

**ALPHABETICAL INDEX
TO THE COMMERCE CONTROL LIST**

This index is not an exhaustive list of controlled items.

Supplement No. 4 to Part 774 – Commerce Control List Order of Review
identifies the steps to follow when reviewing the Commerce Control List.

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Common channel signaling equipment/systems.....	5A991.c.8
Common channel signaling, technology for the development of equipment employing	5D001.c.5
Communications cable systems to detect surreptitious intrusion	5A003.a
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Communication equipment, airborne.....	7A994
Communication (mobile) equipment, assemblies and components.....	5A991.g
Communications interception devices, parts and accessories.....	5A980, 5D980 or 5E980
Communications Systems (underwater)	5A001.b.1
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Compasses (gyro-astro) & other position or orientation deriving devices	7A004
Compasses (gyro-astro) & devices, other than those of 7A004.....	7A104
Complex programmable logic devices (CPLD).....	3A001.7.a, 3A991.d
Components made from Fluorinated compounds	1A001
Components/structures for spacecraft.....	9A010
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Composite or laminate development software.....	1D002
Composite structures, as tubes.....	1A202
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Composite (structural) production equipment, n.e.s.....	1B999.e
Composite (structural) production equipment controlled by 1B999, software for.....	1D999
Composite materials, ceramic-ceramic	1C007.c.1.a
Composites production equipment	1B001
Composite structures for propulsion systems or space vehicles.....	9A110, 9A619.x
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Composites (structural) production equipment.....	1B101
Compound rotary tables for machine tools.....	2B008.d
Compound semiconductor integrated circuits	3A001.a.11

Description	ECCN Citation
Compound semiconductor photocathodes	6A002.a.2.c.3
Compressors.....	9A619.x
Compressors, bellows-sealed scroll-type.....	2B233
Compressors, turboexpander.....	1B232
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Computer, electronic assemblies & equipment & components ...	4A001, 4A003, 4A004 or 4A994
Computer, electronic components	4A101
Computer, electronic components	4A102
Computers, parts, components, accessories... for military applications, not on USML	3A611
Computer aided design (CAD) equipment for semiconductor devices or integrated circuits	3B991.b.2.c
Computer-aided-design (CAD) software for IC's & semiconductors.....	3D003
Computer interconnect equipment.....	4A003.g
Computer/assemblies/components, neural.....	4A004.b
Computer/assemblies/components, optical.....	4A004.c
Computers, electronic assemblies, and related equipment and components not controlled by 4A001 or 4A003	4A994
Computers, analog & analog ruggedized	4A101
Computers for fingerprint equipment	4A980
Computers, digital ruggedized	4A101
Computers/assemblies/components, systolic array.....	4A004.a
Computers, analog	4A001
Computers, digital	4A003
Computers, digital	4A004
Computers, digital.....	4A001
Computers, hybrid.....	4A102
Computers, parts, components ... for military application not on USML.....	4A611/3A611
Computers and electronic assemblies (hybrid), and specially designed components therefor.....	4A994.k
Computers, with extended operating temperature range	4A001.a.1
Computers, radiation hardened	4A001.a.2
Concealment and deception equipment (military), i.e. special paints, decoys, smoke or obscuration equipment and simulators.....	0A617
Concealed object detection equipment	2A984, 2D984 or 2E984
Condensers for use in nuclear reactors	2A290.a
Condensers or heat exchangers	2B350.d
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Conductors, superconductive composite	1C005
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Description	ECCN Citation
Conotoxins	1C351.d.6
Construction equipment “specially designed” for military use	0A617.y.1
Contactors	3A611.y.27
Contagious bovine pleuropneumonia (<i>Mycoplasma mycoides</i> subspecies <i>mycoides</i> SC (small colony)).....	1C351.c.16
Containers, ISO intermodal containers for packing defense articles or “600 series” items	0A617.y.3
Containers, chemical.....	2B350.c
Containment devices (not enumerated under ECCN 1B608 or in USML Category IV or V) for the testing of high explosives or explosive devices	1B234
Containment facilities	2B352.a.1
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Controlled environment (vacuum or inert gas) induction furnaces	2B226
Controlled nucleation thermal decomposition (CNTD) equipment.....	2B005.a.1.b
Controllers, machine tool (CNC).....	1B001.a
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Converters, frequency	3A225
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Cooling fluids - electronic	1C006.d
Cooling fluids, fluorocarbon electronic	1C006.d
Cooling systems, freon and chilled water	1B999.d
Copper or phosphor bronze mesh packings	1A226
Copper metal vapor lasers.....	6A005.b
Coprocessor microcircuits	3A001.a.3 Note
Correlation-velocity sonar log equipment	6A001.b
Counter Improvised Explosive Device equipment	5A001.h
Coxiella burnetii.....	1C351.c.13
CR (Dibenz-(b,f)-1,4-oxazepine) (CAS 257-07-8)	1C607.a.4
Crime science laboratories, parts and accessories, nonmilitary mobile.....	9A980
Crimean-Congo hemorrhagic fever virus (a.k.a. Congo-Crimean hemorrhagic fever virus)	1C351.a.10
Cross (tangential) flow filtration equipment.....	2B352.d
Crossed-field amplifier tubes.....	3A001.b.1.b
Crucibles, liquid actinide resistant.....	2A225
Crucibles, tantalum	2A225.b or c
Cryocoolers for optical sensors, space qualified.....	6A002.d.1

Description	ECCN Citation
Cryocoolers for optical sensors, non-space qualified	6A002.d.2
Cryogenic and superconductive equipment, parts, components, accessories	9A620
Cryogenic and superconductive test equipment	9B620
Cryogenic and superconductive software	9D620
Cryogenic and superconductive technology	9E620
Cryptanalytic equipment and components, mass market.....	5A992
Cryptanalytic systems, equipment and components	5A004.a
Cryptographic enabling systems, equipment, integrated circuits, etc.....	5A002.b
Cryptographic enabling software.....	5D002.b
Cryptographic enabling technology	5E002.b
Cryptographic equipment and components, mass market	5A992
Cryptologic equipment, software for the development, production or use of, mass market ..	5D992
Cryptologic equipment and components, mass market.	5A992
Cryptographic systems, equipment and components for data confidentiality > 56 bits	5A002.a
Crystal pullers and furnaces.....	3B991.b.1.c
CS (o-Chlorobenzylidenemalononitrile or o-Chlorobenzalmalononitrile) (CAS 2698-41-1)	1C607.a.2
CTPB (Carboxy-terminated polybutadiene).....	1C111.b.1
Custom integrated circuits	3A001.a.2 or a.10
Cutting tool inserts, single diamond point	2B998.b
Cutting machines, gears	2B003
Cutting equipment for prepregs/preform production	1B101.d
CVD (Chemical vapor deposition) equipment	1B001.d.2
CVD (Chemical vapor deposition) equipment	2B005.a
CVD (Chemical vapor deposition) equipment	1B101.c.2
CVD (Chemical vapor deposition) furnaces, other than those controlled by 2B005.a, designed or modified for the densification of carbon-carbon composites	2B105
CW (Chemical warfare) precursors	1C350
Cyanogen chloride (506-77-4).....	1C355.b.1.b, 1E355.b.2
Cyber hacking systems, equipment and components	5A004
Cylinder wall lubrication technology, diesel engines	9E003.e.3
DACs (Digital-to-analog converters).....	3A001.a.5
DBRN (Data Based Referenced Navigation) system technology.....	7E004.a.7
Damping, flotation or lubricating fluids	1C006.c
Data acquisition systems for gas turbine engine development	9B002, 9B619.a
Data (message) switching equipment, systems, components and assemblies	5A991.c.1
Data acquisition equipment for wind tunnels, automatic.....	9B005
Data Based Referenced Navigation (DBRN) systems for underwater navigation, technology	7E004.a.7
Datagram packet routing or switching equipment	5A991.c.3
Decanters, centrifugal	2B352.c
Decontamination equipment	1A004 or 1A995

Description	ECCN Citation
Decontamination equipment (military) for toxicological agents	1A607.g
Deep-hole drilling machines	2B001.f
Defect, error or contaminant detection equipment for wafers or substrates	3B992.b.1
Deformable mirrors.....	6A004.a.1
Degassing equipment	2B350
DEGDN (diethylene glycol dinitrate).....	1C111.c.5
Demolition blocks.....	0A604.a
Depleted Uranium.....	1A290
Depth sounders.....	6A001.a.1
Design integration of guidance sets, software	7D103
Detection and protection equipment and components	1A004, 1A995, 2B351 or 2B352
Detection equipment (military) for toxicological agents	1A607.h
Detection equipment, seismic	6A999.a
Detection equipment, radiation.....	1A004, 1A995 or 1A999.a
Detection equipment, radiographic.....	1A999.b
Detection systems for explosives and detonators	1A004.d, 2A983, 2D983 or 2E983
Detection or location systems or transmitting and receiving arrays (acoustic)	6A001.a.1.b
Detectors, optical	6A002.a
Detectors, radiation hardened	6A102
Detectors, space-qualified solid state optical.....	6A002.a.1
Detonation cord.....	1A008 or 1C992.c
Detonator detection.....	2A983, 2D983 or 2E983
Detonators and multipoint initiation systems	3A229
Detonator firing sets, for multiple detonators of 3A232.....	1A007 or 3A229
Detonators, electric or non-electric.....	1C608.d or 1C992.e
Detonators, exploding bridge wire (EBW)	1A007
Detonators, exploding bridge (EB)	1A007
Detonators, exploding foil initiators (EB)	1A007
Detonators for military explosives.....	0A604
Detonators, slapper (electric).....	1A007
Deuterium fluoride-carbon dioxide (DF-CO2) lasers.....	6A005.d.5
Deuterium fluoride (DF) lasers.....	6A005.d.5
Di-isopropylamine	1C350.d.7
Diacetoxyscirpenol	1C351.d.7
Dials, indicator.....	3A611.y.26
Dialkyl (Me, Et, n-Pr or i-Pr) N,N-dialkyl (Me, Et, n-Pr, or i-Pr)-phosphoramidates ..	1C355.a.2.c
Diamond cutting tool inserts, single point	2B998.b
Diamond film substrate development/production technology	3E003.d
Diaphragm valves	2B350.g
Dibromodimethyl ether (CAS 4497-29-4)	1C607.a.7
Dibromotetrafluoroethane based damping or flotation fluids.....	1C006.c.1

