIGINT) or measurement and signatures intelligence (MASINT); | D |
| ♦ (4) Are specially designed to be used in a constellation or formation that when operated together form a virtual satellite (e.g., functioning as if one satellite) with the characteristics or functions of other items in Paragraph (a); | D |
| ♦ (5) Are anti-satellite or anti-spacecraft (e.g., kinetic, RF, laser, charged particle); | D |
| ♦ (6) Have space-to-ground weapons systems (e.g., kinetic or directed energy); | D |
| ♦ (7) Have any of the following electro-optical remote sensing capabilities or characteristics: (*) | D |
| (i) Electro-optical visible and near infrared (VNIR) (i.e., 400 nm to 1,000 nm) or infrared (i.e., greater than 1,000 nm to 30,000 nm) with less than 40 spectral bands and having a clear aperture greater than 0.50 meters; | D |
| (ii) Electro-optical hyperspectral with 40 spectral bands or more in the VNIR, short-wavelength infrared (SWIR) (i.e., greater than 1,000 nm to 2,500 nm) or any combination of the aforementioned and having a Ground Sample Distance (GSD) less than 30 meters; | D |

**Table 15. Spacecraft and Related Article, Continued**

| Description of items for DEMIL coding | DEMIL Code |
|---|---|
| (iii) Electro-optical hyperspectral with 40 spectral bands or more in the mid- wavelength infrared (MWIR) (i.e., greater than 2,500 nm to 5,500 nm) having a narrow spectral bandwidth of (delta lambda (Dl)) less than or equal to 20 nm full width at half maximum (FWHM) or having a wide spectral bandwidth with Dl greater than 20 nm FWHM and a GSD less than 200 meters; **or** | D |
| (iv) Electro-optical hyperspectral with 40 spectral bands or more in the long- wavelength infrared (i.e., greater than 5,500 nm to 30,000 nm) having a narrow spectral bandwidth of limit of the wavelength difference Dl less than or equal to 50 nm FWHM or having a wide spectral bandwidth with Dl greater than 50 nm FWHM and a GSD less than 500 m. | D |
| ♦ (8) Have radar remote sensing capabilities or characteristics (e.g., active electronically scanned array (AESA), synthetic aperture radar (SAR), inverse synthetic aperture radar (ISAR), ultra-wideband SAR, except those having a center frequency equal to or greater than 1 GHZ but less than or equal to 10GHZ and having a bandwidth less than 300 MHz; | D |
| (9) Provide positioning, navigation, and timing (PNT) signals; (*) | D |
| (10) Autonomously perform collision avoidance; | D |
| (11) Are sub-orbital, incorporated propulsion systems described in paragraph (e) of this category or Category IV(d)(1)-(6) of this section, and are specially designed for atmospheric entry or re-entry; | D |
| (12) Are specially designed to provide inspection or surveillance of another spacecraft, or service another spacecraft via grappling or docking; **or (*)** | D |
| ♦ (13) Are classified, contain classified software or hardware, are manufactured using classified production data, or are being developed using classified information (e.g., having classified requirements, specifications, functions, or operational characteristics or include classified cryptographic item described under Part 1 of Table 15). | P |
| (b) Ground control systems or training simulators, specially designed for tracking, telemetry, and control of spacecraft in Paragraph (a) of this category. (*) | C |
| (c) thorough (d) Reserved. | |
| (e) Spacecraft parts, components, accessories, attachments, equipment, or systems, as follows: (*) | |
| (1) Antenna systems specially designed for spacecraft that: | |
| (i) Have a dimension greater than 25 meters in diameter or length of the major axis; | D |
| (ii) Employ active electronic scanning; | D |
| (iii) Are adaptive beam forming; **or** | D |

**Table 15. Spacecraft and Related Article, Continued**

| Description of items for DEMIL coding | DEMIL Code |
|---|---|
| (iv) Are for interferometric radar; | D |
| (2) Space-qualified optics (i.e., lens or mirror or membrane), including optical coating, having one of the following: | |
| (i) Active properties (e.g., adaptive, deformable) with a largest lateral clear aperture dimension greater than 0.35 meters; **or** | D |
| (ii) A largest lateral clear aperture dimension greater than 0.50m; | D |
| (3) Space-qualified focal plane arrays (FPA) having a peak response in the wavelength range exceeding 900 nm and readout integrated circuit (ROIC), whether separate or integrated, specially designed therefor; | D |
| (4) Space-qualified mechanical (i.e., active) cryocooler or active cold finger systems, and associated control electronics specially designed therefor; | D |
| (5) Space-qualified active vibration suppression systems, including active isolation and active dampening systems, and associated control electronics specially designed therefor; | D |
| (6) Optical bench assemblies specially designed to enable spacecraft to meet or exceed the parameters described in Paragraph (a) of this category; | D |
| (7) Space-qualified kinetic or directed-energy systems (e.g., RF, laser, charged particle) specially designed for spacecraft in Paragraph (a)(5) or (a)(6), and specially designed parts and components (e.g., power conditioning and beam-handling or switching, propagation, tracking, and pointing equipment); | D |
| (8) Reserved. | |
| (9) Space-qualified cesium, rubidium, hydrogen maser, or quantum (e.g., based upon aluminum, mercury, ytterbium, strontium, beryllium ions) atomic clocks, and specially designed parts and components therefor; | D |
| (10) Attitude determination and control systems, and specially designed parts and components therefor, that provide a spacecraft's geolocation accuracy, without using ground location points, better than or equal to: | |
| (i) 5 meters circular error at 90 percent confidence (CE90) from low earth orbit (LEO); | D |
| (ii) 30 meters CE90 from medium earth orbit (MEO); | D |
| (iii) 150 meters CE90 from geosynchronous orbit (GEO); **or** | D |
| (vi) 225 meters CE90 from high earth orbit (HEO); | D |
| (11) Space-based systems, and specially designed parts and components therefor, as follows: | |
| (i) Nuclear reactors and associated power conversion systems (e.g., liquid metal or gas-cooled fast reactors); | D |
| (ii) Radioisotope-based power systems (e.g., radioisotope thermoelectric generators); | D |
| (iii) Nuclear thermal propulsion systems (e.g., solid core, liquid core, gas core fission); **or** | D |

