

**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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Communications cable systems to detect surreptitious intrusion	5A003.a
Communication channel controllers	5A991.b.4.b
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
Compasses.....	8A609.y.5, 8A620.y.5, 8A992.j, 9A610.y.13
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
Composite conductors, superconductive	1C005
Composite or laminate development software.....	1D002
Composite structures, as tubes	1A202
Composite structures or laminates	1A002
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
Composite structures for unmanned aerial vehicles	9A610.t
Composites (structural) production equipment.....	1B101
Compound rotary tables for machine tools.....	2B008.c
Compound semiconductor integrated circuits	3A001.a.11
Compound semiconductor photocathodes	6A002.a.2.c.3
Compressors.....	9A619.x
Compressors, bellows-sealed scroll-type.....	2B233
Compressors, turboexpander.....	1B232

Description	ECCN Citation
Compressors, turbo/centrifugal/axial flow.....	9A619.x
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
Conductive polymers	1C001.c
Conductors, superconductive composite	1C005
Congo-Crimean hemorrhagic fever virus (a.k.a. Crimean-Congo hemorrhagic fever virus)	1C351.a.10
Connector backshells, electric	3A611.y.9
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

Description	ECCN Citation
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
Continuous mixers	1B118
Control units for metallurgical melting & casting furnaces.....	2B227
Control systems, on-line development of gas turbine engines	9B002, 9B619.a
Controllable-pitch propellers	8A002.o.2.a
Controlled atmosphere melting & casting furnaces.....	2B227
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
Controllers for high explosive handling robots	2B207
Controllers, robot	2B007
Converter integrated circuits.....	3A001.a.5
Converters, frequency	3A225
Converters, frequency extender	3A001.b.7
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
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

Description	ECCN Citation
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
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

Description	ECCN Citation
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-CO ₂) lasers.....	6A005.d.5
Deuterium fluoride (DF) lasers.....	6A005.d.5
Di-isopropylamine	1C350.d.4
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
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

Description	ECCN Citation
Diesel cycle engine, air independent	8A002.j
Diethyl ethylphosphonate	1C350.b.3
Diethyl methylphosphonite	1C350.b.4
Diethyl phosphite	1C350.c.1
Diethyl-N, N-dimethylphosphoramidate	1C350.b.5
Diethylamine	1C350.d.25
Diethylaminoethanol	1C350.d.3
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
Digitally controlled radio receivers	5A001.b.5
Digitizers, waveform	3A002.h
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

Description	ECCN Citation
Dimensional measuring equipment, instruments/systems	2B006.b
Dimethyl ethylphosphonate	1C350.b.10
Dimethyl methylphosphonate	1C350.b.11
Dimethyl phosphite	1C350.c.2
Dimethylamine.....	1C350.d.5
Dimethylamine hydrochloride	1C350.d.6
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
Disk drive (magnetic hard) development or production technology	4E993.c
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
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

Description	ECCN Citation
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	6A005.f.1
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	2B991d.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
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

Description	ECCN Citation
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.1.c.....	2B006.b.1.d
Electronic cameras.....	6A003.a.5
Electric chairs.....	0A981
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
Electronic streak cameras & streak tubes.....	6A003.a.3
Electronic streak cameras & streak tubes.....	6A203.b.1
Electrical connectors.....	3A611.y.1
Electronically steerable antennae, phased array.....	5A001.d
Electroplating equipment.....	2B999.i
EMP/EMI protection technology, avionic systems.....	7E102
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)

Description	ECCN Citation
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
0-ethyl-2-diisopropylaminoethyl methylphosphonite (QL).....	1C350.a.1
Ethyl centralites	1C018.a
Ethyl iodoacetate (CAS 623-48-3).....	1C607.a.14
Ethyl phenyl urethane	1C018.e
Ethyl phosphinyl dichloride.....	1C350.b.12
Ethyl phosphinyl difluoride	1C350.b.13
Ethyl phosphonous dichloride.....	1C350.b.12
Ethyl phosphonous difluoride.....	1C350.b.13
Ethyl phosphonyl dichloride	1C350.b.14
Ethyl phosphonyl difluoride	1C350.a.2
Ethyl-NN-diphenylurea (ethyl unsymmetrical diphenylurea)	1C018.d
Ethyl dibromoarsine (CAS 683-43-2)	1C607.a.9

Description	ECCN Citation
Ethyldiethanolamine (139-87-7).....	1C350.c.12
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
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