Description	ECCN Citation
Dichlorodimethyl ether (ClCi) (CAS 542–88–1)	1C607.a.8
Die bonder, stored program controlled	3B991.b.3.a
Diesel engines for submarines	8A620.d
Diesel engines, nonmagnetic	8A609.b
Diesel engines (air-cooled) and engine blocks for armored vehicles.....	0A606.c
Dies, bellows-forming.....	2B228.c
Diesel engines, n.e.s.....	9A990
Diesel cycle engine, air independent	8A002.j
Diethyl ethylphosphonate	1C350.b.3
Diethyl methylphosphonate	1C350.b.4
Diethyl methylphosphonite.....	1C350.b.5
Diethyl phosphite	1C350.c.1
Diethyl-N, N-dimethylphosphoramidate	1C350.b.6
Diethylamine.....	1C350.d.3
Diethylaminoethanol.....	1C350.d.4
Diethylene glycol dinitrate (DEGDN).....	1C111.c.5
Diffusion bonding technology, metal working.....	2E003.b.1.b
Diffusion bonding technology/data, super alloys or Ti alloys.....	2E003.b.2.b
Diffusion bonding tools, dies, molds or fixtures.....	1B003
Digital array processors	3A001.a.3 Note
Digital computers.....	4A003
Digital computers.....	4A994.b
Digital computers, electronic assemblies & related equipment.....	4A003
Digital computers, electronic assemblies & related equipment.....	4A001
Digital computers, logic processors.....	4A003
Digital computers, ruggedized	4A101
Digital computers, signal processing	4A003
Digital computers, vector processors.....	4A003
Digital computer electronic assemblies, parallel processing	4A003.c
Digital computer systems	4A004
Digital computer systems	4A003.c
Digital computer systems	4A003.b
Digital computer systems.....	4A001
Digital coprocessors.....	3A001.a.3 Note
Digital differential analyzer, ruggedized	4A101
Digital electronic control software for propulsion systems, aerospace test facilities or air breathing aero-engine test facilities.....	9D003, 9D619
Digital exchanges, telecommunication	5A991.c
Digital instrumentation data recorders.....	3A002.a.6
Digital signal processors	4A003
Digital time delay generators	3A999.e1
Digital-to-analog converter integrated circuits (DACs)	3A001.a.5

Description	ECCN Citation
Digitally controlled radio receivers	5A001.b.5
Digitizers, waveform.....	3A002.h
Diisopropylaminoethanethiol hydrochloride	1C350.b.7
Dimensional inspection or measuring systems or equipment not controlled by 2B006 or 2B206.....	2B996
Dimensional inspection machines.....	2B206
Dimensional inspection equipment/systems	2B006.a
Dimensional inspection equipment/systems	2B006.c
Dimensional measuring equipment, instruments/systems	2B006.b
Dimethyl ethylphosphonate	1C350.b.12
Dimethyl methylphosphonate	1C350.b.13
Dimethyl phosphite.....	1C350.c.2
Dimethylamine.....	1C350.d.8
Dimethylamine hydrochloride	1C350.d.9
Dinitrogen tetroxide ()	1C111.a.3.b
Dinitrogen trioxide.....	1C111.a.3.a
Dinitrogen pentoxide	1C111.a.3.c
2,2' Dinitropropanol	1C018
Diodes, laser.....	6A005.d.1
Diortho tolyl-urethane.....	1C018.g
Diphenyl urethane.....	1C018.f
Direct view imaging equipment.....	6A002.c
Direct-acting hydraulic pressing technology for metal working	2E003.b.2.c
Direct Digital Synthesizer (DDS) integrated circuits	3A001.a.13
Direction finding equipment & components, surveillance	5A001.e
Direction finding equipment, parts & components, navigation, not controlled under 7A003 or 7A103	7A994
Direction finding systems, equipment & components, navigation (inertial)	7A003
Direction finding systems, equipment & components, navigation, not controlled under 7A003	7A103
Directional solidification casting control software.....	9D004.c
Directional solidification casting equipment	9B001.a, 9B619.a
Discharge type arms.....	0A985
Discrete microwave transistors	3A611.d
Discrete microwave transistor technology.....	3E611.b.4
Display, 3D (software for)	7D004.g
Disruptors.....	1A006.b
Disruptors.....	1A006.b
Dissemination equipment (military) for riot control agents in 1C607.a.....	1A607.e
Distillation columns, hydrogen-cryogenic.....	1B228
Distillation towers, packings	1A226
Dive computers	8A992.j

Description	ECCN Citation
Diver deterrent acoustic systems	8A002.r
DNAN (2,4-dinitroanisole) (CAS 119-27-7).....	Annex to Cat 1 “List of Explosives” 44
Dobrava-Belgrade virus	1C351.a.11
Doppler laser interferometers (DLIs).....	6A225
Double-door pass-through decontamination autoclaves.....	2B352.a.2.a
Double seal valves	2B350.g
Drilling equipment.....	2B999.h
Drilling machines, deep-hole	2B001.f
Drone (military) production facilities	9B610.c
Dye lasers.....	6A005.c
Dye lasers.....	6A205
Dynamic adaptive routing equipment.....	5A991.c.9
Dynamic wavefront (phase) measuring equipment	6A004.f
Dynamic adaptive routing software	5D991.a
E-beam welders.....	2B999.e
Earth moving equipment, large.....	2B999.h.2
Eastern equine encephalitis virus.....	1C351.a.12
EB-PVD (Electron beam physical vapor deposition) equipment	2B005.c
Ebolavirus (includes all members of Ebolavirus genus).....	1C351.a.13
Eddy current test equipment for nuclear reactors	2A291.d
EDMs, non-wire feed types	2B001.d
EDMs, wire feed type	2B991.d.1
Ejection seat mounted survival aids for military aircraft.....	9A610.y.6
Electric cattle prods.....	0A985
Electric detonators, explosive	3A232a
Electric fans	3A611.y.2
Electric propulsion engines.....	8A002o.2.b
Electrical contacts	3A611.y.19
Electrical discharge machines, non wire feed (CNC).....	2B001.d
Electrical discharge machines (EDM) of the wire feed type	2B991.d.2
Electrical guide pins.....	3A611.y.20
Electrically driven explosive detonators.....	3A232.a
Electro-optic materials	6C004
Electro-optical device manufacturing equipment and systems.....	3B991.b Note
Electro-optical integrated circuits	3A001.a.6
Electrolysis cells, amalgam lithium isotope separation	1B233.b.3
Electrolytic cells for fluorine production.....	1B225
Electrolytic cells for fluorine production not controlled by 1B225.....	1B999.a
Electromagnetic interference (EMI) protection technology	7E102
Electromagnetic isotope separators.....	1B226
Electromagnetic pulse (EMP) protection, detectors	6A102
Electromagnetic pulse (EMP) protection technology, avionics.....	7E102

Description	ECCN Citation
Electromagnetic pulse (EMP) recovery software	3D005
Electromagnetic radiation sensors, optical fiber	6A002.d.3.a
Electromagnetic signature reduction devices.....	1A101
Electromagnetic signature reduction materials.....	1C101
Electromagnetic underwater communications systems	5A001.b.1.b
Electromagnets, superconductive	3A201.b
Electromagnets, superconductive	3A001.e.3
Electron beam cutting machines (CNC)	2B001.e.1.b
Electron beam equipment for mask making/semiconductor devices.....	3B001.f.2
Electron beam equipment for projection image transfer.....	3B991.b.2.g
Electron beam melting furnaces.....	2B227.b
Electron beam physical vapor deposition (EB-PVD) equipment	2B005.c
Electron beam sensitive resist materials	3C002.b
Electron beam systems, for probing semiconductor devices	3B992.b.5
Electron beam systems.....	3B991.b.1.j
Electron beam test systems	3B992.b.5
Electron bombardment mass spectrometers.....	3A233.d
Electron tube manufacturing equipment and components.....	3B991.a
Electron tube inspection or testing equipment and components.....	3B992.a
Electronic assemblies.....	4A003
Electronic assemblies and related equipment not controlled by 4A001 or 4A003.....	4A994
Electronic assemblies specially designed to provide feedback capability in systems controlled by 2B006.b.3.....	2B006.b.4
Electronic cameras	6A003.a.5
Electric chairs.....	0A981
Electrical connectors.....	3A611.y.1
Electronic components.....	3A001
Electronic components.....	3A201
Electronic components.....	3A101
Electronic components (military)	3A611
Electronic components and materials inspection or testing equipment, components and accessories	3B992
Electronic components and materials manufacturing equipment	3B991
Electronic components and materials manufacturing equipment, not controlled by 3B001	3C001
Electronic computers	4A994.a
Electronic computers & related equipment.....	4A001, 4A003, 4A004 or 4A994
Electronic computers & related equipment.....	4A101
Electronic computers & related equipment.....	4A102
Electronic cooling fluids	1C006.d
Electronic framing cameras	6A203.b.2
Electron sensing devices	6A002.a.2.a.2.b

Description	ECCN Citation
Electronic streak cameras & streak tubes	6A003.a.3
Electronic streak cameras & streak tubes	6A203.b.1
Electrostatic Discharge (ESD) recovery software	3D005
Electronically steerable antennae, phased array	5A001.d
Electroplating equipment	2B999.i
EMP/EMI protection technology, avionic systems	7E102
EMP/ESD recovery software.....	3D005
Encoders, rotary input shaft type, and rings, discs or scales therefor.....	3A001.f
Encryption equipment, assemblies & components	5A002
Encryption hardware components.....	Cat 5 pt 2 Note 3 (b)
Encryption software	5D002
End effectors, robot.....	2B207
End effectors, robot.....	2B007
Energetic ionic materials.....	Annex to Cat 1 List of Explosives 48
Energy storage capacitors	3A001.e.2
Engines, diesel n.e.s.	9A990
Engines (marine), n.e.s.....	8A992.g
Engines (submarine), n.e.s.	8A992.g
Engines (air breathing reciprocating or rotary internal combustion type)	9A012.b.4
Enterohaemorrhagic E. coli (EHEC)	1C351.c.17
Environmental chambers	1B018.b, 9B106, or 9B610.b
Environmental chambers, capable of simulating flight conditions.....	9B106, 9B610.b
Environmental test facilities for 7A611 (except 7A611.y) or guidance equipment	7B611
Epitaxial growth equipment.....	3B001.a
Epitaxial growth stored program controlled equipment	3B991.b.1.d
Epitaxial wafers, Cadmium telluride (CdTe).....	6C002.b
Epoxy resin matrix impregnated carbon fibers or filamentary materials	1C010.e Note 1
Equine morbillivirus (Hendra virus).....	1C351.a.18
Equipment (i.e., 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.....	6B619.a
Equipment (military) “specially designed” for the destruction of chemical warfare agents	1B607.a
Equipment and tooling “specially designed” for the “development,” “production,” repair, overhaul, or refurbishing of commodities controlled by 1A607.e, .f, .g, .h, or .j or by USML Category XIV(f).....	1B607.c
Erbium oxide (erbia) (Er ₂ O ₃) made/coated crucibles	2A225.a.4
Etching stored program controlled equipment.....	3B991.b.1.h
Ethers, as lubricating fluid	1C006.b.1
Ethyl centralites	1C018.a
Ethyl iodoacetate (CAS 623-48-3).....	1C607.a.14