**Table 15. Spacecraft and Related Article, Continued**

| Description of items for DEMIL coding | DEMIL Code |
|---|---|
| (iv) Electric (Plasma/Ion) propulsion systems that provide a thrust greater than 300 milli-Newtons and a specific impulse greater than 1,500 sec; or that operated at an input power of more than 15kw; | D |
| (12) Thrusters (e.g., spacecraft or rocket engines) using bi-propellants or mon-opropellant that provide greater than 150 lbf (e.g., 667.23 N) vacuum thrust; | G |
| (13) Control moment gyroscope (CMG) specially designed for spacecraft; | D |
| (14) Space-qualified monolithic microwave integrated circuits (MMIC) that combine transmit and receive (T/R) functions on a single die as follows: | |
| a. Having a power amplifier with maximum saturated peak output power (in watts), Psat greater than 200 divided by the maximum op-erating frequency (in GHz) squared [Psat >200 W*GHz$^2$/ fGHz$^2$]; **or** | D |
| b. Having a common path (e.g., phase shifter-digital attenuator) circuit with greater than 3 bits phase shifting at operating frequencies 10 GHz or below, or greater than 4 bits phase shifting at operating fre-quencies above 10 GHz; | D |
| (15) Space-qualified oscillator for radar in Paragraph (a) of this category with phase noise less than -120 dBc/ Hz + (20 log10(RF) (in GHz)) measured at 2 KHz*RF (in GHz) from carrier; | D |
| (16) Space-qualified star tracker or star sensor with angular accuracy less than or equal to 1 arcsec (1-Sigma) per star coordinate, and a tracking rate equal to or greater than 3.0 degrees per second, and specially designed parts and components therefor; | D |
| ♦ (17) Primary, secondary, or hosted payload that performs any of the functions described in Paragraph (a) of this category; (*) | D |
| ♦ (18) Secondary or hosted payload, and specially designed parts and components, developed with DoD funding; (*) | D |
| (19) Spacecraft heat shields or heat sinks specially designed for atmospheric entry or re-entry, and specially designed parts and components therefor (MT if usa-ble in rockets, SLVs, missiles, drones, or UAVs capable of delivering a pay-load of at least 500 kg to a range of at least 300 km); (*) | D |
| (20) Equipment modules, stages, or compartments that incorporated propulsion systems described in paragraph (e) of this category or Category IV(d)(1)-(6) of this section, and can be separated or jettisoned from another spacecraft; | D |
| ♦ (21) Any part, component, accessory, attachment, equipment, or system that: | |
| (i) Is classified. | P |
| (ii) Contains classified software from the manufacturer; **or** | P |
| (iii) Is unclassified but being developed using classified information. | D |

**Table 15. Spacecraft and Related Article, Continued**

| Description of items for DEMIL coding | DEMIL Code |
|---|---|
| (f) Decals, labels, and technical manuals containing technical data directly related to the items listed in this table described as either: | |
| (1) Classified **or** | P |
| (2) Unclassified. | D |
| (g) through (w) Reserved. | |
| (*) Additional notes located in the ITAR | |
| **Part 2. Military items described in the CCL** | |
| **"Spacecraft" and Related Commodities.** | **ECCN 9A515** |
| **Description of items for DEMIL coding** | **DEMIL Code** |
| (a) "Spacecraft," including satellites, and space vehicles and "sub-orbital craft," whether designated developmental, experimental, research or scientific, not enumerated in USML Category XV or described in ECCN 9A004.u or .w, that: | |
| (1) Have electro-optical remote sensing capabilities and a clear aperture greater than 0.35 meters, but less than or equal to 0.50 meters; | Q |
| (2) Have remote sensing capabilities beyond near infrared (NIR) (i.e., short-wavelength infrared (SWIR), mid-wavelength infrared (MWIR), or Long-wavelength (LWIR)); | Q |
| (3) Have radar remote sensing capabilities (e.g., AESA, SAR, or ISAR) having a center frequency equal to or greater than 1.0 GHz, but less than 10.0 GHz, and a bandwidth equal to or greater than 100 MHz, but less than 300 MHz; | Q |
| (4) Provide space-based logistics, assembly, or servicing of another "spacecraft"; or | Q |
| (5) Are not described in Paragraphs 9A515 (a)(1), (a)(2), (a)(3) or (a)(4) (*) | Q |
| (b) Ground control systems and training simulators "specially designed" for telemetry, tracking, and control of the "spacecraft" described in ECCN 9A515 in Paragraph (a), Part 2 of this table or ECCN 9A004.u of Part 774 of Title 15, CFR. | Q |
| (c) Reserved. | |
| (d) Microelectronic circuits (e.g., integrated circuits, microcircuits, metal oxide semiconductor field-effect transistors) and discrete electronic components rated, certified, or otherwise specified or described as meeting or exceeding all the following characteristics and that are specially designed for items described in Tables 3 through 23 or ECCN 9A515 described in Part 2 of this table or ECCN 9A004.u of Part 774 of Title 15, CFR: (*) | |
| (1) A total dose of $5 \times 10^5$ Radians (Rads) (System of units (Si))($5 \times 10^3$ gray (Gy) (Si)); | D |
| (2) A dose rate upset threshold of $5 \times 10^8$ Rads (Si)/sec ($5 \times 10^6$ Gy (Si)/sec); | D |

