

**ALPHABETICAL INDEX  
TO THE COMMERCE CONTROL LIST**

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Computers, digital	4A001



Description	ECCN Citation
Computers, having information security characteristics . . . . .	4A001.b
Computers, hybrid . . . . .	4A102
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
Condensers for use in nuclear reactors . . . . .	2A290.a
Condensers or heat exchangers . . . . .	2B350.d
Conductive polymers . . . . .	1C001.c
Conductors, superconductive composite . . . . .	1C005
Congo-Crimean haemorrhagic fever virus (a.k.a. Crimean-Congo haemorrhagic fever virus) . . . . .	1C351.a.2
Conotoxin . . . . .	1C351.d.3
Contactors, chemical exchange (ammonia-hydrogen) . . . . .	0B004.b.2.b
Contactors, liquid-liquid centrifugal . . . . .	0B001.e.1
Containers, chemical . . . . .	2B350.c
Containment facilities . . . . .	2B352.a
Continuous mixers . . . . .	1B118
Contrarotating propellers . . . . .	8A002.o.1.b
Control rods, for nuclear reactors . . . . .	0A001.c
Control units for metallurgical melting & casting furnaces . . . . .	2B227
Control systems, on-line development of gas turbine engines . . . . .	9B002
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
Converter interfaces for digital video magnetic tape recorders . . . . .	3A002.a.4
Converters, frequency . . . . .	0B001.c.11
Converters, frequency . . . . .	3A225
Converters, frequency extender . . . . .	3A001.b.7
Cooling equipment for crucibles . . . . .	0B001.i.5
Cooling equipment for molten uranium . . . . .	0B001.g.2
Cooling fluid (fluorocarbon electronic) development, production, or use technology . . . . .	1E994
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
Coprocessors or accelerators, graphics . . . . .	4A003.d
Core grid plates . . . . .	0A001.h
Core support structures . . . . .	0A001.h
Correlation-velocity sonar log equipment . . . . .	6A001.b
Counter-current solvent extractors . . . . .	0B006.c
Coxiella burnetii . . . . .	1C351.b.2
Crime science laboratories, parts and accessories, nonmilitary mobile . . . . .	9A980
Crimean-Congo haemorrhagic fever virus (a.k.a. Congo-Crimean haemorrhagic fever virus) . . . . .	1C351.a.2
Critically safe tanks, nuclear fuel reprocessing . . . . .	0B006.b
Cross-flow filtration equipment . . . . .	2B352.d
Crossed-field amplifier tubes . . . . .	3A001.b.1.b
Crucibles, liquid actinide resistant . . . . .	2A225
Crucibles, resistant to molten uranium . . . . .	0B001.g.2
Crucibles, resistant to molten uranium . . . . .	0B001.i.5
Crucibles, tantalum . . . . .	2A225.b.c
Crude petroleum or shale oil . . . . .	1C981
Cryocoolers for optical sensors, space qualified . . . . .	6A002.d.1
Cryocoolers for optical sensors, non-space qualified . . . . .	6A002.d.2
Cryogenic distillation towers & cold boxes . . . . .	0B004.b.3.a
Cryogenic heat exchangers for UF6/Carrier gas separation . . . . .	0B001.d.7.a
Cryogenic refrigeration units . . . . .	0B001.d.7.b