Description	ECCN Citation
Ethyl phenyl urethane	1C018.e
Ethyl phosphinyl dichloride	1C350.b.15
Ethyl phosphinyl difluoride	1C350.b.16
Ethyl phosphonous dichloride.....	1C350.b.15
Ethyl phosphonous difluoride.....	1C350.b.16
Ethyl phosphoryl dichloride	1C350.b.17
Ethyl-NN-diphenylurea (ethyl unsymmetrical diphenylurea)	1C018.d
Ethyldibromoarsine (CAS 683-43-2)	1C607.a.9
Ethyldiethanolamine (139-87-7).....	1C350.c.3
Evaporators for concentrated lithium hydroxide solution	1B233.b.4
Exchange columns, liquid-liquid for lithium amalgams.....	1B233.b.1
Exchanges, telecommunication.....	5A991.c
Excimer lasers	6A005.d.4
Execution of human beings, equipment for	0A981
Expert systems - integration systems technology	2E003.e
Exploding foil initiators (EFI)	1A007
Exploding bridge (EB) detonators	1A007
Exploding bridge wire (EBW) detonators	1A007
Explosive, high	1C239
Explosive/munitions environment handling robots	2B007.b
Explosive detection.....	1A004.d
Explosive detonator firing sets.....	1A007.a
Explosives or detonator detection equipment, software, or technology	2A983, 2D983 or 2E983
Explosive detonators, electric	1A007.b or 3A232
Explosive devices , charges, components - commercial.....	1C608, 1A008 or 1C992.1
Explosives (military) production equipment	1B018.a
Explosives (military) in charges for civil applications	1A008 or 1C608
FADEC (Full authority digital electronic engine control) software	9D003, 9D619
FADEC (Full authority digital electronic engine control) technology	9E003.h, 9E619
Fan blade (hollow) technology	9E003, 9E619
Fans, electric	3A611.y.2
Fast Fourier Transform (FFT) processors.....	3A001.a.12
Fast switching function modules or assemblies.....	3A228.c
Fast fourier transform processors, acoustic signal processing.....	6A001.a.2.c
Fault tolerance FADEC software.....	9D003, 9E619
Fermenters (biological processing), and components designed for such fermenters	2B352.b
Fertilizers containing ammonium nitrate	1C997
Fiber, equipment for the production of.....	1B999
Fiber and filamentary material.....	1C010
Fiber and filamentary material.....	1C210
Fiber converting equipment, polymeric to carbon or silicon carbon	1B001.d.1
Fiber laser components	6A005.e.3

Description	ECCN Citation
Fiber optic cable.....	5A001.c
Fiber optic gyro coil winding machines	7B003
Fiber optic magnetometers.....	6A006.c
Fiber optic hull penetrators/connectors.....	8A002.c
Fiber optic wave division multiplex equipment.....	5A991.b.5
Fiber preforms, metal coated, for fiber prepregs in 9C110.....	9C110
Fiber prepregs, resin impregnated, for items in 9A110	9C110
Fiber, rare-earth metal doped double-clad	6C005.b
Fiber reinforcement, production equipment	1B001.d
Fiber straining equipment	1B001.d.1
Fiber surface treatment equipment.....	1B101.d
Fibrous or filamentary materials.....	1C210
Fibrous or filamentary materials.....	1C010
Fibrous or filamentary materials, carbon.....	1A002.b.1
Fibrous and filamentary materials for use in composite structures	1C990
Fibrous or filamentary material production equipment	1B001
Fibrous or filamentary material production equipment	1B101.c
Fibrous and filamentary materials development, production or use technology	1E994
Field programmable gate arrays (FPGA).....	3A001.a.7, 3A991.d
Field programmable interconnects (FPIC).....	3A001.a.7, 3A991.d
Field programmable logic arrays (FPLA).....	3A001.a.7, 3A991.d
Field programmable logic devices (FPLD).....	3A001.a.7, 3A991.d
Field test equipment to evaluate or calibrate the operation of systems described in USML Category XII(a), (b), or (c).....	7B611
Filament winding machines	1B001.a
Filament winding machines	1B101.a
Filament winding machines	1B201
Filling equipment, remotely controlled.....	2B350.f
Film type integrated circuits	3A001.a Note 2
Filter canisters.....	1A004 or 1A995
Filters, tunable band-pass	3A001.b.5
Filters for clean rooms	3B991.b.4
Filters (fuel or oil) for gas turbine engines	9A619.y.4
Filters (hydraulic, fuel, oil, air) for ground vehicles.....	0A606.y.8
Filters, optical	6A994.a
Filters for hydraulic/oil/fuel systems in military aircraft.....	9A610.y.8
Filters for pneumatic/hydraulic/oil/fuel systems in submersible vessels.....	8A620.y.2
Filters for pneumatic/hydraulic/oil/fuel systems in surface vessels of war	8A609.y.2
Finger barriers.....	3A611.y.31
Finger cuffs	0A983
Fingerprint analyzers, cameras and equipment.....	3A981
Fingerprint equipment, computers for	4A980

Description	ECCN Citation
Fingerprinting powders, dyes, inks.....	1A985
Finishing machines, gear	2B003
Finishing machines, gear	2B003
Fins.....	8A992.i
Fire extinguishers for military aircraft.....	9A610.y.26
Fire detectors for military aircraft.....	9A610.y.27
Firearms, muzzle-loading (black powder)	0A018.c
Firing sets, for multiple detonators of 3A232	1A007 or 3A229.a
Fireworks displays	1C608.j or 1C992.k
Fissile materials, special or other.....	0C002
Flanges, vacuum	2B999.k
Flares, non-irritant smoke	1A984
Flash discharge X-ray generators.....	3A201.c
Flash X-ray machines	3A999.c
Flexible rotor centrifugal balancing machines.....	2B229.a
Flexible sensors for hydrophones	6A001.a.2.a.1
Flexible nozzles, thrust vector control sub-system.....	9A106.c
Flexible waveguide	3A991.h
Flight management system integration technology	7E104
Flight control servo valves.....	9A106.e
Flight control systems for non-military UAVs	7A116
Flight control systems for military UAVs or drones	9A610.w
Flight control systems - software.....	7D003.e and 7D004
Flight instrument systems, integrated	7A103.b
Flight instrument trainer, military.....	9A610.t
Flight control system development technology	7E004
Flight control actuator technology	7E004.a.5
Flip-guards	3A611.y.32
Flow-forming machines	2B009
Flow-forming machines	2B109
Flow-forming machines	2B209
Flow-forming machines	2B999i
Fluid energy mills	1B119
Fluoride compounds (bulk).....	6C994.a.1
Fluoride glass (bulk)	6C994.a.2
Fluorinated silicone fluid	1C006.b.2
Fluorinated compounds, components	1A001
Fluorinated compounds, unprocessed.....	1C009
Fluorinated phosphazene elastomers	1C009.c
Fluorinated polyimide.....	1C009.b
Fluorine	1C999.f
Fluorine production (electrolytic cells).....	1B225

Description	ECCN Citation
Fluorocarbon electronic cooling fluids	1C006.d
Fluorophosphate glass.....	6C004.e
Flurocarbon electronic cooling fluids	1C006.d
Fluxgate magnetometer technology	6E003.f
Fly cutting machines	2B001.b.4 or 2B992.b
Fly-by-light flight control system software	7D003.e, 7D004.c
Fly-by-light or fly-by-wire technology	7E004.b
Fly-by-wire flight control system software.....	7D003.e, 7D004.c
Fly-by-wire systems for military UAVs or drones	9A610.w
Fly-by-wire systems for missiles	7A116
Fly-by-wire control system technology	7E004.b
Foam, syntactic for underwater use (in any stage of manufacture)	8C001 or 8A002.a.4
Foam mirror structures, lightweight	6A004.a.3
Focal plane arrays, direct view	6A002.c.2 or c.3
Focal plane arrays, linear & 2D	6A002.a.3
Focal plane arrays, non-space qualified.....	6A002.a.3.g
Focal plane arrays, space qualified.	6A002.a.1.d
Focal-plane array performance determining equipment	3B992.b.4.c
Fogging or spraying systems, specially designed for fitting to aircraft, “lighter than air vehicles,” or “UAVs”	2B352.h.1
Foot-and-mouth disease virus	1C351.a.14
Fording (water) kits for ground vehicles	0A606.e
FPGA's (Field programmable gate arrays)	3A001.a.7
FPLA's (Field programmable logic arrays)	3A001.a.8
Fracking fluid.....	0A998.b.2
Framing cameras, electronic type	6A203.b.2
Framing cameras, mechanical.....	6A203.a.1
Framing tubes & solid state imaging devices	6A203.b.3
Framing cameras, electronic type	6A003.a.4
Francisella tularensis.....	1C351.c.14
Free electron laser magnet wiggler manufacturing or inspection equipment	6B995.a.1
Free electron laser photo injector manufacturing or inspection equipment.....	6B995.a.2
Freeze drying equipment (steam, gas, or vapor sterilizable)	2B352.e
Freon and chilled water cooling systems	1B999.d
Frequency agile (frequency hopping) radio equipment	5A001.b.3
Frequency agile systems	5A002.e
Frequency agile tubes	3A001.b.1
Frequency hopping development technology	5E001.b.4
Frequency analyzers (signal analyzers)	3A002.c
Frequency changers	3A999.a
Frequency changers (converters or inverters)	3A225
Frequency changers (a.k.a. converters or inverters) and generators, “software”	

Description	ECCN Citation
“specially designed” for the “use” of	3D201
Frequency changers (a.k.a. converters or inverters) and generators, “software”	
“specially designed” to enhance or release the performance characteristics of equipment	
to meet or exceed the performance characteristics in ECCN 3A225	3D202
Frequency extenders, mixers/converters.....	3A001.b.7
Frequency network analyzers	3A002.e
Frequency standards, atomic.....	3A002.g
Frequency synthesized signal generators.....	3A002.d
Frequency synthesizer, electronic assemblies.....	3A001.b.11
Fuel oils.....	1C980
Fuel cell air independent power systems	8A002.j
Fuel lines and hoses for gas turbine engines.....	9A619.y.3
Fuel filters for gas turbine engines.....	9A619.y.4
Full Authority Digital Electronic Engine Control software.....	9D003, 9D619
Functional (truth table) testing equipment, for integrated circuits	3B002.b
Fungi, human and zoonotic pathogens and “toxins”	1C351.e
Fungi, plant pathogens	1C354.b
Furnaces	2B226
Furnaces, Chemical Vapor Deposition (CVD), other than those controlled by	
2B005.a, designed or modified for the densification of carbon-carbon composites	2B105
Furnaces	2B227
Fused silica glass.....	6C004.e
GaAs photocathodes	6A002.a.2.c.3
GaInAs photocathodes	6A002.a.2.c.3
Galleys (military aircraft)	9A610.y.9
Galleys (submersible vessels).....	8A620.y.3
Galleys (surface vessels of war)	8A609.y.3
Gallium organo-metallic compounds.....	3C003
Gallium III/V compound substrates, hetero-epitaxial grown-multi-layer	3C001.c
Gallium nitride (GaN) “substrates”, ingots, boules, or other preforms of	
those materials.....	3C005.a
Gallium selenide	6C004.b.5
Gallows	0A981
Gas centrifuge rotor assembly equipment.....	2B228.a
Gas krytron tubes	3A228.a
Gas or full face masks.....	1A004 or 1A995
Gas centrifuge rotor balancing equipment.....	2B229
Gas, manufactured, synthetic or natural liquid produced or derived	
from Naval Petroleum Reserves	1C984
Gas discharge & ion lasers.....	6A005.a
Gas and oil exploration equipment, software, and data	0A998
Gas lasers	6A005.a