Description	ECCN Citation
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
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Description	ECCN Citation
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Description	ECCN Citation
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Description	ECCN Citation
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Hemishell dimensional inspection equipment/systems	2B006.c
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
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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
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High-speed cameras and imaging devices and “components” therefore not controlled by ECCN 6A003	6A203
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High-vacuum service equipment	2B999.k
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HIPS (Hot Isostatic Presses).....	2B004
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Description	ECCN Citation
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Hot cap sealers (semi-automatic or automatic) for ceramic microcircuit	3B991.b.3.c
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Hydraulic forming equipment.....	2B999.b
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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
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Hydrogen fluoride.....	1C350.d.7
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Description	ECCN Citation
Hydrophones	6A001.a.2.a
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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
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Identification plates for gas turbine engines	9A619.y.7
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Image enhancement equipment	4A994.f
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Imaging device manufacturing equipment and systems	3B991.b Note
Image intensifier tubes & components	6A002.a.2
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Description	ECCN Citation
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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
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Inertial measurement equipment.....	7A003
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Inertial navigation, systems/equipment/components	7A003
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Inertial navigation system software, source code	7D002
Inertial reference Systems (IRS).....	7A003.c
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Inflatable boats and components.....	8A992.f
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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
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Infrared sensors, industrial	6A002.c
Infrared viewers (police model).....	9A980
Inhibited red fuming nitric acid (IRFNA).....	1C111.a.3.e
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Injector (free electron laser photo) manufacturing or inspection equipment.....	6B995.a.2
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.c
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
Instruction generators for machine tools - technology	2E003.d

Description	ECCN Citation
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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
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Integrated circuits, microwave	3A001.b.2
Integrated circuits, radiation hardened.....	3A001.a.1
Integrated circuits and assemblies manufacturing equipment and systems.....	3B991.b
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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
Intercepting systems and equipment, communications	5A001.f
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Interlacing machines	1B001.c
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International Space Station parts components accessories attachments	9A004.w-y
Interrupters, ground fault circuit.....	3A611.y.18
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Inverse synthetic aperture radar (ISAR)	6A008.d
Inverters (Frequency changers or converters).....	3A225
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Ion beam equipment for mask making/semiconductor devices.....	3B001.f.2
Ion beam equipment for projection image transfer.....	3B991.b.2.g

Description	ECCN Citation
Ion beam sensitive resist materials	3C002.b
Ion beam system, manufacturing, repairing, physical layout analysis and testing of masks or semiconductor devices.....	3B992.b.6
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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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Navigation, airborne communication and other avionics software	7D004, 7D994
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Description	ECCN Citation
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Nickel alloy/powder or particulate form	1C002.b.1.a
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N,N-Dialkyl (Me, Et, n-Pr or i-Pr) aminoethane-2-ols and corresponding protonated salts	1C355.a.2.e
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
Noise reduction equipment for vessels, acoustic mounts	8A002.o.3.a
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Description	ECCN Citation
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Nuclear reactor equipment.....	2A291
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Nuclear reactor, ultrasonic test equipment.....	2A291.d
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Optical absorption materials, low	6C994.a
Optical components, space-qualified	6A004.c
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Description	ECCN Citation
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Optical surface coating/treatment technology	6E003.d.1
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Description	ECCN Citation
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Piping, fittings and valves of or lined with stainless steel, copper-nickel alloy or other alloy steel	2A992
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Description	ECCN Citation
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Polybutadiene-acrylic acid-acrylonitrile (PBAN).....	1C111.b.4
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Description	ECCN Citation
Porcine Teschovirus (Teschén disease virus)	1C351.a.37
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Preforms production equipment controlled by 1B999, software for	1D999.b
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Preforms, fibrous or filamentary materials	9A110
Preforms, metal coated fiber (for propulsion systems).....	9A110
Prepreg production equipment.....	1B001.e
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Prepreg production equipment, n.e.s.	1B999.e