Description	ECCN Citation
Cryoseparators	0B001.d.7.a
Cryptanalytic equipment or devices, digital	5A002.a.2
Cryptoanalytic equipment and components, n.e.s.	5A992
Cryptographic equipment and components, n.e.s.	5A992
Cryptography equipment or devices, digital	5A002.a.1
Cryptography equipment or devices, analog	5A002.a.3
Cryptologic equipment, software for the development, production or use of	5D992
Cryptologic equipment and components, n.e.s.	5A992
Cryptologic equipment, technology for the development, production or use of	5E992
Crystal pullers and furnaces	3B991.b.1.c
CTPB (Carboxy-terminated polybutadiene)	1C111.b.1
Custom integrated circuits	3A001.a.2 and 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) equipment, plasma enhanced	3B001.d
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
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
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, 1A995
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
Dengue fever virus	1C351.a.3
Depleted Uranium	1A290
Depleted Uranium	0C001
Depth sounders	6A001.a.1
Design integration of guidance sets, software	7D103
Desublimers for UF6 removal	0B002.b
Detection and protection equipment and components	1A004, 1A995, 2B351, 2B352
Detection equipment, seismic	6A999.a
Detection equipment, radiation	1A004, 1A995, 1A999.a
Detection equipment, radiographic	1A999.b
Detection systems for explosives and detonators	2A983, 2D983, 2E983
Detection or location systems (acoustic)	6A001.a.1.b
Detectors, optical	6A002.a
Detectors, radiation hardened	6A102
Detectors, space-qualified solid state optical	6A002.a.1
Detonation cord	1C018.b, 1C992.c
Detonator detection	2A983, 2D983, 2E983
Detonator firing sets, for multiple detonators of 3A232	3A229.a
Detonators, electric or non-electric	1C018.d, 1C992.e
Detonators, exploding bridge wire (EBW)	3A232.a.2
Detonators, exploding bridge (EB)	3A232.a.1
Detonators, exploding foil initiators (EB)	3A232.a.4
Detonators, slapper (electric)	3A232.a.3

Description	ECCN Citation
Deuterated compounds, (e.g. Deuterated paraffins)	0C004
Deuterium & deuterium compounds as mixtures & solutions	0C004
Deuterium/deuterium compound production plant, equipment- & components	0B004
Deuterium fluoride-carbon dioxide (DF-CO2) lasers	6A005.d.5
Deuterium fluoride (DF) lasers	6A005.d.5
Di-isopropylamine	1C350.d.4
Diacetoxyscirpenol toxin	1C351.d.14
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
Diaphragms, made from fluoroelastomers	1A001.c
Diaphragm valves	2B350.g
Dibromotetrafluoroethane based damping or flotation fluids	1C006.c.1
Die bonder, stored program controlled	3B991.b.3.a
Diesel engines for submarines	8A018.b.1
Diesel engines, nonmagnetic	8A018.b.3
Dies, bellows-forming	2B228.c
Diesel engines,n.e.s.	9A990
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
Diethylaminoethanol	1C350.d.3
Diethylene glycol dinitrate (DEGDN)	1C111.c.5
Diffuser plates	0A001.h
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, fault tolerant	4A003.a
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.a
Digital exchanges, telecommunication	5A991.c
Digital instrumentation tape data recorders	3A002.a.3
Digital signal processors	3A001a.3 Note
Digital signal processors	4A003
Digital time delay generators	3A999.e1
Digital video magnetic tape recorders	3A002.a.2
Digital-to-analog converter integrated circuits (DACs)	3A001.a.5
Digitally controlled radio receivers	5A001.b.5
Digitizers, waveform	3A002a.5
Dimensional inspection or measuring systems or equipment not controlled by 2B006	2B996
Dimensional inspection machines	2B206
Dimensional inspection equipment/systems	2B006.a
Dimensional inspection equipment/systems	2B006.c
Dimensional measuring equipment, instruments/systems	2B006.b

Description	ECCN Citation
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 (Nitrogen dioxide)	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
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
Discharge type arms	0A985
Disk drive (magnetic hard) development or production technology	4E993.c
Disk drives	4A994.d
Dissolvers, for nuclear fuel	0B006.b
Distillation columns	2B350.e
Distillation columns, hydrogen-cryogenic	1B228
Distillation equipment, purification of UF6	0B003.b.2
Distillation Towers (ammonia)	0B004.b.4.b
Distillation towers and cold boxes (hydrogen cryogenic)	0B004.b.3.a
Distillation towers, packings	1A226
Dive computers	8A992.j
Dobrava (pulmonary and renal syndrome-haemorrhagic fever viruses)	1C351.a.3.1
Doppler laser interferometers (DLIs)	6A225
Double seal valves	2B350.g
Drilling equipment	2B999.h
Drilling machines, deep-hole	2B001.f
Dry etching equipment, anisotropic plasma	3B001.c
Dye lasers	6A005.c
Dye lasers	6A205
Dynamic adaptive routing equipment	5A991.c.9
Dynamic signal analyzers	3A002.c.2
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.4
EB-PVD (Electron beam physical vapor deposition) equipment	2B005.c
Ebola virus	1C351.a.5
Eddy current test equipment for nuclear reactors	2A291.d
EDMs, non-wire feed types	2B001.d
EDMs, wire feed type	2B991.d.1
Electric cattle prods	0A985
Electric detonators, explosive	3A232a
Electric propulsion engines	8A002o.2.b
Electrical discharge machines, non wire feed (CNC)	2B001.d
Electrical discharge machines (EDM) of the wire feed type	2B991.d.2
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
Electrochemical reduction cells	0B001.e.3
Electrochemical reduction cells, feed equipment	0B001.e.4