Description	ECCN Citation
Gas monitoring systems, toxic.....	2B351
Gas sterilizable freeze drying equipment.....	2B352.e
Gas turbine aeroengines, civil non-certified/supersonic.....	9A001
Gas turbine blade, manufacturing or measuring equipment.....	9B001, 9B619
Gas turbine blade technology.....	9E003.a, 9E619
Gas turbine blades, vanes or tip shroud casting equipment, tooling or fixtures.....	9B991, 9B619
Gas turbine brush seal production/test equipment.....	9B003, 9B619
Gas turbine components, solid state joining equipment.....	9B004, 9B619
Gas turbine engine development systems/instrumentation.....	9B002, 9B619
Gas turbine engine development control systems or instrumentation.....	9B002, 9B619
Gas turbine engine propulsion systems assemblies/components.....	9A003, 9A619
Gas turbine engine technology.....	9E003, 9E619
Gas turbine engine development and use software.....	9D004, 9D619
Gas turbine engine monitoring system software.....	9D619.b.11
Gas turbine engines, parts and components, not controlled by 9A001 or 9A101.....	9A991, 9A619
Gas turbine engines & assemblies/components, marine.....	9A002
Gas turbine test/flow modeling software.....	9D004.a, 9D619
Gas turbine (aero engine) test software.....	9D004.b, 9D619
Gaskets, aircraft/aerospace use.....	1A001.a, 9A610.x
Gaskets, ground vehicles.....	0A606.y.9
Gaskets, vacuum.....	2B999.k
Gate silicon intensifier target (SIT) videcon tubes.....	6A203.b.3.b
Gateways & bridges.....	5A991.b.4.b
Gauges, hydraulic, pneumatic, fuel and lubrication.....	3A611.y.35
Gauges and indicators (analog cockpit).....	9A610.y.2
Gauges and indicators (submersible vessels).....	8A620.y.10
Gauges and indicators (surface vessels of war).....	8A609.y.10
GDMS (Glow discharge mass spectrometers).....	3A233.b
Gear honing, shaving, grinding, cutting, and finishing machines.....	2B003
Gearmaking and/or finishing machinery not controlled by 2B003.....	2B993
Gel propellant control systems.....	9A106.d
Generator systems, neutron.....	3A231
Generators and other equipment for nuclear plants.....	2A290
Generators, digital time delay.....	3A999.e1
Generators, for ground vehicles.....	0A606.y.2
Generators, field – “specially designed for military use.....	0A617.y.4
Generators, high-current pulse for detonators.....	3A229
Generators, high-speed pulse.....	3A230
Generators, marx.....	3A999.c
Generators, portable electric.....	2A994
Genetically-modified microorganisms.....	1C353
Germanium, hetero-epitaxial grown multi-layer substrates.....	3C001.b

Description	ECCN Citation
Gimbals, optical control.....	6A004.d.3
Glass fiber or filamentary materials.....	1C210.b
Glass fiber, for optical communications	5A001.c
Glass matrix reinforced composite materials.....	1C007.c.1.a
Glass preforms, for optical fiber production.....	5C991
Glass Windows, nuclear radiation shielding.....	1A227
Glass, high homogeneity.....	6C004.e.3
Global Navigation Satellite Systems (GNSS) ranging signals decryption software	7D005
Global positioning system (GPS) equipment & components	7A005, 7A105 or 7A994
Glove boxes	0B999
Gloves, protective	1A004 or 1A995
Glow discharge mass spectrometers (GDMS).....	3A233.b
GNSS (Global Navigation Satellite Systems) ranging signals decryption software	7D005
Goatpox virus.....	1C351.a.15
Gold (Au) metal vapor lasers	6A005.b
GPS equipment, other than those of 7A005	7A105
GPS (Global positioning system) equipment/components	7A005
Gradiometers & components, gravity	6A007.c
Gradiometers & components, gravity	6A107
Gradiometers & components, magnetic.....	6A006
Graphite, fine grain recrystallized bulk	1C107.a
Graphite, bulk	1C107.a
Graphite, pyrolytic or fibrous reinforced.....	1C107.b
Graphite, nuclear-grade, not intended for use in a nuclear reactor.....	1C298
Gravimeters (Gravity meters) & components, gravity	6A007.a
Gravimeters (Gravity meters) & components, gravity	6A007.b
Gravimeters (Gravity meters) & components, gravity	6A107
Gravity meter (gravimeters) products & calibration equipment.....	6B007
Gravity meters.....	6A997
Gravity gradiometers & components	6A007.c
Gravity meters (gravimeters) & components.....	6A007.b
Gravity meters (gravimeters) & components.....	6A007.a
Gravity meters (gravimeters) software	6D003.g
Gravity gradiometers & components	6A107
Gravity meters (gravimeters) & components.....	6A107
Gravity gradiometer software	6D003.g
Greases.....	1C980
Grenades, non-irritant smoke.....	1A984
Grinding machines (CNC)	2B991.d.1
Grinding machines, gear	2B003
Grinding machines	2B201.b
Grinding machines	2B001.c

Description	ECCN Citation
Ground fault circuit interrupters	3A611.y.18
Ground vehicles & related commodities.....	0A606
Grounding straps.....	3A611.y.25
Guanarito virus.....	1C351.a.16
Guanidine nitrate.....	1C011.c or 1C608.m
GUDN (Guanylurea dinitramide) FOX-12 (CAS 217464-38-5).....	Annex to Cat 1 List of Explosives 46
Guidance sets usable in missiles	7A117
Guillotines.....	0A981
Gun barrel rifling and broaching machines and tools therefor	2B018.e or f
Gun barrel trepanning machines	2B018.g
Gun boring and turning machines.....	2B018.h
Gun honing machines	2B018.i
Gun, immobilization	0A985
Gun jump screw lathes.....	2B018.j
Gun rifling machines.....	2B018.k
Gun, shotgun.....	0A984
Gun straightening presses	2B018.l
Gun, stun.....	0A985
Gyro dynamic balance stations	7B003 or 7B101
Gyro tuning test stations	7B003 or 7B101
Gyro run-in/motor test stations	7B003 or 7B101
Gyro evacuation/fill stations	7B003 or 7B101
Gyro-astro compasses & devices.....	7A104
Gyros & gyro components.....	7A102
Gyros.....	7A002
Gyroscope production/manufacturing/test equipment.....	7B003
Hacking systems, equipment and components	5A004
Hafnium oxide (hafnia) (HfO ₂) made/coated crucibles	2A225.a.5
Hafnium metal, alloys & compounds	1C231
Hafnium fluoride (HfF ₄) glass	6C004.e
Hair type absorbers	1C001.a Note 1.a
Handcuffs.....	0A982
Handling equipment for propellants and their constituents	1B115
Handling systems, semiconductor wafers.....	3B001.e
Hantaan virus	1C351.a.17
Harbor entrance detection devices for submersible vessels.....	8A620.c
Hard surface coated substrates.....	3B991.b.2.b.1
Harnesses, complete.....	9A992, 9A610.h
Heading sensors, towed hydrophones.....	6A001.a.2.b.4
Heading sensors	6A001.a.2.d
Heat exchangers for use in nuclear reactors	2A290.a

Description	ECCN Citation
Heat exchangers & condensers	2B350.d
Heat pipe cooled mirrors.....	6A005.e.1
Heat sinks.....	3A611.y.3
Helicopter system development technology	7E004.c
Helicopter power transfer system technology.....	9E003.d, 9E610
Helium, enriched.....	1C232
Helium refrigeration units.....	1B231.b.1
Helium.....	1C980
Helium-3	1C232
Helix Tubes.....	3A001.b.1.a.4
Helix traveling wave tubes (TWTs) technology.....	3E611.b.1
Helmet, military, shells, liners, comfort pads	1A613.c and .y.1
Helminthosporium oryzae (Cochliobolus miyabeanus).....	1C354.b.2
Hemishell dimensional inspection equipment/systems	2B006.d
Hendra virus (Equine morbillivirus).....	1C351.a.18
Herpesvirus (Suid herpesvirus 1; a.k.a. Pseudorabies virus, Aujeszky’s disease)	1C351.a.50
Hetero-epitaxial grown multi-layer substrates.....	3C001
Hetero-structure semiconductor technology	3E003.b
High energy storage capacitors.....	3A001.e.2
High explosive containment vessels, chambers, containers, and similar containment devices not enumerated under ECCN 1B608 or in USML Category IV or V.....	1B234
High power pulse shaping networks.....	3A999.c
High voltage capacitors.....	3A999.c
High voltage triggers.....	3A999.c
High-speed pulse generators.....	3A230
High-speed cameras	6A003
High-speed cameras and imaging devices and “components” therefore not controlled by ECCN 6A003	6A203
High-speed cameras and imaging devices and “components” therefore, “software” “specially designed” to enhance or release the performance characteristics of devices to meet or exceed the performance characteristics described in ECCN 6A203	6D201
High-vacuum service equipment	2B999.k
High-velocity gun systems.....	2B232
Hinges for ground vehicles	0A606.y.11
HIPS (Hot Isostatic Presses)	2B204
HIPS (Hot Isostatic Presses)	2B004
HIPS (Hot Isostatic Presses)	2B104
Hog cholera virus (classical swine fever virus)	1C351.a.9
Hollow cylinder centrifugal balancing machines	2B229.b
Holographic sights	0A987
Holographic sights that have focal plane array or image intensifier tube, technology for	0E987
Honing machines, gear	2B003

Description	ECCN Citation
Honing machines, gear.....	2B003
Horses by sea	0A980
Hoses (brake) for ground vehicles	0A606.y.1
Hoses (cooling systems) for ground vehicles	0A606.v.7
Hoses (fuel) for gas turbine engines	9A619.y.3
Hoses (fuel and hydraulic) for military aircraft	9A610.y.10
Hoses (hydraulic system) for ground vehicles.....	0A606.y.10
Hoses for pneumatic/hydraulic/oil/fuel systems in surface vessels of war.....	8A609.y.2
Hoses (pneumatic) for ground vehicles	0A606.y.13
Hot isostatic presses (HIPS)	2B204
Hot isostatic densification technology/data, Al/Ti/Superalloys.....	2E003.b.2.d
Hot isostatic presses (HIPS).....	2B004
Hot cap sealers (semi-automatic or automatic) for ceramic microcircuit	3B991.b.3.c
Hot cell manipulators.....	2B225
Hot cells	0B999
Hot isostatic presses (HIPS)	2B104
HT-2 toxin.....	1C351.d.8
HTPB (Hydroxy-terminated polybutadiene) propellant additive	1C111.b.2
Hull penetrators/connectors, fiber optic.....	8A002.c
Human pathogens and “toxins”	1C351
Hybrid integrated circuits	3A001.a Note 2
Hybrid rocket propulsion systems	9A009
Hybrid computers & components	4A001
Hybrid computers and electronic assemblies.....	4A994.k
Hybrid computers	4A102
Hybrid computer electronic systems/electronic assemblies	4A001.a
Hybrid rocket motors and components	9A109
Hydraulic fluids	1C980
Hydraulic fluids	1C996
Hydraulic forming equipment.....	2B999.b
Hydraulic fracturing items	0A998.b
Hydraulic fracturing ‘proppant,’ ‘fracking fluid,’ and chemical additives therefor	0A998.b.2
Hydraulic pressing, direct-acting technology	2E003.b.1.c
Hydraulic stretch-forming machines and dies technology.....	2E003.c
Hydrazine.....	1C111.d
Hydrides of Antimony, arsenic & phosphorus	3C004
Hydrocarbon oils, synthetic	1C996
Hydroclave temperature, pressure or atmosphere regulation technology.....	1E103
Hydrodynamic calculations/modeling, software for.....	0D999.c
Hydrofoil vessel technology	8E002.c.3
Hydrogen.....	1C980
Hydrogen cyanide (74-90-8).....	1C355.b.1.c, 1E355.b.3