Description	ECCN Citation
Prepregs production equipment controlled by 1B999, software for.....	1D999.b
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Prepregs, fibrous or filamentary materials.....	9A110
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Presses, hot isostatic.....	2B104
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Processors, digital signal.....	4A003
Processors, digital array.....	4A003
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Production equipment, reentry vehicles.....	9B115
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Proppant	0A998.b.2
Prolifometers, to characterize mirrors for laser gyro equipment	7B102.c
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Propellants and constituent materials	1C111
Propellant (liquid) production equipment and components.....	1B115
Propellant (liquid) test and handling equipment and components.....	1B115
Propellant (solid) production equipment and components	1B117
Propellants, having nitrocellulose.....	1C608.a
Propellers and systems used with reciprocating engines for military aircraft	9A610.y.25
Propeller blades or propfans composite technology	9E003.b.2, 9E610.y
Propeller noise reduction technology.....	8E002.a
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Propulsion systems/components, production equipment.....	9B115, 9B619
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Propulsion, satellites	9A515
Propulsion system components/structures, launch-vehicle.....	9A010
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Propulsion systems, rocket.....	9A009
Propulsion systems, rocket.....	9A007
Propulsive substances	1C111.a
Propyleneimine	1C608.1
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Protective and detection equipment	1A004, 1A995 or 2B351
Protective clothing, Independently ventilated.....	2B352.g.1
Protective suits, gloves, shoes.....	1A004, 1A995 or 2B352.g.1
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<i>Pseudomonas mallei</i> (<i>Burkholderia mallei</i>).....	1C351.c.5
<i>Pseudomonas pseudomallei</i> (<i>Burkholderia pseudomallei</i>)	1C351.c.6
Pseudorabies virus (Aujeszky's disease; Suid herpesvirus 1)	1C351.a.51
Psychological stress analysis equipment	3A981
Public Address (PA) systems for military aircraft.....	9A610.y.18
Public Address (PA) systems for submersible vessels	8A620.y.1
Public Address (PA) systems for surface vessels of war.....	8A609.y.1
<i>Puccinia graminis</i> ssp. <i>graminis</i> var. <i>graminis</i> / <i>Puccinia graminis</i> ssp. <i>graminis</i> var. <i>stakmanii</i> (<i>Puccinia graminis</i> [syn. <i>Puccinia graminis</i> f. sp. <i>tritici</i>]).....	1C354.b.4

Description	ECCN Citation
Puccinia striiformis (syn. Puccinia glumarum).....	1C354.b.5
Pulsating Chemical Vapor Deposition production equipment.....	2B005.a.1.a
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Pulse jet engines/components.....	9A111
Pulse radar cross-section measurement systems & components.....	6B008
Pulse shaping networks, high power.....	3A999.c
Pulsed electron accelerators.....	3A201.c
Pumpjet propulsion systems.....	8A002.p
Pumps, high pressure.....	0A998.b.3
Pumps, liquid propellant.....	9A106.d
Pumps, lithium amalgam.....	1B233.b.2
Pumps, mercury or lithium amalgam.....	1B233.b.2
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Pumps, potassium amide in liquid ammonia.....	1B230
Pumps, seal-less.....	2B350.i
Pumps, vacuum.....	2B231
Pumps, vacuum.....	2B350.i
Pumps designed for industrial service.....	2B999.j
Pumps designed to move molten metals by electromagnetic force.....	2A993
Pyrolitic deposition nozzles.....	1B116
Pyrolitic deposition systems (“isostatic presses”, other than those controlled by 2B004).....	2B104
Pyrolitic deposition systems (chemical vapor deposition furnaces, other than those controlled by 2B005.a).....	2B105
Pyrolitic deposition systems, for rocket nozzles and reentry vehicle nose tips.....	2B117
Pyrolitically derived materials production technology.....	1E104
Pyrolized carbon-carbon components.....	1A102
Pyrolized carbon-carbon materials.....	1C102
Pyrolysis equipment, for rocket nozzles and reentry vehicle nose tips (“isostatic presses”, other than those controlled by 2B004).....	2B104
Pyrolysis equipment, for rocket nozzles and reentry vehicle nose tips (chemical vapor deposition furnaces, other than those controlled by 2B005.a).....	2B105
Pyrolysis equipment, for rocket nozzles and reentry vehicle nose tips (other than those controlled by 2B004, 2B005.a, 2B104, or 2B105).....	2B117
Pyrolysis process control equipment, for “isostatic presses”, other than those controlled by 2B004.....	2B104
Pyrolysis process control equipment, for chemical vapor deposition furnaces, other than those controlled by 2B005.a.....	2B105