**Table 15. Spacecraft and Related Article, Continued**

| Description of items for DEMIL coding | DEMIL Code |
|---|---|
| (3) A neutron dose of $1 \times 10^{14}$ n/cm$^2$ (1 million electron volts (MeV) equivalent); | D |
| (4) An uncorrected single event upset sensitivity of $1 \times 10^{-10}$ errors/bit/day or less, for the cosmic ray effects on micro-electronics-Monte Carlo geosynchronous orbit, solar minimum environment for heavy ion flux. An uncorrected single event upset sensitivity of $1 \times 10^{-3}$ errors/part or less for a fluence of $1 \times 10^7$ protons/cm$^2$ for proton energy greater than 50 MeV; and | D |
| (5) An uncorrected single event upset sensitivity of 1 x 10-3 errors/part or less for a fluence of 1 X 107 protons/cm$^2$ for proton energy greater than 50 MeV. | D |
| (e) Microelectronic circuits (e.g., integrated circuits and micro-circuits) that are rated, certified, or otherwise specified or described as meeting or exceeding either of the following characteristics and that are specially designed for items described in Part 1 or ECCN 9A515 in Part 2 of this table or ECCN 9A004.u of Part 774 of Title 15, CFR. (*) | |
| (1) A total dose ≥$1 \times 10^5$ Rads (Si) ($1 \times 10^3$ Gy(Si)) and <$5 \times 10^5$ Rads (Si) ($5\times 10^3$ Gy(Si)); and | D |
| (2) A single event effect (i.e., single event latch up, single event burnout, or single event gate rupture) immunity to a linear energy transfer ≥80 MeV-cm$^2$/mg. | D |
| (f) Pressure suits (i.e., space suits) capable of operating at altitudes 55,000 feet above sea level. | Q |
| (g) Remote sensing components "specially designed" described in ECCNs 9A515.a.1 through 9A515.a.4 as follows: for | |
| (1) Space-qualified optics (i.e., lens, mirror, or membrane having active properties (e.g., adaptive, deformable)) with the largest lateral clear aperture dimension equal to or less than 0.35 meters; or with the largest clear aperture dimension greater than 0.35 meters but less than or equal to 0.50 meters; | Q |
| (2) Optical bench assemblies "specially designed" for spacecraft listed in paragraph (a) of this table; **or** | Q |
| (3) Primary, secondary, or hosted payloads that perform a function of spacecraft listed in paragraph (a) of this table. | Q |
| (h) Spacecraft thrusters using bi-propellants or mono-propellants that provide thrust equal to or less than 150 lbf (i.e., 667.23 N) vacuum thrust. | Q |
| (i) through (w) Reserved | |
| (x) "Specially designed" "parts," "components," "accessories," and "attachments" for an item in ECCN 9A515 or Part 1 of this table and that are not described in other ECCNs and are not microelectronic circuits and discrete electronic components. (*) | Q |
| 1. Enumerated or controlled in the USML or elsewhere within ECCNs 9A515 or 9A004 | Q |
| 2. Microelectronic circuits and discrete electronic components; | Q |

**Table 15. Spacecraft and Related Article, Continued**

| Description of items for DEMIL coding | DEMIL Code |
|---|---|
| 3. Described in ECCNs 7A004 or 7A104; | Q |
| 4. Described in an ECCN containing "space-qualified" as a control criterion (i.e., 3A001.b.1, 3A001.e.4, 3A002.g.1, 3A991.o, 3A992.b.3, 6A002.a.1, 6A002.b.2, 6A002.d.1, 6A004.c and .d, 6A008.j.1, 6A998.b, or 7A003.d.2); | Q |
| 5. Microwave solid state amplifiers and microwave assemblies (refer to ECCN 3A001.b.4 for controls on these items); | Q |
| 6. Travelling wave tube amplifiers (refer to ECCN 3A001.b.8 for controls on these items); **or** | Q |
| 7. Elsewhere specified in ECCN 9A515.y. | A |
| (y) Items identified in an interagency-cleared commodity classification pursuant to Section 748.3 (e) of Title 15, CFR. | |
| (1) Discrete electronic components not specified in Paragraph (e). | A |
| (2) Space grade or for spacecraft applications thermistors. | A |
| (3) Space grade or for spacecraft applications RF microwave bandpass ceramic filters (dielectric resonator bandpass filters); | A |
| (4) Space grade or for spacecraft applications hall effect sensors; | A |
| (5) Space grade or for spacecraft applications subminiature (subminiature version A (SMA) and subminiature push-on (SMP)) plugs and connectors, Threaded Neill-Concelman (TNC) plugs and cable and connector assemblies with SMA plugs and connectors; and | A |
| (6) Space grade or for spacecraft applications flight cable assemblies. | A |
| (*) Additional notes located in the CCL | |
| **Test, inspection, and production equipment "specially designed" for "spacecraft" and related commodities.** | **ECCN 9B515** |
| **Description of items for DEMIL coding** | **DEMIL Code** |
| (a) Test, inspection, and production "equipment" "specially designed" for the "production" or "development" of Paragraph (a), ECCN 9A515 items described in Part 2 or Paragraphs (a) and (e) of Part 1 of this table, or ECCN 9A004.u of Part 774 of Title 15, CFR. (*) | C |
| (b) Environmental test chambers capable of pressures below (10-4) Torr, and "specially designed" for Paragraph (a), ECCN 9A515 items described in Part 2 or Paragraph (a) of Part 1. | Q |