Description	ECCN Citation
Hydrogen fluoride.....	1C350.d.10
Hydrogen fluoride (HF) lasers.....	6A005.d.5.a
Hydrogen isotope storage & purification systems.....	1B231.b.2
Hydrogen refrigeration units.....	1B231.b.1
Hydrogen sulphide-water exchange tray columns.....	1B229
Hydrogen-cryogenic distillation columns.....	1B228
Hydrophone arrays, towed acoustic.....	6A001.a.2.b
Hydrophone arrays (towed) acoustic data processing source code.....	6D003.a.2
Hydrophones.....	6A001.a.2.a
3-Hydroxy-1-methylpiperidine.....	1C350.d.11
Hydroxy-terminated polybutadiene (HTPB).....	1C111.b.2
ICP/MS (Inductively coupled plasma mass spectrometers).....	3A233.a
III/V and II/VI semiconductor materials purifying or processing equipment.....	3B991.b.1.b
III/V compound substrates, gallium or indium.....	3C001.c
Identification plates and nameplates.....	3A611.y.33
Identification plates for gas turbine engines.....	9A619.y.7
Igniters.....	1C608.e or 1C992.f
Image enhancement, digital equipment.....	4A003
Image enhancement equipment.....	4A994.f
Imaging devices.....	6A002
Imaging device manufacturing equipment and systems.....	3B991.b Note
Image intensifier tubes & components.....	6A002.a.2
Image intensifier tubes, direct view.....	6A002.c.1 or c.3
Image transfer equipment.....	3B991.b.2
Imaging cameras.....	6A003.b
Imaging cameras with focal plane arrays of 6A002.a.3.....	6A003.b.4
Imaging cameras with image intensifiers of 6A002.a.2.a.....	6A003.b.3
Imaging cameras incorporating solid-state detectors specified by 6A002.a.1.....	6A003.b.5
Imaging devices.....	6A203.b.3
Imaging equipment, visible & infrared.....	6A002.c
Imaging satellites.....	9A515
Imaging sensors, multispectral and monospectral.....	6A002.b
Immobilization guns and projectiles.....	0A985
Immunotoxins and vaccines.....	1C991
Impregnated cathodes for electronic tubes.....	3A001.b.1.c
Imprint lithography equipment.....	3B001.f.2
Improvised explosive devices (specially designed or modified disposal equipment , components, and accessories).....	1A006
Improvised Explosive Devices (IED) activation devices.....	5A001.h
IMU platform balance fixture.....	7B003 or 7B101
IMU platform tester.....	7B003 or 7B101
IMU stable element handling fixture.....	7B003 or 7B101

Description	ECCN Citation
Incinerators designed to destroy the chemicals controlled by 1C350.....	2B350.j
Independent (air) power systems underwater	8A002.j
Indicator dials.....	3A611.y.26
Indicator heads designed/modified for use with balancing machines in 2B119.a.....	2B119.b
Indium organo-metallic compounds	3C003
Indium III/V compounds substrates.....	3C001.c
Induction coil magnetometers.....	6A006.c
Induction furnace, controlled environment inert gas	2B226
Induction furnace, vacuum.....	2B226
Inductively coupled plasma mass spectrometers (ICP/MS)	3A233.a
Industrial process control hardware/systems designed for power industries.....	1B999.c
Industrial process control hardware/systems designed for power industries controlled by 1B999, software for.....	1D999.a
Inert gas environment induction furnaces.....	2B226
Inertial Measurement Equipment.....	7A003.c
Inertial measurement equipment.....	7A003
Inertial measurement unit tester (IMU module)	7A003, 7B003 or 7B101
Inertial navigation, systems/equipment/components	7A103.a
Inertial navigation, systems/equipment/components	7A003
Inertial navigation systems not controlled by 7A003 or 7A103	7A994
Inertial navigation system software, source code	7D002
Inertial reference Systems (IRS).....	7A003.c
Inertial sensors, optical fiber.....	6A002.d.3.a
Inflatable boats and components.....	8A992.f
Inflation cartridges	8A992.i
Influenza virus (Reconstructed 1918 influenza virus)	1C351.a.40
Information security defeating, weakening or bypassing systems, equip. and components...5A004	
Information security equipment software, mass market	5D992
.....	
.....	
Information security equipment and components, mass market.....	5A992
Information security software	5D002
Information security systems/equipment/devices/components.....	5A002
Information security technology, mass market.....	5E992
Information security - test, inspection, and production equipment	5B002
Infrared detectors, industrial space qualified	6A002.a.1
Infrared sensors, industrial	6A002.c
Infrared viewers (police model).....	9A980
Inhibited red fuming nitric acid (IRFNA).....	1C111.a.3.e
Initiation systems, single or multipoint (electric)	3A232.b
Injector (free electron laser photo) manufacturing or inspection equipment.....	6B995.a.2

Description	ECCN Citation
Inorganic overlay coating application technology	2E003.f
Inorganic chemicals listed in Supp. No. 1 to part 754 produced or derived from the Naval Petroleum Reserves	1C980
Inorganic fibers & filamentary materials	1C010.c
Inspection equipment (linear-angular for hemishells)	2B006.d
Inspection equipment for composite materials	1B001.f
Inspection machines (dimensional), devices or systems, other than those in 2B006	2B206
International Space Station being developed, launched, and operated under the supervision of NASA and “parts,” “components,” “accessories” and “attachments” that are “specially designed” for the ISS.	9A004.w and .x
Instrumentation for gas turbine development	9B002, 9B619
Instrumentation for wind tunnels	9B005
Instrumentation systems, inertial navigation	7A003
Instrumentation cameras	6A003.a
Integrated circuit assembly equipment	3B991.b.3
Integrated circuit, Direct Digital Synthesizer (DDS).....	3A001.a.13
Integrated circuit test equipment, microwave	3B002.c
Integrated circuit test equipment, for (truth table) testing	3B002.b
Integrated circuit, masks	3B001.g
Integrated circuits, compound semiconductor	3A001.a.11
Integrated circuits, custom	3A001.a.10
Integrated circuits, general purpose	3A001.a
Integrated circuits, microwave	3A001.b.2
Integrated circuits, radiation hardened.....	3A001.a.1
Integrated circuits and assemblies manufacturing equipment and systems.....	3B991.b
Integrated circuit and assembly testing equipment.....	3B992.b.4.b
Integrated circuit computer-aided-design (CAD) software	3D003
Integrated circuits and assemblies inspection or testing equipment and systems.....	3B992.b
Integrated flight instrument systems/components	7A103.b
Integrated Navigation Systems, designed or modified for use in missiles	7A103.c
Integrated Services Digital Network technology	5E991
Integrated system source code, avionic/mission systems	7D003.c
Integration software for expert systems	2E003.e
Integration technology for flight management systems.....	7E104
Intensity modulator	3A001.i
Intercepting systems and equipment, communications	5A001.f
Intercepting devices, communications.....	5A980
Interconnect equipment (Computer)	4A003.g
Interconnection equipment.....	3B991.b.1.1
Interface equipment (military) for use in collecting or processing samples of chemical warfare agents.....	1A607.j
Interferometers, velocity (VISARs).....	6A225

Description	ECCN Citation
Interlacing machines	1B001.c
Intermediate amplifier equipment.....	5A991.b Note a.3
International Space Station parts components accessories attachments	9A004.w-y
Interrupters, ground fault circuit.....	3A611.y.18
Interstages for missiles.....	9A117
Intrinsic magnetic gradiometers.....	6A006.c.3
Inverse synthetic aperture radar (ISAR)	6A008.d
Inverters (Frequency changers or converters).....	3A225
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Microcontroller microcircuits	3A001.a.3
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Microelectronic circuits (e.g., integrated circuits and micro-circuits) that are rated, certified, or otherwise specified or described as meeting or exceeding all the characteristics in 9A515.e and that are “specially designed” for defense articles controlled by USML Category XV or items controlled by 9A515.....	9A515.e
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Modeccin.....	1C351.d.10
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Monolithic integrated circuit repair or trimming laser equipment.....	3B991.b.1.m
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Multichip integrated circuits	3A001.a Note 2
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NDT (non-destructive test) inspection equipment	9B007
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Neodymium lasers	6A205.f
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Network access controllers contained in computer equipment.....	4A994.i
Network access controllers contained in telecommunications	5A991.b.4.a
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Neutron generator systems & tubes	3A231
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N,N-Dialkyl (Me, Et, n-Pr or i-Pr) aminoethane-2-thiols and corresponding protonated salts	1C355.a.2.f
N,N-Dialkyl (Me, Et, n-Pr or i-Pr) phosphoramidic dihalides	1C355.a.2.b
N-Nonanoylmorpholine, (MPA) (CAS 5299-64-9).....	1C607.a.6
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Description	ECCN Citation
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Non-fluorinated polymeric substances.....	1C008
Non-fluorinated polymeric manufactures.....	1A003
Non-irritant smoke flares, canisters, grenades and charges.....	1A984
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Nuclear reactor, ultrasonic test equipment.....	2A291.d
Nuclear technology for the development, production or use of nuclear materials, facilities, and equipment.....	0E001
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Numerically controlled machine tools that can be equipped with electronic devices for simultaneous contouring control.....	2B991.c
O-ring for ground vehicles.....	0A606.y.9
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Oil well cartridges.....	1C608.f or 1C992.g
Oil lines and tubes for military gas turbine engines.....	9A619.y.2
Oil tank and reservoirs for military gas turbine engines.....	9A619.y.1
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Oils, distillate fuel.....	1C980
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Description	ECCN Citation
On-highway tractors.....	9A990
Operating systems for real time processing equipment, software	4D993.c
Operating system software for real time processing equipment.....	4D993.c
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Ruby lasers.....	6A995.c
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S-parameter test/measurement equipment	3B002.a
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Safety cabinets, capable of biological use	2B352.f.2
Saint Louis (St. Louis) encephalitis virus	1C351.a.49
Salmonella enterica subspecies enterica serovar Typhi (Salmonella typhi).....	1C351.c.18
Salvage systems, ocean.....	8A001.e
Saps	0A978
SARS-related coronavirus (SARS-CoV).....	1C351.a.46
Satellite communication equipment technology	5E001.b.1
Satellite receivers	7A005
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Scanning cameras & systems.....	6A003.b.2
Scatterometers.....	7B002.a
Scatterometers, to characterize mirrors for laser gyro equipment	7B102.a
Sclerophthora rayssiae var. zaeae	1C354.b.8
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SDH (Synchronous Digital Hierarchy) technology	5E001.b.4
SDH (Synchronous Digital Hierachy) technology	5E991.a.2
Sealers (semi-automatic or automatic hot cap) for ceramic microcircuit packages	3B991.b.3.c
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Description	ECCN Citation
Segmented mirrors, assembly in space	6A004.c.3
Seismic detection equipment	6A999.a
Semiconductor, test equipment	3B002
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Semiconductor components, extended temperature range.....	3A001.a.2
Semiconductor component design software, computer-aided-design	3D003
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Sensors, Micromachined Angular Rate	7A994
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Sensors, optical	6A992
Sensors, optical	6A002
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Shackles	0A982
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Shaving machines, gear	2B003
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Shields, police	0A979
Shiga toxins (shiga-like toxins, verotoxins, and verocytotoxins)	1C351.d.13
Shiga toxin producing Escherichia coli (STEC) of serogroups O26, O45, O103, O104, O111,O121, O145, O157, and other shiga toxin producing serogroups	1C351.c.19