Description	ECCN Citation
Pyrolysis process control equipment (other than those controlled by 2B004, 2B005.a, 2B104, or 2B105).....	2B117
Pyrotechnic articles, dual use.....	1A984
Pyrotechnic devices, commercial.....	1C608.j or 1C992.k
QRS11-00100-100/101 Micromachined Angular Rate Sensors.....	7A994
Q-switched lasers.....	6A005.a or b
Q-switched lasers.....	6A205.f
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Quadrature-amplitude- modulation (QAM) based radio equipment operating above level 16.....	5A991.b.7.b
Quadrature-amplitude-modulation (QAM) based radio equipment.....	5A991.b.7
Quadrature-amplitude-modulation (QAM) based radio equipment, equipment for the development of.....	5B001.b.4.a
Quadrature-amplitude-modulation (QAM) based radio equipment, software for the development of.....	5D001.d.4.a
Quadrature-amplitude-modulation (QAM) based radio equipment, technology for the development of.....	5E001.c.4.a
Quantum cryptography.....	5A002.c
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3-Quinuclidinol.....	1C350.b.19
3-Quinuclidone.....	1C350.d.15
Rabies virus (and all other members of the Lyssavirus genus).....	1C351.a.39
Radar cross section measurement systems, missile.....	6B108
Radar, high frequency (HF) surface wave.....	3A611.e
Radar systems & components.....	6A008
Radar altimeters.....	7A106
Radar software.....	6D003.h
Radar systems, employing signal processing.....	6A008.h
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Radiation hardened detectors.....	6A102
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Radiation hardened TV cameras not specified in 6A203.....	6A999.b
Radiation transport calculations/modeling, software for.....	0D999.b
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Description	ECCN Citation
Radiation shielding windows.....	1A227
Radio frequency monitoring equipment	5A001.f.4
Radio frequency transmitting equipment.....	5A001.h.1
Radio equipment	5A001.b.2, 3 or 4
Radio equipment	5A991.b.6 or 7
Radio relay communications equipment.....	5A991.h
Radio, shortwave technology.....	5E001.c.4.c
Radio systems development/production technology	5E001.b.3
Radiographic detection equipment	1A999.b
Radiographic equipment	3A101.b
Radionuclides, alpha-emitting	1C236
Radionuclides, alpha-emitting, n.e.s.	1C999.g
Radium-226, compounds, mixtures, products or devices	1C237
Radome design software	6D003.h.2
Radomes usable in protecting missiles against nuclear effects	6A103
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Range gated illumination systems, underwater	8A002.d.2
Range instrumentation radars	6A108.b.2
Rankine cycle engine, air independent	8A002.j.1
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Rate tables, positioning tables, and motion simulators.....	2B120
Rathayibacter toxicus.....	1C354.a.6
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Receivers, radio.....	5A001.b.2, 3 or 4
Reciprocating diesel engine & component technology	9E003.e.1
Reconstructed 1918 influenza virus (includes reconstructed replication competent forms of the 1918 pandemic influenza virus containing any portion of the coding regions of all eight gene segments)	1C351.a.40
Recording equipment, analog & digital tape recorders	3A002.a
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Description	ECCN Citation
Red dot sights that have focal plane array or image intensifier tube, technology for.....	0E987
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Reflectivity (electromagnetic) reducing materials.....	1C101
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Reinforced composite materials.....	1C007.c.1.a
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Release mechanisms, electronic.....	9A992, 9A610.h
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Remotely operated filling equipment, chemical	2B350.f
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Resaturated pyrolyzed components	1A102
Resaturated pyrolyzed materials	1C102
Resin impregnated fiber prepregs for 9A110 items.....	9C110
Resin impregnated fibers	1C010.e
Resin (thermoset) impregnated continuous materials.....	1C210.c
Resin impregnated fiber prepregs, propulsion & space systems	9A110
Resist materials, semiconductor lithography	3C002
Resists (positive), semiconductor lithography	3C992
Resist material, coated (semiconductor) substrates	3C002
Resistors, fixed.....	3A611.y.23
Restraint devices (electronic monitoring).....	3A981
Restraint devices, law enforcement, including leg irons, shackles, and handcuffs; straight jackets, stun cuffs; shock belts; shock sleeves, multipoint restraint devices, restraint chairs	0A982
Reticles, integrated circuits of 3A001.....	3B001.g
Reticles and designs	3B991.b.2
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Reticle sights that have focal plane array or image intensifier tube, technology for.....	0E987
Rhenium and alloys containing rhenium	1C241
Rheostats.....	3A611.y.8
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Description	ECCN Citation
Rickettsia prowazekii.....	1C351.c.17
Rift Valley fever virus	1C351.a.41
Rinderpest virus	1C351.a.42
Ring laser gyro mirror characterizing equipment	7B002
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Riot control agents and tear gases.....	1C607.a
Robot end-effectors.....	2B207
Robot end-effectors.....	2B007
Robot controllers for high explosive handling.....	2B207
Robot controllers.....	2B007
Robots with real time 3D image processing or scene analysis	2B007.a
Robots not controlled by 2B007 or 2B207	2B997
Robots, specially designed to operate at high altitudes	2B007.d
Robots, explosive/munitions environment handling.....	2B007.b
Robots, radiation hardened	2B007.c
Robots with real time 3D image processing or scene analysis	2B207
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Rocket fuels	1C111
Rocket/rocket motor, test benches/stands	9B117
Rocket engines, solid propellant	9A107
Rocket motors, hybrid	9A109
Rocket nozzles	9A106.b
Rocket stages, other than those of 9A005/7/9, 9A105/107/109	9A119
Rocket motor inspection equipment	9B007
Rockets, sounding.....	9A104
Roller bearings, solid	2A001.a
Rollers for prepregs/preform production	1B101.d
Rotary position feedback units.....	2B008.b
Rotor assembly mandrels, bellows forming.....	2B228.a
Rotor centrifugal balancing machines	2B229
Rotor components, tooling for manufacture	9B009
Rotor fabrication/assembly equipment	2B228.a
Rotor forming mandrels, precision	2B209.b
Rotor straightening equipment or systems.....	2B228.b
Routers, telecommunications	5A991.c.10
Ruby lasers.....	6A995.c
Russian Spring-Summer encephalitis virus (Tick-borne encephalitis virus).....	1C351.a.52
S-parameter test/measurement equipment	3B002.a
S20 and S25 photocathodes	6A002
Sabia virus.....	1C351.a.44