## Table 16. Nuclear Weapons Related Articles



| Part 1. Nuclear Weapons Related Articles described in USML Category XVI | |
|---|---|
| **Description of items for DEMIL coding** | **DEMIL Code** |
| (a) Reserved. | |
| ♦ (b) Modeling or simulation tools that model or simulate the environments generated by nuclear detonations or the effects of these environments on systems, subsystems, components, structures, or humans. | D |
| (c) Reserved. | |
| (d) Parts, components, accessories, attachments, associated equipment, and production, testing, and inspection equipment and tooling, specially designed for the articles in Paragraph (b) of this table. | D |
| (e) Decals, labels, and technical manuals containing technical data directly related to the items listed in Paragraph (b) described as either: | |
| (i) Classified **or** | P |
| (ii) Unclassified. | D |
| (f) through (w) Reserved. | |

## Table 17. Classified Articles, Technical Data, and Defense Services Not Otherwise Listed


| Part 1. Classified Articles, Technical Data, and Defense Services Not Otherwise Enumerated as described in USML Category XVII | |
|---|---|
| **Description of items for DEMIL coding** | **DEMIL Code** |
| ♦ (a) All articles, and technical data (as defined in Subpart 120.10 of Title 22, CFR) and defense services as defined in Part 120.9 of Title 22, CFR which are classified in the interests of national security and that are not otherwise described on the USML. | P |

## Table 18. Directed Energy Weapons



| Part 1. Directed Energy Weapons described in USML Category XVIII | |
|---|---|
| **Description of items for DEMIL coding** | **DEMIL Code** |
| ♦ (a) Directed energy weapons as follows: | |
| (1) Systems or equipment that, other than as a result of incidental, accidental, or collateral effect: | |
| (i) Degrade, destroy, or cause mission-abort of a target; | D |
| (ii) Disturb, disable, or damage electronic circuitry, sensors, or explosive devices remotely; | D |
| (iii) Deny area access; | D |
| (ii) Cause lethal effects; **or** | D |
| (v) Cause ocular disruption or blindness; **and** | D |
| (2) Use any non-acoustic technique such as lasers (including continuous wave or pulsed lasers), particle beams, particle accelerators that project a charged or neutral particle beam, high power radio frequency (RF), or high pulsed power or high average power RF beam transmitters. | D |
| ♦ (b) Systems or equipment specially designed to detect, identify, or provide defense against articles specified in paragraph (a) of Part 1 of this category. | D |
| (c) through (d) Reserved. | |
| (e) Components, parts, accessories, attachments, and associated systems or equipment specially designed for any of the defense articles in Paragraphs (a) or (b) of this category. | D |
| (f) Developmental directed energy weapons funded by the DoD via contract or other funding authorization, and specially designed parts and components therefor; (*) | D |
| (g) Decals, labels, and technical manuals containing technical data directly related to the items listed in this table described as either: | |
| (i) Classified **or** | P |
| (ii) Unclassified. | D |
| (*) Additional notes located in the ITAR | |

## Table 18. Directed Energy Weapons, Continued

| **Part 2. Military items described in the CCL** | |
|---|---|
| **Test, inspection, and production "equipment" and related commodities "specially designed" for the "development," "production," repair, overhaul, or refurbishing of commodities enumerated or otherwise described in USML Category XVIII** | **ECCN 6B619** |
| **Description of items for DEMIL coding** | **DEMIL Code** |
| (a) Tooling, templates, jigs, mandrels, molds, dies, fixtures, alignment mechanisms, and test equipment not enumerated or otherwise described in this table and not elsewhere specified that are specially designed for the development, production, repair, overhaul, or refurbishing of commodities described in Part 1 of this table. | D |
| (b) through (w) Reserved. | |
| (x) "Parts," "components," "accessories," and "attachments" "specially designed" for an item described in Paragraph (a) of this ECCN. | Q |

## Table 19. Gas Turbine Engines and Associated Equipment



| Part 1. Gas Turbine Engines and Associated Equipment described in USML Category XIX | |
|---|---|
| **Description of items for DEMIL coding** | **DEMIL Code** |
| ♦ (a) Turbofan and turbojet engines (including technology demonstrators, developmental engines, or variable cycle engines), capable of 15,000 lbf (66.7kilonewton) of thrust or greater that have any of the following: | |
| (1) With or specially designed for thrust augmentation (afterburner); | C |
| (2) Thrust or exhaust nozzle vectoring; | C |
| (3) Parts or components described in Paragraph (f)(6) of this table; | P |
| (4) Specially designed for sustained 30 second inverted flight or negative g maneuver; **or** | C |
| (5) Specially designed for high power extraction (greater than 50 percent of engine thrust at altitude) at altitudes greater than 50,000 feet. | C |
| ♦ (b) Turboshaft and turboprop engines (including those that are technology demonstrators or developmental engines) that have any of the following: | |
| (1) Capable of 2000 mechanical shaft horsepower (1491 kW) or greater and specially designed with oil sump sealing when the engine is in the vertical position; **or** | C |
| (2) Capable of a specific power of 225 shaft horsepower(shp)/(lbm/sec) or greater and specially designed for armament gas ingestion and non-civil transient maneuvers, where specific power is defined as maximum takeoff shaft horsepower divided by compressor inlet flow (lbm/sec). | C |
| ♦ (c) Gas turbine engines (including technology demonstrators, developmental engines, and variable cycle engines) specially designed for UAV systems, cruise missiles, or target drones. | C |
| ♦ (d) GE38, AGT1500, CTS800, MT7, T55, HPW3000, GE3000, T408, and T700 engines. (*) | C |