Description	ECCN Citation
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Ship vessel positioning systems, acoustic.....	6A001.a.1.d
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Shock batons	0A985
Shock belts	0A982
Shock shields	0A985
Shock sleeves	0A982
Shock tubes	1C608.b or 1C992.c
Shoes, protective	1A004 or 1A995
Shortwave radio technology	5E001.c.4.c
Shotgun shells	0A986
Shotgun shell manufacturing equipment	0B986
Shotgun shells, buckshot.....	0A984
and shotgun shells, technology for the development or production of	0E984
Shotguns, barrel length 18 inches or over.....	0A984
Shotgun trigger mechanisms, barrels, magazines, magazine extension tubes, receivers.....	0A984
Shrink fit machines for rotor fabrication/assembly	2B228.a
Side Scan Sonar & Synthetic Aperture Sonar (SAS) designed for seabed imaging...	6A001.a.1.a.3
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Sights and sighting devices for firearms that have focal plane array or image intensifier tube, technology for.....	0E987
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Signal generators, frequency synthesizer based.....	3A002.d
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Signal processing equipment, sonar.....	6A001.a.1.d
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Signal tracking development/use technology, laser.....	5E001.b.2
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Signature suppression devices, treatments & fittings	1A101
Silicon carbide (SiC) substrate blanks	6C004.d
Silicon, hetero-epitaxial grown multi-layer substrates	3C001.a
Silicon microcircuits	3A001.a
Silicone carbide wafers or semiconductor substrates, ingots, boules or preforms	3C005.a

Description	ECCN Citation
Silicon-on-sapphire integrated circuits	3A001.a Note 2
Silicone fluid, fluorinated	1C006.b.2
Silver gallium selenide (AgGaSe ₂)	6C004.b.2
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Simulators for nuclear reactors	2A291.b
Simultaneous initiation arrangements or systems, single & multipoint	3A232.b
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Single crystal casting equipment	9B001.a, 9B619
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Single-element & focal plane arrays, space-qualified	6A002.e
Sin Nombre virus	1C351.a.48
Skin friction transducers, wall	9B008
Slapper detonators (Electric).....	1A007 or 3A232.a.3
Slurries and emulsions, commercial prefabricated	1C608.h
Slurry propellant control systems	9A106.d
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Smoke detector for military aircraft.....	9A610.y.27
Sodium azide.....	1C992.1
Sodium bifluoride	1C350.d.19
Sodium cyanide.....	1C350.d.20
Sodium fluoride	1C350.d.21
Sodium (Na) metal vapor lasers.....	6A005.b
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Software, adaptive control	2D002.b.2
Software, adaptive control	2D992.a
Software, dedicated, for toxic gas monitoring systems and their dedicated detecting components controlled by 2B351	2D351
Software, electronic devices	2D002
Software, for coordinating function of multiple subsystems for use in missiles	9D105
Software, for portable electric generator development or production	2D994
Software for Nuclear materials, facilities and equipment.....	0D001
Software, numerical control.....	2D002 and 2D003
Software, real time processing in machine tools	2D002.b
Software, real time processing equipment operating systems	4D993.c
Software, recovery of source code.....	5D001.c.2
“Software” specially designed or modified for the “development”, “production” or “use” of items controlled by 2A290 or 2A291	2D290
“Software” specially designed or modified for the “development”,	

Description	ECCN Citation
“production” or “use” of equipment controlled by 2A983	2D983
“Software” specially designed or modified for the “development”, “production” or “use” of equipment controlled by 2B991, 2B993, or 2B996, 2B997, and 2B998.....	2D991
“Software” specially designed or modified for the “development”, “production” or “use” of items controlled by 2A992 or 2A993	2D993
“Software” “specially designed” for ground vehicles and related commodities controlled by 0A606, 0B606, or 0C606	0D606
“Software” “specially designed” for commodities controlled by 0A617, “equipment” controlled by 0B617, or materials controlled by 0C617	0D617
“Software” specially designed for the “development” of the equipment controlled by 3A003.....	3D004
“Software” “specially designed” for the “development,” “production,” operation, failure analysis or anomaly resolution of commodities controlled by 9A515.d	9D515.d
“Software” “specially designed” for the “development,” “production,” operation, failure analysis or anomaly resolution of commodities controlled by 9A515.e	9E515.e
Solar cells, cell-interconnect-coverglass (CIC) assemblies, solar panels, and solar arrays (space qualified)	3A001.e.4 or 3A991
Solenoids.....	3A611.y.10
Solenoids, superconductive.....	3A001.e.3
Solenoids, superconductive	3A201.b
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Solid rocket propulsion systems	9A007
Solid rocket propulsion system, components.....	9A008
Solid rocket propulsion system, components.....	9A108
Solid state cameras.....	6A003.b.1
Solid state joining equipment, tools/dies/fixtures	9B004
Solid state imaging devices.....	6A203.b.3
Solid-state imaging devices	6A002
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Sonar, active individual	6A001.a.1.e
Sonar processing equipment	6A001.a.2.b
Sonar log equipment	6A001.b
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Sonar, Synthetic Aperture Sonar (SAS) designed for seabed imaging.....	6A001.a.1.a.3
Sonar, underwater navigation system	7A008
Sonar signal processing equipment.....	6A001.a.1.d Note a
SONET (Synchronous Optical Network) technology.....	5E001.b.4

Description	ECCN Citation
SONET (Synchronous Optical Network) technology.....	5E991.a.2
Sounding rocket use software	9D101
Sounding rockets.....	9A104
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Source code, development of avionic goods as specified.....	7D004
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Space-qualified focal plane arrays	6A002. a.1.d
Space-qualified or radiation hardened photovoltaic arrays	3A001.e.1.c
Space-qualified solid state detectors.....	6A002.a.1
Space-qualified optical components	6A004.c
Spacecraft.....	9A515
Spacecraft buses.....	9A515
Spacecraft on-board systems.....	9A515
Spacecraft payloads	9A515
Spacecraft and related commodities	9A004 or 9A515
Spacecraft components	9A515 or 9A010
Spacecraft inertial navigation equipment/components	7A003
Spark-gaps, triggered	3A228.b
Speakers	3A611.y.11
Spectrometry analytical instruments.....	3A999.f
Spherical or spheroidal aluminum powder	1C111.a.1
Spiked batons.....	0A983
Spin forming machines	2B009
Spin forming machines	2B209
Spin forming machines	2B9991
Spin forming machines capable of flow-forming functions	2B209
Spin forming machines combining spin-forming and flow-forming function.....	2B009
Spindle assemblies.....	2B998.a
Spindle assemblies, machine tools.....	2B008.d
Spray booms or arrays of aerosol generating units, specially designed for fitting to aircraft, lighter than air vehicles,” or “UAVs”	2B352.i.2
Spray cooling thermal management systems.....	3A003
Spray-drying equipment capable of drying toxins or pathogenic microorganisms	2B352.f
Spraying or fogging systems, specially designed for fitting to aircraft, “lighter than air vehicles,” or “UAVs”	2B352.i.1
Spraying production equipment, plasma with controlled atmosphere.....	2B005.d
Spread spectrum development technology techniques	5E001.b.4
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Spread spectrum spreading code generation.....	5A002.e

Description	ECCN Citation
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Sputter deposition production equipment	2B005.e
Sputtering equipment, magnetically enhanced	3B991.b.1.f
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St. Louis encephalitis virus	1C351.a.49
Staging mechanisms for missiles	9A117
Stainless steel plate	1C999.b
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‘Star trackers’ and components therefor	7A004
Statistical multiplex equipment.....	5A991.b Note a.7
Steam sterilizable freeze drying equipment	2B352.e
Steel, maraging	1C216
Steel, maraging	1C116
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Steel plate, stainless	1C999.b
Stealth materials, coatings and treatments for signature suppression.....	0C617.a
Step & repeat equipment, semiconductor wafer processing	3B001.f.1
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Storage phosphor image plates	1A999.b
Storage tanks, containers, receivers (chemical, with total internal volume greater than 100 L) and prefabricated repair assemblies therefor	2B350.c
Stored program controlled (SPC) switching equipment	5A991.c
Stored program controlled (SPC) switching equipment, equipment for the development of equipment employing.....	5B001.b
Stored program controlled (SPC) switching equipment, software for the development of equipment employing	5D001.d
Stored program controlled (SPC) switching equipment, technology for the development of equipment employing	5E001.c
Stored program controlled equipment controlled by 3B, software for use of	3D002
Stored program controlled crystal pullers.....	3B991.b.1.c.2
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Streak cameras, mechanical or electronic	6A003.a.3
Streak tubes, electronic streak cameras	6A203.b.1
Streak cameras, electronic type.....	6A203.b.1
Striplines to provide low inductance path to detonators	3A234
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Structural composites production equipment	1B101

Description	ECCN Citation
Structures and composite structures, laminate, and manufacturers for missiles.....	9A110
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Stun cuffs	0A982
Submarine diesel engines.....	8A620.d
Submarine engines, n.e.s.....	8A992.g
Submarine nets.....	8A620.e
Submarine vessel positioning systems, acoustic.....	6A001.a.1.d
Submersible systems.....	8A992.e
Submersible vessels, cargo and transport	8A620
Submersible vessels, military.....	8A620
Submersible vessels, oceanographic and associated commodities.....	8A620
Submersible vehicles operation software (unmanned)	8D999
Submersible vehicles/vehicle systems, equipment, or components (non-military).....	8A002.a
Submersible vehicles/vehicle systems or equipment (non-military)	8A001
Substrate development/production technology, diamond film	3E003.d
Substrates, for X-ray masks	3B991.b.2.b.2
Substrates, hard surface coated.....	3B991.b.2.b.1
Substrates, multi-layer hetero-epitaxial materials.....	3C001
Substrates, semiconductor with resist coating	3C002
Substrates with at least one epitaxial layer of silicon carbide, gallium nitride, aluminum nitride or aluminum gallium nitride	3C006
Suid herpesvirus 1 (Aujeszky's disease; Pseudorabies virus)	1C351.a.50
Suits, protective.....	1A004, 1A995 or 2B352.f.1
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Superconducting quantum interference devices (SQUIDs).....	6A006.a.1
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Superconductive electrical equipment	9A620.b
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Superconductive electromagnets or solenoids	3A201.b
Superconductive electromagnets or solenoids	3A001.e.3
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Superconductive quantum interference devices (SQUIDs)	6A006.a.1
Superconductive propulsion engines	8A002.o.2.c
Superconductive electromagnetic sensors	6A996
Superconductive electronic device technology.....	3E003.c
Superplastic forming technology, metal working.....	2E003.b.1.a
Superplastic forming tools, dies, molds or fixtures	1B003
Superplastic forming technology/data, Al/Ti/Super alloys.....	2E003.b.2.a