Description	ECCN Citation
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
Satellite receivers, other than those of 7A005	7A105
Satellites, commercial communications	9A004
SAW (Surface Acoustic Wave) devices	3A001.c.1
Saxitoxin	1C351.d.12
Scanning cameras & systems	6A003.b.2
Scatterometers	7B002.a
Scatterometers, to characterize mirrors for laser gyro equipment	7B102.a
Sclerophthora rayssiae var. zae	1C354.b.8
Scramjet engines/components	9A011
Scuba gear	8A992.h
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
Seal-less pumps	2B350.i
Seals, aircraft/aerospace use	1A001.a, 9A610.x
Search lights	0A617.y.5
Seats, seat assemblies, seat supports, and harnesses – for ground vehicles	0A606.y.14
Security equipment, information	5A002
Security equipment, information, software	5D002
Security imaging equipment	2A984, 2D984 or 2E984
Security scanning equipment	2A984, 2D984 or 2E984
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Seismic detection equipment	6A999.a
Semiconductor, test equipment	3B002
Semiconductor compound photocathodes	6A002.a.2.c.3
Semiconductor components, extended temperature range	3A001.a.2
Semiconductor component design software, computer-aided-design	3D003
Semiconductor device discrete testing equipment	3B992.b.4.a
Semiconductor device inspection or testing equipment and systems	3B992.b
Semiconductor device or material manufacturing equipment	3B001
Semiconductor devices manufacturing equipment and systems	3B991.b
Semiconductor lasers	6A005.d.1

Description	ECCN Citation
Semiconductor materials purifying or processing equipment	3B991.b.1.b
Semiconductor probing systems, electron & laser beam	3B002.d
Sensing devices (electronic)	6A002.a.2.a.2.b
Sensing elements, hydrophone	6A001.a.2.a
Sensing fibers, optical (not controlled by 6A002)	6C992
Sensor materials, optical	6C002
Sensors, direction finding systems (passive)	7A115
Sensors, industrial infrared	6A002.a
Sensors, linear position feedback unit	2B008.a
Sensors, Micromachined Angular Rate	7A994
Sensors, multispectral imaging	6A002.b
Sensors, optical	6A992
Sensors, optical	6A002
Sensors, pressure (manganin & quartz)	6A226
Sensors, radiation hardened	6A102
Sensors, superconductive electromagnetic	6A996
Seoul virus	1C351.a.45
Separation mechanisms for missiles	9A117
Separators, centrifugal (biological)	2B352.c
Separators, electromagnetic isotope	1B226
Servo valves, gel propellant control systems	9A106.d
Severe acute respiratory syndrome-related coronavirus (SARS-related coronavirus) ...	1C351.a.46
Shackles	0A982
Shaft encoders (rotary input type), and rings, discs or scales therefor	3A001.f
Shaving machines, gear	2B003
Sheeppox virus (Sheep pox virus)	1C351.a.47
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
Shigella dysenteriae	1C351.c.20
Ship vessel positioning systems, acoustic	6A001.a.1.d
Shims for gas turbine engines	9A619.y.6
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