## Table 19. Gas Turbine Engines and Associated Equipment, Continued

| Description of items for DEMIL coding | DEMIL Code |
|---|---|
| (e) Digital engine control systems (e.g., full authority digital engine controls (FADEC) and digital electronic engine controls (DEEC)) specially designed for gas turbine engines described in this table. (MT if the digital engine control system is for an aircraft, excluding manned aircraft, or missile that has a range equal to or greater than 300 km). (*) | D |
| (f) Parts, components, accessories, attachments, associated equipment, and systems as follows: | |
| (1) Parts, components, accessories, and attachments specially designed for the following U.S. origin engines and military variants: **F101, F107, F112, F118**, **F119, F120, F135, F136, F414, F415**, and **J402**; (*) | D |
| ♦ (2) Hot section components (i.e., combustion chambers and liners; high pressure turbine blades, vanes, disks and related cooled structure; cooled intermediate pressure turbine blades, vanes, disks and related cooled structures; cooled low pressure turbine blades, vanes, disks and related cooled structures; cooled shaft-driving power turbine blades, vanes, disks and related cooled structures; cooled augmenters; and cooled nozzles) specially designed for gas turbine engines described in part 1 of this table; | D |
| (3) Uncooled turbine blades, vanes, disks, and tip shrouds specially designed for gas turbine engines described in part 1 of this table; | D |
| (4) Combustor cowls, diffusers, domes, and shells specially designed for gas turbine engines described in part 1 of this table; | D |
| (5) Engine monitoring systems (i.e., prognostics, diagnostics, and health) specially designed for gas turbine engines and components described in part 1 of this table; | C |
| ♦ (6) Any part, component, accessory, attachment, equipment, or system that: | |
| i. Is classified. | P |
| ii. Contains classified software from the manufacturer; **or** | P |
| iii. Is unclassified but being developed using classified information. | D |
| (7) Investment casting cores, core dies, or wax pattern dies for parts or components enumerated in Paragraphs (f)(1), (f)(2), or (f)(3) of this table; | D |
| (8) Pressure gain combustors specially designed for engines controlled in Part 1 of this table and specially designed parts and components therefor; | D |
| (9) Three-stream fan systems, specially designed for gas turbine engines described in part 1 of this table, that allow the movement of airflow between the streams to control fan pressure ratio or bypass ratio (by means other than use of fan corrected speed or the primary nozzle area to change the fan pressure ratio or bypass ratio), and specially designed parts, components, accessories, and attachments therefor; | D |

## Table 19. Gas Turbine Engines and Associated Equipment, Continued

| Description of items for DEMIL coding | DEMIL Code |
|---|---|
| (10) High pressure compressors, specially designed for gas turbine engines described in part 1 of this table, with core-driven bypass streams that have a pressure ratio greater than one, occurring across any section of the bypass duct, and specially designed parts, components, accessories, and attachments therefor; | D |
| (11) Intermediate compressors of a three-spool compression system, specially designed for gas turbine engines described in part 1 of this table, with an intermediate spool-driven bypass stream that has a pressure ratio greater than one, occurring across any section of the bypass duct, and specially designed parts, components, accessories, and attachments therefor; **or** | D |
| (12) Any of the following equipment if specially designed for an item described in Paragraph (f)(1): jigs, locating fixtures, templates, gauges, molds, dies, caul plates, or bell mouths. | D |
| (g) Decals, labels, and technical manuals containing technical data directly related to the items listed in this table described as either: | |
| (1) Classified **or** | P |
| (2) Unclassified. | D |
| (h) through (w) Reserved. | |
| (*) Additional notes located in the ITAR | |
| **Part 2. Military items described in the CCL** | |
| **Military gas turbine engines and related commodities.** | **ECCN 9A619** |
| **Description of items for DEMIL coding** | **DEMIL Code** |
| (a) "Military Gas Turbine Engines" "specially designed" for a military use that are not controlled in USML Category XIX(a), (b), (c), or (d). (*) | C |
| (b) Digital engine controls (e.g., Full Authority Digital Engine Controls (FADEC) and Digital Electronic Engine Controls (DEEC)) "specially designed" for gas turbine engines controlled in this ECCN 9A619 | D |
| (c) If "specially designed" for gas turbine engines described in ECCN 9A619, Paragraph (a), Part 2, hot section components (i.e., combustion chambers and liners; high pressure turbine blades, vanes, disks and related cooled structure; cooled low pressure turbine blades, vanes, disks and related cooled structure; cooled augmenters; and cooled nozzles). | D |
| (d) If "specially designed" for gas turbine engines described in ECCN 9A619, Paragraph (a), Part 2, uncooled turbine blades, vanes, disks, and tip shrouds. | D |
| (e) If "specially designed" for gas turbine engines described in Paragraph (a), ECCN 9A619, Part 2, combustor cowls, diffusers, domes, and shells. | D |
| (f) Engine monitoring systems (i.e., those that conduct prognostics, diagnostics, and monitor health) "specially designed" for gas turbine engines and components described in ECCN 9A619, Part 2. | C |
| (g) through (w) Reserved. | |