Description	ECCN Citation
Surface acoustic wave devices.....	3A001.c.1
Surface coating & processing equipment	2B005
Surface effect vehicles technology	8E002.c.1, c.2
Surface finishing equipment	3B991.b.1.k
Surface irregularity measuring equipment/instruments	2B006.c
Surface skimming (shallow bulk) acoustic wave devices.....	3A001.c.1
Surface vessel positioning systems, acoustic.....	6A001.a.1.d
Surface vessels & components.....	8A609
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Surreptitious interception systems and equipment, technology for	5E001 or 5E980
Survey equipment, surface vessel.....	6A001.a.1.a.1
Survey equipment, underwater	6A001.a.1.a.2
Survey systems or transmitting and receiving arrays, bathymetric	6A001.a.1.b
Swine fever virus (African)	1C351.a.2
Swine fever virus (Hog cholera virus).....	1C351.a.9
Swine vesicular disease virus (Porcine enterovirus type 9).....	1C351.a.51
Switch fabric development/production technology	5A991.c.10
Switches, filtered and unfiltered mechanical	3A611.y.21
Switching devices, modules or assemblies	3A228
Switching equipment, stored program controlled.....	5A991.c
Synchronous Digital Hierarchy (SDH) technology	5E001.b.4
Synchronous Digital Hierarchy (SDH) technology	5E991.a.2
Synchronous Optical Network technology (SONET).....	5E001.b.4
Synchronous Optical Network technology (SONET).....	5E991.a.2
Synchytrium endobioticum.....	1C354.b.9
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Syntactic foam, underwater use	8C001
Synthetic crystalline laser host material	6C005
Synthetic diamond material	6C004.f
Synthetic aperture radar (SAR).....	6A008.d
Systolic array computers/assemblies/components.....	4A004.a
T-2 toxin.....	1C351.d.15
Tanks, austenitic stainless steel.....	2B999.n
Tanks, chemical storage (capacity greater than 100 L)	2B350.c
Tanks, monel.....	2B999.f
Tanks, stainless steel.....	2B999.g
Tank turret rings and sprockets induction hardening machines.....	2B018.m

Description	ECCN Citation
Tank turret bearing grinding machines	2B018.s
Tantalum crucibles coated with tantalum carbide/nitride/boride.....	2A225.c
Tantalum made or lined crucibles	2A225.b
Tape designed for testing recording equipment of entry 3A002a.....	3A002.a
Tape bonders, stored program controlled equipment	3B991.b.3.b
Tape recording equipment	3A002.a
Tape-laying machines	1B101.b
Tape-laying machines	1B001.b
Tar sands	1C981
Tear gas	1A984
Tear gases and riot control agents	1C607.a
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Technology, airborne equipment	7E004.a
Technology, development of frequency hopping techniques	5E001.b.4
Technology, development of spread spectrum techniques	5E001.b.4
Technology, “development,” “production,” or “use” of “software” controlled by ECCN 3D201 or 3D202	3E202
Technology, diamond substrate film.....	3E003.d
Technology, for commodities controlled by 8A609, 8B609, or 8C609, or “software” controlled by 8D609	8E609
Technology, for ground vehicles and related commodities in 0A606, 0B606, 0C606 or software in 0D606.....	0E606
Technology, for items controlled by 0A617, 0B617, 0C617, 0D617	0E617
Technology, for items controlled by 8A620, 8B620 or 8D620	8E620
Technology, gas turbine engine components.....	9E003.c, 9E619
Technology, gas turbine engine components.....	9E003.a, 9E619
Technology, helicopter power transfer systems.....	9E003.d, 9E619
Technology, hetero-structure semiconductor development.....	3E003.b
Technology, high output type diesel engines.....	9E003.e
Technology, integration software for expert systems	2E003.e
Technology, “production” or “use” of “software” controlled by ECCN 6D201	6E202
“Technology” specially designed or modified for the “development”, “production” or “use” of equipment controlled by 2A983, or the “development” of software controlled by 2D983	2E983
Technology “required” for the “development” or “production” of commodities controlled by ECCN 6A002.f - ROICs	6A002.f
“Technology” “required” for the “development,” “production,” operation, failure analysis or anomaly resolution of commodities controlled by 9A515.d.....	9E515.d
“Technology” “required” for the “development,” “production,” failure analysis or anomaly resolution of commodities controlled by 9A515.e	9E515.e

Description	ECCN Citation
Technology, superconductive electronic device	3E003.c
Technology, tilt rotor/wing power transfer systems development.....	9E003.d, 9E610.a
Technology, vacuum microelectronic device	3E003.a
TEGDN (Triethylene glycol dinitrate) propellant additive	1C111.c.2
Telecommunications equipment	5A001
Telecommunications equipment, parts, components for a military application	5A611, 3A611
Telecommunications equipment, high and low temperature tolerant.....	5A991.a
Telecommunication equipment not controlled by 5A001	5A991
Telecommunications equipment/system software	5D001.c.1
Telecommunications interception equipment	5A001.f
Telecommunication monitoring equipment.....	5A001.f
Telecommunication test, inspection and production equipment	5B001
Telecommunications test equipment.....	5B991
Telecommunications transmission equipment, equipment for the development of equipment employing	5B001.b
Telecommunications transmission equipment, software for the development of equipment employing	5D001.d
Telecommunications transmission equipment, technology for the development of equipment employing	5E001.c
Telemetry & telecontrol equipment for missiles.....	5A101
Television cameras (radiation hardened), or lenses therefor	6A203.d
Television cameras, underwater.....	8A002.d.1.b
Television cameras, underwater.....	8A002.d.1
Television cameras, underwater	8A002.d.1.a
Television cameras, underwater.....	8A992.a.2
Television systems (camera, lights, monitoring and signal transmission equipment), remote operation with submersible vehicle	8A992.a.1
Tellurium (Te).....	6C002.a
Tempest type equipment	5A003.b
Tension stretchers for prepregs/preform production	1B101.d
Terminal interface equipment	4A994.i
Terrestrial, marine acoustic equipment.....	6A991
Terrestrial equipment, specially designed for spacecraft.....	9A515
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Test benches/stands, for rockets/motors/rocket engines.....	9B117
Test, calibration or alignment equipment for equipment controlled by 7A.....	7B001
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Test equipment - specially designed for testing finished or unfinished semiconductor devices.....	3B002
Test facilities and equipment “specially designed” for military certification, qualification, or testing of commodities controlled by 1A607.e, .f, .g, .h, or .j or by	

Description	ECCN Citation
USML XIV(f), except for XIV(f)(1).....	1B607.b
Test, inspection, and production commodities for military electronics.....	3B611
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Test tape designed for recording equipment of entry 3A002a.....	3A002.a
Testing equipment, for electronic components.....	3B992.b.4
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TEX (4,10-Dinitro-2,6,8,12-tetraoxa-4, 10- diazaisowurtzitane)	Annex to Cat 1 List of Explosives 45
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Thecaphora solani	1C354.b.11
Thermal batteries	9A604
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Thermal sensors, optical fiber.....	6A002.d.3
Thermoplastic liquid crystal copolymers.....	1C008.b
Thermoset resin impregnated materials.....	1C210.c
Thio-ethers, as lubricating fluids	1C006.b.1
Thiodiglycol.....	1C350.b.22
Thionyl chloride.....	1C350.c.9
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Thrust vector control sub-system.....	9A106.c
Thrusters, satellites	9A515
Thulium-YAG (Tm:YAG) lasers.....	6A005.c.1, c.2 or c.3
Thulium-YSGG (Tm:YSGG) lasers	6A005.c.1, c.2 or c.3
Thumbcuffs.....	0A983
Thumbscrews	0A983
Thumbwheels.....	3A611.y.22
Thyristor devices and modules, solid-state pulsed power switching.....	3A001.g
Tick-borne encephalitis virus (Far Eastern subtype, formerly known as Russian Spring-Summer encephalitis virus)	1C351.a.52
Tick-borne encephalitis virus (Siberian subtype, formerly known as West Siberian virus).....	1C351.b.3
Tilletia indica	1C354.b.10
Tilt rotor/tilt wing power transfer system technology	9E003.d, 9E610.a
Tilting spindles for machine tools.....	2B009.c
Time delay general, electronic equipment for	3A999.e
Time interval measurement, electronic equipment for	3A999.e
Time or frequency domain processing & correlation equipment	6A001.a.2.c
TIMS (Thermal ionization mass spectrometers).....	3A233.c

Description	ECCN Citation
Tires (aircraft)	9A610.y.1
Tires (ground vehicles), except run flat	0A606.15
Titanium alloys	1C002.b.3
Titanium alloys, as tubes/solid forms/forgings	1C202.b
Titanium alloy/powder or particulate form	1C002.c.1.c
Titanium aluminides	1C002.a.2
Titanium-based alloys	1C002.b.3
Titanium doped sapphire laser host material	6C005.a
Titanium-sapphire (Ti: Al ₂ O ₃) lasers	6A005.c.1, c.2 or c.3
Titanium-stabilized duplex stainless steel 9Ti-DSS)	1C118
TMETN (trimethylolethane trinitrate)	1C111.c.4
Tooling and equipment “specially designed” for the “development,” “production,” repair, overhaul, or refurbishing of commodities controlled by 1A607.e, .f, .g, .h, or .j or by USML Category XIV(f)	1B607.c
Tooling for powder metallurgy rotor component manufacture	9B009
Torpedo nets.....	8A620.e
Torquemeter assembly software	9D619.b.9
Torture, specially designed implements of	0A983
Touchpads	3A611.y.28
Tow-placement machines	1B001.g, 1B101.a
Towed acoustic hydrophone arrays	6A001.a.2.b
Toxic gas monitors and monitoring systems	2B351
Toxins	1C350, 1C351, 1C355 or 1C395
Trackballs.....	3A611.y.12
Tracking radar	6A008.1.1
Tracking systems, precision	6A108.b.1
Tracking systems	6A008.1
Tractors and parts.....	9A990
Transceivers, radio.....	5A001.b.2 through 10
Transceivers, radio.....	5A991.b.6 or 7
Transcoders (translation encoders)	5A991.b Note a.6
Transducers, wall skin friction	9B008
Transducers, acoustic projectors.....	6A001.a.1.c
Transformers, electric	3A611.y.13
Transient recorders (Waveform digitizers).....	3A002.h or 3A992.g
Transistor test equipment, S-parameter measurement	3B002.a
Transistors, microwave	3A001.b.3, 3A611.d
Translation encoders (transcoders)	5A991.b Note a.6
Transmission fluids, automatic	1C980

Description	ECCN Citation
Transmission equipment	5A991.b
Transmission equipment for Improvised Explosive Devices (IED)	5A001.h
Transmissions for tracked combat vehicles	0A606.d
Transmit/receive or transmit modules, transmit/receive MMICs or transmit MMICs... ..	3A001.b.12
Transmit/receive or transmit module technology	3E611.b.2, 3E001
Transmultiplex equipment	5A991.b Note a.9
Transport, handling, activation, and launch equipment	9A115
Traveling wave tubes (TWTs), industrial	3A001.b.1.a
Tributyl phosphate	1C999.d
Triethanolamine	1C350.c.10
Triethanolamine hydrochloride.....	1C350.d.24
Triethyl phosphite	1C350.c.11
Triethylene glycol dinitrate (TEGDN).....	1C111.c.2
Triggered spark-gaps	3A228.b
Triggers, high voltage	3A999.c
Trimethyl phosphite.....	1C350.c.12
Tritium, compounds & mixtures.....	1C235
Tritium plant or facilities equipment	1B231.b
Tritium production recovery, extraction & concentration handling facilities or plant.....	1B231.a
Tritium targets for production of tritium and related development and production technology.....	1A231
Tubes, gas krytron	3A228.a
Tubes, vacuum sprytron	3A228.a
Tunable band-pass filters	3A001.b.5
Tunable lasers	6A005.c
Tunable lasers, solid state	6A005.c.1, c.2 or c.3
Tungsten alloys	1C004
Tungsten alloy, parts	1C226
Tungsten carbide, parts	1C226
Tungsten & molybdenum metal & alloys.....	1C117
Tungsten, parts	1C226
Turbines for use in nuclear reactors.....	2A290.a
Turbines, aero gas engines, test software.....	9D004.b, 9D619
Turbines, gas aero engines.....	9A001, 9A619.a
Turbo prop engines	9A619.a
Turbocompound engines.....	9A101
Turboexpanders and turboexpander-compressors	1B232
Turbofan & turbojet engines, lightweight.....	9A101, 9A619
Turboprop engine systems specially designed for items controlled by 9A012	9A102.a
Turning machines for optical quality surfaces.....	2B992.a