Description	ECCN Citation
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
Sidelooking airborne radar (SLAR).....	6A008.d
Sights and sighting devices for firearms	0A987
Sights and sighting devices for firearms that have focal plane array or image intensifier tube, technology for.....	0E987
Signal processor microcircuits.....	3A001.a.3 Note
Signal generators, frequency synthesizer based.....	3A002.d
Signal analyzers	3A002.c
Signal processing devices, acousto-optic.....	3A001.c.3
Signal processing equipment, sonar.....	6A001.a.1.d
Signal processing equipment	4A994.f
Signal processing equipment, general purpose digital.....	4A003
Signal processing equipment, hydrophone arrays	6A001.a.2.c
Signal (information bearing) reducing systems, equipment and components	5A003.b
Signal tracking development/use technology, laser.....	5E001.b.2
Signature suppression devices, treatments & fittings	1C001
Signature (electromagnetic) reduction devices.....	1C001
Signature (electromagnetic) reduction devices.....	1A101
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	3C005
Silicon-on-sapphire integrated circuits	3A001.a Note 2
Silicone fluid, fluorinated	1C006.b.2
Silver gallium selenide (AgGaSe ₂).....	6C004.b.2
Silylated resists for semiconductor lithography.....	3C002.d
Simple programmable logic devices (SPLD)	3A001.7.a, 3A991.d
Simulators for nuclear reactors	2A291.b
Simultaneous initiation arrangements or systems, single & multipoint	3A232.b
Single crystal casting control software	9D004.c
Single crystal casting equipment	9B001.a, 9B619
Single crystals	6C002.b
Single mode optical fiber & cable	5A991

Description	ECCN Citation
Single point diamond turning techniques, technology.....	6E003.d.2
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
Smoke bombs.....	1A984
Smoke detector for military aircraft.....	9A610.y.27
Sodium azide.....	1C992.1
Sodium bifluoride	1C350.d.16
Sodium cyanide.....	1C350.d.17
Sodium fluoride	1C350.d.18
Sodium (Na) metal vapor lasers.....	6A005.b
Sodium sulphide.....	1C350.d.19
<i>Software, see product group D for controls in each category</i>	
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 potable 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”, “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

Description	ECCN Citation
“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
Solid propellant rocket engines.....	9A107
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
Solid-state pulsed power switching thyristor devices and thyristor modules	3A001.g
Solid state lasers, tunable.....	6A005.c
Solid state microwave amplifiers.....	3A001.b.4
Solid-state power semiconductor switches, diodes, or 'modules'	3A001.h
Sonar, active individual	6A001.a.1.e
Sonar processing equipment	6A001.a.2.b
Sonar log equipment	6A001.b
Sonar, Side Scan Sonar (SSS) designed for seabed imaging.....	6A001.a.1.a.3
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
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
Source code recovery software	5D001.c.2
Spacecraft.....	9A515
Spacecraft buses.....	9A515
Spacecraft on-board systems.....	9A515
Spacecraft payloads	9A515

Description	ECCN Citation
Space probes	9A515
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 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	2B999i
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.c
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
Spread spectrum radio equipment.....	5A001.b.3
Spread spectrum spreading code generation.....	5A002.e
Sprytron tubes, vacuum	3A228.a
Sputter deposition production equipment	2B005.e
Sputtering equipment, magnetically enhanced	3B991.b.1.f
SQUIDs (Superconducting quantum interference devices).....	6A006.a.1
St. Louis encephalitis virus	1C351.a.49
Staging mechanisms for missiles	9A117
Stainless steel plate	1C999.b
Staphylococcus aureus enterotoxins, hemolysin alpha toxin, and toxic shock syndrome toxin (formerly known as Staphylococcus enterotoxin F).....	1C351.d.14
‘Star trackers’ and components therefor	7A004
Statistical multiplex equipment.....	5A991.b Note a.7