## Table 19. Gas Turbine Engines and Associated Equipment, Continued

| Description of items for DEMIL coding | DEMIL Code |
|---|---|
| (x) "Specially designed" "parts," "components," "accessories," and "attachments" that are "specially designed" for an item described in ECCN 9A619, Part 2 (other than paragraph (c), or a defense article in Part 1 and not described in Paragraph (y), Part 2. (*) | Q |
| (y) "Specific parts," "components," "accessories," and "attachments" "specially designed" for an item in this table or in Table 10: | |
| (1) Oil tank and reservoirs. | A |
| (2) Oil lines and tubes. | A |
| (3) Fluid hoses, and lines (for a commodity subject to control in this entry or a defense article in USML Category XIX), fittings, couplings, and brackets therefor; | A |
| (4) Fluid filters and filter assemblies. | A |
| (5) Clamps (for a commodity subject to control in this entry or a defense article in USML Category XIX); . | A |
| (6) Shims. | A |
| (7) Identification plates and nameplates. | A |
| (8) Fluid manifolds; and | A |
| (9) Check valves for fluid systems. | A |
| (*) Additional notes located in the CCL | |
| **Test, inspection, and production "equipment" and related commodities " specially designed" for the "development" or "production" of commodities listed in ECCN 9A619 or USML Category XIX.** | **ECCN 9B619** |
| **Description of items for DEMIL coding** | **DEMIL Code** |
| (a) Test, inspection, and production equipment "specially designed" for the "production," "development," operation, installation, maintenance, repair, overhaul, or refurbishment of commodities described in ECCN 9A619 in Part 2 or Part 1, and parts, components, accessories, and attachments specially designed. | C |
| (b) Equipment, cells, or stands specially designed for testing, analysis, and fault isolation of engines, systems, components, parts, accessories, and attachments specified as ECCN 9A619 in Part 2 or in Part 1. | C |
| (c) through (x) Reserved. | |
| (y) Bearing pullers "specially designed" for the "production" or "development" of commodities enumerated or otherwise described in ECCN 9A619 (except for 9A619.y) or USML Category XIX and "parts," "components," "accessories," and "attachments" "specially designed" therefor. | A |

## Table 19. Gas Turbine Engines and Associated Equipment, Continued

| Materials "specially designed" for commodities described in Part 1 or ECCN 9A619 not elsewhere specified in the CCL or the USML. | ECCN 9C619 |
|---|---|
| **Description of items for DEMIL coding** | **DEMIL Code** |
| (a) Materials not elsewhere specified in Tables 3 through 23 or the CCL and specially designed for items described in Part 1 or ECCN 9A619 of Part 2 (except paragraph (y) of this table. Includes materials "specially designed" for both an engine described in Part 1 of this table and an engine described in ECCN 9A619 in Part 2 of this table. | Q |
| (b) Materials "specially designed" for use in certain gas turbine engines, as follows: | |
| (1) Powders "specially designed" for thermal or environmental barrier coating of defense articles, described in paragraphs (f)(1)–(f)(4) of Part 1 of this Table for engines listed in (f)(1); | Q |
| (2) Superalloys (i.e., nickel, cobalt or iron based), used in directionally solidified or single crystal casting, "specially designed" for defense articles described in paragraphs (f)(1)– (f)(4) of Part 1 of this Table for engines listed in paragraph (f)(1); **or** | Q |
| (3) Imide matrix, metal matrix, or ceramic matrix composite material (i.e., reinforcing fiber combined with a matrix) specially designed for defense articles described in paragraphs (f)(1)–(f)(4) of Part 1 of this Table for engines listed in paragraph (f)(1). | Q |

## Table 20. Submersible Vessels and Related Articles



| Part 1. Submersible Vessels and Related Articles described in USML Category XX | |
|---|---|
| **Description of items for DEMIL coding** | **DEMIL Code** |
| (a) Submersible and semi-submersible vessels that are: | |
| ♦ (1) Submarines specially designed for military use; | C |
| (2) Mine countermeasure vehicles; | C |
| (3) Anti-submarine warfare vehicles; | C |
| (4) Armed or are specially designed to be used as a platform to deliver munitions or otherwise destroy or incapacitate targets (e.g., firing torpedoes, launching rockets, firing missiles, deploying mines, deploying countermeasures) or deploy military payloads; | C |
| (5) Swimmer delivery vehicles specially designed for the deployment, recovery, or support of swimmers or divers from submarines; | C |
| (6) Integrated with nuclear propulsion systems; | C |
| (7) Equipped with any mission systems in Tables 3 through 23; **or (*)** | C |
| (8) Developmental vessels funded by the DoD via contract or other funding authorization; (*) | C |
| ♦ (b) Engines, electric motors, and propulsion plants as follows: | |
| (1) Naval nuclear propulsion plants, prototypes, and special facilities for their construction, support, and maintenance therefor; | F |
| (2) Electric motors specially designed for submarines that have the following: | |
| (i) Power output of more than 0.75 megawatts (1,000 horsepower); | D |
| (ii) Quick reversing; | D |
| (iii) Liquid cooled; **and** | D |
| (iv) Totally enclosed. | D |
| (c) Parts, components, accessories, attachments, and associated equipment, including production, testing, and inspection equipment and tooling, specially designed for any of the articles in Paragraphs (a) and (b) of this table. (*) | D |