Description	ECCN Citation
Turning machines (CNC).....	2B991.d.1
Turning machines.....	2B201.c
Turning machines (CNC).....	2B001.a
TV cameras (radiation-hardened), or lenses therefor	6A203.d
TV cameras, radiation-hardened, not specified in 6A203	6A999.b
Two dimensional focal plane arrays	6A002.a.3
TWTs (Traveling Wave Tubes).....	3A001.b.1.a
UAVs (non-military).....	9A012.a
UAV (military) production facilities	9B610.c
Ultra high temperature ceramic composites	1C107.d.3
Ultrasonic test equipment for nuclear reactors	2A291.d
Underwater breathing apparatus, self-contained.....	8A992.h
Underwater cameras, photographic	8A002.d, e or f
Underwater camera equipment, n.e.s.....	8A992.d
Underwater communications systems.....	5A001.b.1
Underwater ElectroMagnetic Receivers (UEMR).....	6A006.e
Underwater ElectroMagnetic Receivers (UEMR) software	6D003.f.3 or f.4
Underwater electric field sensors.....	6A006.b
Underwater lights.....	8A992.j
Underwater noise reduction technology	8E002
Underwater (propeller) noise reduction software	8D002
Underwater propulsion equipment.....	8A992.j
Underwater rebreathing apparatus	8A620.f
Underwater robots, computer controlled	8A002.h
Underwater sonar navigation systems	7A008
Underwater systems or equipment and parts, not controlled by 8A002.....	8A992
Underwater television cameras.....	8A992.a.2
Underwater vehicles, industrial	8A001
Underwater velocity measurement equipment.....	6A001.b
Underwater vessel positioning systems, acoustic	6A001.a.1.d
Underwater vision systems	8A002.d
Underwater vision systems	8A992.a
Unmanned aerial vehicles, not specified in 9A102	9A120, 9A610
Unmanned aerial vehicles and associated systems, production equipment.....	9B010, 9A610
Unmanned aerial vehicles, associated equipment, systems, and components.....	9A012.b, 9A610
Unmanned air vehicle systems (UAVs) Non-military.....	9A012.a
Unmanned submersible vehicle operation software	8D999
Unmanned tethered submersible vehicles.....	8A001.c
Unmanned untethered submersible vehicles.....	8A001.d
Uranium, depleted.....	1A290
Uranium titanium alloys	1C004

Description	ECCN Citation
Urine collection bags/pads/cups/pumps for military aircraft.....	9A610.y.21
Vaccines and immunotoxins.....	1C991
Vacuum electronic devices.....	3A001.b
Vacuum furnaces.....	2B226
Vacuum furnaces.....	2B227
Vacuum induction furnaces.....	2B226
Vacuum induction furnace, power supplies.....	2B226
Vacuum melting, remelt & casting furnaces.....	2B227
Vacuum microelectronic device development/production technology.....	3E003.a
Vacuum pumps.....	2B231
Vacuum pumps.....	2B350.i
Vacuum pumps, bellows-sealed scroll-type.....	2B233
Vacuum tubes, electronic microwave.....	3A001.b.1
Vacuum sprytron tubes.....	3A228.a
Vacuum valves, piping, flanges, gaskets.....	2B999.k
Valves, austenitic stainless steel.....	2B999.n
Valves, bellows seal.....	2A226
Valves, bellows.....	2B350.g
Valves (check) for hydraulic and pneumatic systems in military aircraft.....	9A610.y.4
Valves, double-seal.....	2B350.g
Valves, of or lined with stainless steel, copper-nickel alloy or other alloy steel (not having the characteristics of valves controlled by 2B350.g).....	2A992
Valves, diaphragm.....	2B350.g
Valves, monel.....	2B999.f
Valves, multiple seal incorporating a leak detection port.....	2B350.g
Valves, non-return (check).....	2B350.g
Valves, stainless steel.....	2B999.g
Valves, vacuum.....	2B999.k
Vapor sterilizable freeze drying equipment.....	2B352.e
Variola virus.....	1C351.a.53
Vector processing unit technology.....	3E002
Vector processors/assemblies.....	4A003
Vehicle position determination software.....	6D103
Vehicles, "specially designed" for a military use.....	0A606.a
Vehicles, unarmed, off-road, and armored.....	0A606.b.1
Velocity interferometers (VISARs).....	6A225
Velocity measurement equipment, underwater.....	6A001.b
Venezuelan equine encephalitis virus.....	1C351.a.54
Ventilated full or half (protective clothing) suits.....	2B352.f.1
Verocytotoxin producing E. coli (VTEC).....	1C351.c.17
Verotoxin.....	1C351.d.13

Description	ECCN Citation
Vesicular stomatitis virus.....	1C351.a.55
Vessels, austenitic stainless steel	2B999.n
Vessel positioning systems, acoustic	6A001.a.1.d
Vessel noise reduction equipment	8A002.o.3
Vessels, marine	8A001, 8A609, 8A620
Vessels, marine systems or equipment	8A992
Vessels, monel	2B999.f
Vessels, stainless steel	2B999.e
Vests, bulletproof & bullet resistant	1A005
Vibration test equipment, acoustic.....	9B006
Vibration test equipment, parts and components.....	9B990
Vibration test equipment using digital control techniques	2B116
Vibrio cholerae.....	1C351.c.21
Video cameras incorporating solid state sensors	6A003.b.1
Vinylidene fluoride copolymers, components of.....	1A001
virulans, fungi (Colletotrichum kahawae)	1C354.b.1
Virus protection software, mass market.....	5D992
Viruses	1C351 or 1C353
Viruses, animal pathogens	1C351.a
Viruses, human pathogens	1C351.a or .b
Viruses, plant pathogens	1C354.c
Viscous software, 2D or 3D engine flow modeling.....	9D004.a
Viscumin (Viscum album lectin 1).....	1C351.d.17
Vision systems, underwater	8A992.a
Vision systems, underwater	8A002.d
Voice print identification and analysis equipment and parts	3A980
Volkensin	1C351.d.18
Wafer handling systems, semiconductor	3B001.e
Wafer processing, semiconductor manufacture.....	3B001.e
Wafer probing equipment	3B992.b.3
Wafer production align and expose equipment	3B991.b.2.f
Wafers, semiconductor with function determined.....	3A001.a
Wafers, comprising multiple epitaxially grown layers	3C001
Wall skin friction transducers	9B008
War implement machinery, equipment, gear, and specially designed parts and accessories therefor.....	2B018
Water (deep) fording kits for ground vehicles.....	0A606.e
Water jet cutting machines (CNC).....	2B001.e.1.a
Water jet (pumpjet) propulsion systems	8A002.p
Waterplane area vessels (small).....	8E002.c.4
Water tanks (potable) and accessories for military aircraft	9A610.y.17

Description	ECCN Citation
Water tanks (potable) and accessories for submersible vessels.....	8A620.y.7
Water tanks (potable) and accessories for surface vessels of war	8A609.y.7
Water tunnels, propulsion model acoustic field measurement	8B001
Water-hydrogen sulphide exchange tray columns.....	1B229
Wave division multiplex equipment	5A991.b.5
Waveform digitizers (Transient recorders).....	3A002.h
Wax pattern preparation equipment, ceramic shell	9B991.e
Weaving machines	1B001.c
Weight belts	8A992.i
Welders, MIG	2B999.d
Welders, E-beam.....	2B999.e
Welding machines, laser	2B999.c
Western equine encephalitis virus	1C351.a.56
Western red cedar, logs and timber.....	1C988
Wet-spinning equipment for refractory ceramics	1B101.c.3
Wet-spinning equipment for refractory ceramics	1B001.d.3
Wetsuits.....	8A992.i
Wide-swath bathymetric survey systems.....	6A001.a.1
Wigglers (free electron laser magnet) manufacturing or inspection equipment.....	6B995.a.1
Wind tunnel aero-model technology.....	9E003.b.1
Wind tunnel, control systems.....	9B005
Wind tunnels, usable for missiles	9B105
Winding machines, fiber optic gyro coil.....	7B003
Windows, glass for nuclear radiation shielding.....	1A227
Windows (ground vehicle), except those for armored vehicles	0A606.y.16
Windshield water and wiper systems for military aircraft.....	9A610.y.22
Wing folding system software	0D521 No. 3
Wing folding system technology	9E003.j
Work stations, as computers having a CTP above 260 Mtops	4A003.b
X-ray converters.....	1A999.b
X-ray equipment for projection image transfer	3B991.b.2.g
X-ray generators, radiographic	3A201.c
X-ray machines, flash	3A999.c
X-ray (non planar) inspection equipment, rocket motors	9B007
Xanthomonas albilineans	1C354.a.1
Xanthomonas axonopodis pv. citri (Xanthomonas campestris pv, citri A) (Xanthomonas campestris pv. citri).....	1C354.a.2
Xanthomonas oryzae.....	1C354.a.3
Xanthomonas oryzae pv. oryzae (syn. Pseudomonas campestris pv. oryzae).....	1C354.a.3
Yellow fever virus.....	1C351.a.57
Yersinia pestis.....	1C351.c.22

Description	ECCN Citation
Yttrium oxide (yttria) (Y ₂ O ₃), crucibles made or coated.....	2A225.a.8
Zinc germanium biphosphide	6C004.b.4
Zinc germanium diphosphide	6C004.b.4
Zinc germanium phosphide.....	6C004.b.4
Zinc selenide (ZnSe), substrate blanks	6C004.a
Zinc sulphide (ZnS), substrate blanks.....	6C004.a
Zirconium fluoride (ZrF ₄) glass	6C004.e
Zirconium metal particulate.....	1C111.a.2.a.1
Zirconium metal, alloy, compounds, or manufacturers	1C234
Zirconium oxide (zirconia) (ZrO ₂) made/coated crucibles	2A225.a.9
Zoonotic pathogens and “toxins”	1C351

Note: Prior to October 15, 2013, the CCL contained certain ECCNs that were only included as cross references to items subject to the export control regulations administered by the Nuclear Regulatory Commission. ECCNs formerly listed on the CCL that, as of October 15, 2013 were subject to the export licensing authority of the Nuclear Regulatory Commission at 10 CFR part 110 are: 0A001, 0B001, 0B002, 0B003, 0B004, 0B005, 0B006, 0C001, 0C002, 0C004, 0C005, 0C006, 0C201 and 1C012. See Section § 774.1(b) for additional information.