Description	ECCN Citation
Steam sterilizable freeze drying equipment.....	2B352.e
Steel, maraging	1C216
Steel, maraging	1C116
Steel, Titanium-stabilized duplex stainless (Ti-DSS).....	1C118
Steel plate, stainless	1C999.b
Stealth materials, coatings and treatments for signature suppression.....	0C617.a
Step & repeat equipment, semiconductor wafer processing.....	3B001.f.1
Stirling cycle engine, air independent.....	8A002.j.4
Storage phosphor image plates	1A999.b
Storage tanks, chemical (capacity greater than 100 L).....	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
Straight jackets.....	0A982
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Streak cameras, mechanical type	6A203.a.2
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
Stroboscopic light systems.....	8A992.c
Structural composites production equipment	1B101
Structures and composite structures, laminate, and manufacturers for missiles.....	9A110
Stun guns.....	0A985
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

Description	ECCN Citation
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
Sulphur dichloride.....	1C350.c.7
Sulphur monochloride.....	1C350.c.6
Supercomputers, see Computers	
Superconducting quantum interference devices (SQUIDs).....	6A006.a.1
Superconductive composite conductor	1C005
Superconductive gates, current switching.....	3A001.d.1
Superconductive electrical equipment	9A620.b
Superconductive electromagnetic sensors	6A996.b
Superconductive electromagnets or solenoids.....	3A201.b
Superconductive electromagnets or solenoids.....	3A001.e.3
Superconductive devices or circuits.....	3A001.d
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
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
Surface vessels of war and related commodities	8A609
Surface wave radar, high frequency.....	3A611.e
Surreptitious interception devices.....	5A980
Surreptitious interception systems and equipment	5A001.f

Description	ECCN Citation
Surreptitious interception systems and equipment, software for	5D001 or 5D980
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
Synthetic Aperture Sonar (SAS) designed for seabed imaging	6A001.a.1.a.3
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
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

Technology, see product group E for controls for each category.

Description	ECCN Citation
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, machine tool instruction generators	2E003.d
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 6A990.....	6E990
“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
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

Description	ECCN Citation
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
Teschen disease virus (Porcine Teschovirus)	1C351.a.38
Test benches/stands, for rockets/motors/rocket engines.....	9B117
Test, calibration or alignment equipment for equipment controlled by 7A.....	7B001
Test equipment - propellants and their constituents	1B115
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 USML XIV(f), except for XIV(f)(1).....	1B607.b
Test, inspection, and production commodities for military electronics.....	3B611
Test models for defense articles.....	0A617
Test receivers, microwave	3A002.f
Test tape designed for recording equipment of entry 3A002a.....	3A002.a
Testing equipment, for electronic components.....	3B992.b.4
Test, inspection, development and production equipment for Category 5 items.....	5B
Tetrazines	Annex to Cat 1 List of Explosives 47
Tetrodotoxin.....	1C351.d.16
TEX (4,10-Dinitro-2,6,8,12-tetraoxa-4, 10- diazaisowurtzitane)	Annex to Cat 1 List of Explosives 45
Thallium arsenic selenide (Tl ₃ AsSe ₃ or TAS)	6C004.b.3

Description	ECCN Citation
Thecaphora solani	1C354.b.11
Thermal batteries	9A604
Thermal ionization mass spectrometers (TIMS).....	3A233.c
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.20
Thionyl chloride.....	1C350.c.8
Thrust tabs, thrust vector control subsystems	9A106.c
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
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,”	

Description	ECCN Citation
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 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
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
Traveling wave tubes (TWTs), industrial	3A001.b.1.a
Tributyl phosphate	1C999.d
Triethanolamine	1C350.c.9
Triethanolamine hydrochloride.....	1C350.d.20
Triethyl phosphite	1C350.c.10
Triethylene glycol dinitrate (TEGDN).....	1C111.c.2
Triggered spark-gaps	3A228.b
Triggers, high voltage	3A999.c

Description	ECCN Citation
Trimethyl phosphite	1C350.c.11
Tritium, compounds & mixtures.....	1C235
Tritium plant or facilities equipment	1B231.b
Tritium production recovery, extraction & concentration handling facilities or plant.....	1B231.a
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
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

Description	ECCN Citation
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
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

Description	ECCN Citation
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
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

Description	ECCN Citation
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
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

Description	ECCN Citation
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
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

Description

ECCN Citation

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.