## Table 20. Submersible Vessels and Related Articles

| Description of items for DEMIL coding | DEMIL Code |
|---|---|
| (d) Decals, labels, and technical manuals containing technical data directly related to the items listed in this table described as either: | |
| (i) Classified **or** | P |
| (ii) Unclassified. | D |
| (e) through (w) Reserved. | |
| (*) Additional notes located in the ITAR | |
| **Part 2. Military items described in the CCL** | |
| **Submersible vessels, oceanographic, and associated commodities.** | **ECCN 8A620** |
| **Description of items for DEMIL coding** | **DEMIL Code** |
| (a) Submersible and semi-submersible vessels "specially designed" for a military use and not described in the Tables 3 through 23. This paragraph includes submarine rescue vehicles and deep submergence vehicles. (*) | C |
| (b) Submersible and semi-submersible vessels "specially designed" for cargo transport and "parts," "components," "accessories," and "attachments" "specially designed" therefore. | C |
| (c) Harbor entrance detection devices (magnetic, pressure, and acoustic) and controls, not elsewhere specified in tables 1 to 21. | C |
| (d) Diesel engines of 1,500 horsepower and over with rotary speed of 700 rpm or over "specially designed" for submarines. (*) | D |
| (e) Submarine nets and torpedo nets. | D |
| (f) Diving and underwater swimming apparatus specially designed or modified for military use, as follows: | |
| 1. Self-contained diving rebreathers, closed or semi-closed circuit; | D |
| 2. Underwater swimming apparatus specially designed for use with the diving apparatus specified in subparagraph f.1; | D |
| (g) through (w) Reserved. | |
| (x) "Specially designed" "parts," "components," "accessories," and "attachments" that are "specially designed" for an ECCN 8A620 item described in Part 2 (except for Paragraph (b) of Part 2) or in Part 1 that is not elsewhere specified and not described in Paragraph (y), Part 2 of Table 22. | Q |
| (y) Specific "parts," "components," "accessories," and "attachments" "specially designed" for a commodity subject to control in this ECCN, as follows, and "parts," "components," "accessories," and "attachments" "specially designed" therefor: | |
| (1) Public address (PA) systems | A |
| (2) Filters and filter assemblies, hoses, lines, fittings, couplings, and brackets for pneumatic, hydraulic, oil and fuel systems. | A |
| (3) Galleys. | A |
| (4) Lavatories. | A |
| (5) Magnetic compass, magnetic azimuth detector. | A |
| (6) Medical facilities. | A |

## Table 20. Submersible Vessels and Related Articles

| Description of items for DEMIL coding | DEMIL Code |
|---|---|
| (7) Potable water tanks, filters, valves, hoses, lines, fittings, couplings, and brackets. | A |
| (8) Panel knobs, indicators, switches, buttons, and dials whether unfiltered or filtered for use with night vision imaging systems. | A |
| (9) Emergency lighting. | A |
| (10) Gauges and indicators. | A |
| (11) Audio selector panels. | A |
| (*) Additional notes located in the CCL | |
| **Test, inspection, and production "equipment" and related commodities "specially designed" for the "development", "production," repair, overhaul, or refurbishing of commodities listed in ECCN 8A620.** | **ECCN 8B620** |
| **Description of items for DEMIL coding** | **DEMIL Code** |
| (a) Test, inspection, and production equipment specially designed for the "development," "production," repair, overhaul, or refurbishing of commodities described in ECCN 8A620 (except for Paragraphs (b) and (y)) in Part 2 and parts, components, accessories, and attachments "specially designed" therefor. | C |
| (b) Test, inspection, and production "equipment" "specially designed" for the "development," "production," repair, overhaul, or refurbishing of commodities described in ECCN 8A620 in Paragraph (b), Part 2 and "parts," "components," "accessories," and attachments "specially designed" therefor. | C |

## Table 21. Articles, Technical Data, and Defense Services Not Otherwise Listed

| **Articles, Technical Data, and Defense Services Not Otherwise Enumerated as described in USML Category XXI** | |
|---|---|
| **Description of items for DEMIL coding** | **DEMIL Code** |
| ♦(a) Any article not described on the USML may be included in this table until such time as the appropriate USML category is amended. The decision on whether any article may be included in this table, and the designation of the defense article as not significant military equipment in accordance with Part 120.7 of Title 22, CFR is made by the Director, Office of Defense Trade Controls Policy. | D |
| (b) Technical data in accordance with Subpart 120.10 of Title 22, CFR and defense services in accordance with Subpart 120.9 of Title 22, CFR directly related to the defense articles described in Paragraph (a) of this table. | D |

## DEMIL CODING OF Commerce Control List (CCL) ITEMS

## ASSIGNING DEMIL CODES TO NON-MILITARY CCL ITEMS

a. Introduction. DEMIL coders will use this section with Step 12 of the coding steps described in Table 2 in accordance with Part 774 of Title 15, CFR. Items not described in the United States Munitions List (USML) or CCL become eligible for DEMIL code "A" assignment.

b. Export Control Classification Number (ECCN)'s. The key in determining whether an item meets DEMIL code "Q" criteria is whether the item is listed on the CCL and is described under a specific ECCN as stated in Part 774 of Title 15, CFR. An example ECCN is shown in Figure 2. Each ECCN consists of 5 characters as shown in Figure 2.

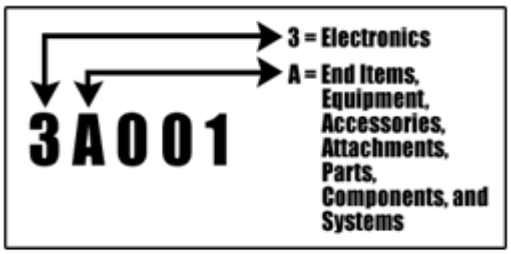



**Figure 1. Example of an ECCN**

(1) The first position in an ECCN is a number which identifies the CCL category as listed in Figure 2:

| | |
|---|---|
| Category 0 | Nuclear Materials, Facilities, and Equipment and Miscellaneous Items |
| Category 1 | Materials, Chemicals, Microorganisms, and Toxins |
| Category 2 | Materials Processing |
| Category 3 | Electronics |
| Category 4 | Computers |
| Category 5 | Telecommunications (Part I) and Information Security (Part II) |
| Category 6 | Sensors and Lasers |
| Category 7 | Navigation and Avionics |
| Category 8 | Marine |
| Category 9 | Aerospace and Propulsion |