Description	ECCN Citation
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 separation equipment & components . . . . .	0B001.j
Electromagnetic isotope separation plant . . . . .	0B001.a.9
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
Electron beam equipment for mask making/semiconductor devices . . . . .	3B001.f.2
Electron beam equipment for projection image transfer . . . . .	3B991.b.2.g
Electron beam guns, high power . . . . .	0B001.g.1
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 cyclotron resonance (ECR) CVD equipment . . . . .	3B001.d.1.b
Electron cyclotron resonance (ECR) plasma dry etching equipment . . . . .	3B001.c.1.b
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 beam gun, Strip . . . . .	0B001.g.1
Electronic beam gun, Scanning . . . . .	0B001.g.1
Electronic cameras . . . . .	6A003.a.5
Electronic components . . . . .	3A001
Electronic components . . . . .	3A201
Electronic components . . . . .	3A101
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, 4A994
Electronic computers & related equipment . . . . .	4A101
Electronic computers & related equipment . . . . .	4A102
Electronic controls, for nuclear reactors . . . . .	0A001.d
Electronic cooling fluids . . . . .	1C006.d
Electronic framing cameras . . . . .	6A203.b.2
Electronic streak cameras & streak tubes . . . . .	6A003.a.3
Electronic streak cameras & streak tubes . . . . .	6A203.b.1
Electronically steerable antennae, phased array . . . . .	5A001.d
Electroplating equipment . . . . .	2B999.i
EMP/EMI protection technology, avionic systems . . . . .	7E102
Encoders, rotary input shaft type . . . . .	3A001.f
Encryption equipment, assemblies & components . . . . .	5A002
Encryption software . . . . .	5D002
End effectors, robot . . . . .	2B207
End effectors, robot . . . . .	2B007
Energy storage capacitors . . . . .	3A001.e.2
Engines, diesel n.e.s. . . . .	9A990
Engines (marine), n.e.s. . . . .	8A992.g

Description	ECCN Citation
Engines (submarine), n.e.s. . . . .	8A992.g
Enrichment plant, isotope . . . . .	0B001
Enterohaemorrhagic Escherichia coli, serotype O157 and other verotoxin producing serotypes . . . . .	1C351.c.15
Environmental chambers . . . . .	1B018.b, 9B106.b
Environmental chambers, capable of simulating flight conditions . . . . .	9B106.a
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.29
Erbium oxide (erbia) (Er <sub>2</sub> O <sub>3</sub> ) made/coated crucibles . . . . .	2A225.a.4
Ehrlichia ruminantium (a.k.a. Cowdria ruminantium) . . . . .	1C360.b.3.a
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 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 phosphoryl dichloride . . . . .	1C350.b.14
Ethyl phosphoryl difluoride . . . . .	1C350.a.2
Ethyl-NN-diphenylurea (ethyl unsymmetrical diphenylurea) . . . . .	1C018.d
Ethyldiethanolamine (139-87-7) . . . . .	1C355.b.2.a
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
Expert systems - integration systems technology . . . . .	2E003.e
Expert systems software . . . . .	4D003.b
Exploding foil initiators (EFI) . . . . .	3A232.a.4
Exploding bridge (EB) detonators . . . . .	3A232.a.1
Exploding bridge wire (EBW) detonators . . . . .	3A232.a.2
Explosive, high . . . . .	1C239
Explosive/munitions environment handling robots . . . . .	2B007.b
Explosives or detonator detection equipment, software, or technology . . . . .	2A983, 2D983, 2E983
Explosive detonators, electric . . . . .	3A232.a
Explosive devices and charges, commercial . . . . .	1C992.1
Explosives (military) production equipment . . . . .	1B018.a
Explosives (military) in charges for civil applications . . . . .	1C018
FADEC (Full authority digital electronic engine control) software . . . . .	9D003
Fan blade (hollow) technology . . . . .	9E003
Fast reacting ion-exchange resins . . . . .	0B001.f.1
Fast Fourier Transform (FFT) processors . . . . .	3A001.a.12
Fast switching function modules or assemblies . . . . .	3A228.c
Fast select packet routing or switching equipment . . . . .	5A991.c.4
Fast fourier transform processors, acoustic signal processing . . . . .	6A001.a.2.c
Fast-exchange liquid-liquid pulse columns . . . . .	0B001.e.2
Fault tolerant digital computers . . . . .	4A003.a
Fault tolerance FADEC software . . . . .	9D003.b
Feed preparation systems for Uranium Chloride production . . . . .	0B001.e.5
Fermenters, biological processing . . . . .	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 optic cable . . . . .	5A001.c.1
Fiber optic gyro coil winding machines . . . . .	7B003
Fiber optic magnetometers . . . . .	6A006.c
Fiber optic hull penetrators/connectors . . . . .	8A002.c