**Figure 2. CCL Categories**

(2) The second position is a letter to identify the CCL product group as shown in Figure 3.

| | |
|---|---|
| Group A | End Items, Equipment, Accessories, Attachments, Parts, Components, and Systems |
| Group B | Test, Inspection, and Production Equipment |
| Group C | Materials |
| Group D | Software |
| Group E | Technology |

**Figure 3. CCL Product Groups**

(3) The third position is a number which identifies the CCL primary reason (or reasons) for control contained in the entry as shown in Figure 4.

| 3rd Position | Reason(s) for Control |
|---|---|
| 0 | National Security |
| 1 | Missile Technology |
| 2 | Nuclear Nonproliferation |
| 3 | Chemical and Biological Weapons |
| 5 | National Security (Weapons and Spacecraft)* |
| 6 | National Security (Military Related)* |
| 9 | Anti-Terrorism; Crime Control; Encryption Items; Firearms Convention; Regional Stability; Short Supply; United Nations Embargo; Significant Items; Surreptitious Listening |
| | *ECCNs that are 500 Series for the purposes of DEMIL coding, are listed in Part 2 of selected Tables 3 to 23. This section specifically addresses items that are not 500 or 600 series items. |

**Figure 4. CCL Primary Reason (or Reasons) for Control**

c. Control Under the EAR. The EAR controls specific items found on the CCL based on objective technical characteristics as well as other items based on a series of general criteria in accordance with Parts 730-774 of Title 15, CFR. All such items are considered subject to the EAR.

(1) To classify an item subject to the EAR against the CCL, review the general characteristics of the item. This will usually guide you to the appropriate category described in Figure 2.

(2) Once a potentially applicable CCL category is described, determine which product group described in Figure 3 within the CCL category applies to the item.

(3) Then start from the beginning of the product group and examine each ECCN to determine whether a specific ECCN describes the item.

d. Finding an ECCN.

(1) To narrow the search within the CCL category and group, each ECCN will have a heading with a brief description as shown in Figure 5.

**3A001 Electronic components and "specially designed components" therefor, as follows (see List of Items Controlled).**

**Figure 5. Example of an ECCN Heading**

(2) After the brief description for each ECCN in the CCL, there are three sections titled, "License Requirements," "License Exceptions," and "List of Items Controlled." Only the "List of Items Controlled" section of an ECCN needs to be reviewed to determine if the item is described in the CCL and not the USML. This section provides "Units," "Related Controls," "Related Definitions," and "Items" applicable to the ECCN entry.

(a) Related Controls as shown in Figure 6 will indicate if another U.S. Government agency or department has authority and control.

**List of Items Controlled**

*Related Controls:*
(1) See Category XV of the USML for certain "space-qualified" electronics and Category XI of the USML for certain ASICs "subject to the ITAR" (see 22 CFR parts 120 through 130).
(2) See also 3A101, 3A201, 3A611, 3A991, and 9A515.

**Figure 6. Example of Related Controls**

## DEMIL CODING OF Commerce Control List (CCL) ITEMS, Continued

(b) The items described in the ECCN are listed following the word "Items." The coder must be careful when reading an ECCN for the first time to avoid missing this information and possibly interpreting the ECCN header as the definitive item identification (see Figure 7 for an example). In some entries, the list is contained within the entry heading as shown in Figure 8.

*Related Definitions:* N/A
*Items:* Military aircraft, demilitarized (not specifically equipped or modified for military operation), as follows:

**Figure 7. Example of Items Header**

*Items:*
The list of items controlled is contained in the ECCN heading.

**Figure 8. Example of Items Controlled in ECCN Heading**

### DEMIL Coding of Non-Military or Non-Spacecraft CCL Items.

(3) Coders assign:

(a) DEMIL code "Q" for items with a specific ECCN.

(b) DEMIL code "A" for items that do not have a specific ECCN

(4) Items assigned DEMIL code "A" are still subject to the EAR in accordance with Parts 730-774 of Title 15, CFR and designated "EAR99" as shown in Figure 9. These may require a license from the DOC for export.

**EAR99 Items subject to the EAR that are *not* elsewhere specified in this CCL Category *or* in any other category in the CCL are designated by the number *EAR99*.**

**Figure 9. EAR99 Statement**

## DEMIL Coding of Non-Military or Non-Spacecraft CCL Items., Continued

### SENSITIVE AND NON-SENSITIVE CCLI.

(1) After the coders assign a DEMIL code "Q" for items with a non 600 series ECCN, the DoD DEMIL Program Manager and the DoD DEMIL Coding Management Office:

e. Identify the sensitive and non-sensitive CCLI.

f. Assign an integrity code based on the reason for control as shown in Figure 10

| SENSITIVE DEMIL Q _ IC-3 | NON-SENSITIVE DEMIL Q _ IC-6 |
|---|---|
| NS = National Security = 0 | AT = Anti-Terrorism = 9 |
| NS = National Security (Spacecraft) = 5 | CC = Crime Control = 9 |
| NS = National Security (Military) = 6 | EI = Encryption Items = 9 |
| MT = Missile Technology = 1 | FC = Firearms Convention = 9 |
| NP = Nuclear Nonproliferation = 2 | RS = Regional Stability = 9 |
| CB = Chemical & Biological Weapons = 3 | SS = Short Supply = 9 |
| CW = Chemical Weapons Convention = 3 | UN = United Nations Embargo = 9 |
| | SI = Significant Items = 9 |
| | SL = Surreptitious Listening = 9 |

**Figure 10. Sensitivity Based on Reasons for Control**