Description	ECCN Citation
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 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
Field programmable logic arrays (FPLA) . . . . .	3A001.a.7
Field programmable logic devices . . . . .	3A001.a.7
Field programmable logic devices . . . . .	3A991.c
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, 1A995
Filters, tunable band-pass . . . . .	3A001.b.5
Filters for clean rooms . . . . .	3B991.b.4
Filters, optical . . . . .	6A994.a
Fine aluminum oxide powder . . . . .	0C201
Fingerprint analyzers, cameras and equipment . . . . .	3A981
Fingerprint equipment, computers for . . . . .	4A980
Fingerprinting powders, dyes, inks . . . . .	1A985
Fingers, for surface effect vessels . . . . .	8A002.k
Finishing machines, gear . . . . .	2B003
Finishing machines, gear . . . . .	2B003
Fins . . . . .	8A992.i
Firearms, muzzle-loading (black powder) . . . . .	0A018.c
Firing sets, for multiple detonators of 3A232 . . . . .	3A229.a
Fireworks displays . . . . .	1C018.j, 1C992.k
Fissile materials, special or other . . . . .	0C002
Flame towers, UF6 production . . . . .	0B003.b.1
Flanges, vacuum . . . . .	2B999.k
Flares, non-irritant smoke . . . . .	1A984
Flash discharge X-ray generators . . . . .	3A201.c
Flexal (South American haemorrhagic fever) . . . . .	1C351.a.30
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
Flight management system integration technology . . . . .	7E104
Flight control servo valves . . . . .	9A106.e
Flight control systems for missiles . . . . .	7A116
Flight control systems - software . . . . .	7D003.e
Flight instrument systems, integrated . . . . .	7A103.b
Flight instrument trainer, military . . . . .	9A018.f
Flight control system development technology . . . . .	7E004
Flight control actuator technology . . . . .	7E004.a.5
Flow-forming machines . . . . .	2B009
Flow-forming machines . . . . .	2B109
Flow-forming machines . . . . .	2B209
Flow-forming machines . . . . .	2B9991
Fluid energy mills . . . . .	1B119
Fluoride compounds (bulk) . . . . .	6C994.a.1
Fluoride glass (bulk) . . . . .	6C994.a.2
Fluorinated silicone fluid . . . . .	1C006.b.2

Description	ECCN Citation
Fluorinated compounds, components	1A001
Fluorinated compounds, unprocessed	1C009
Fluorinated phosphazene elastomers	1C009.c
Fluorinated hydrocarbon polymers	0C201
Fluorinated polyimide	1C009.b
Fluorinating equipment, UF5 to UF6	0B001.h.3
Fluorination & hydrofluorination screw and fluid beds, UF6 production	0B003.b.1
Fluorine	1C999.f
Fluorine production (electrolytic cells)	1B225
Fluorocarbon electronic cooling fluid development, production, or use technology	1E994
Fluorocarbon electronic cooling fluids	1C006.d
Fluorophosphate glass	6C004.e
Fluorocarbon electronic cooling fluids	1C006.d
Fluxgate magnetometer technology	6E003.f
Fly cutting machines	2B001.b.4, 2B992.b
Fly-by-light flight control system software	7D003.e
Fly-by-wire flight control system software	7D003.e
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
Focal plane arrays, linear & 2D	6A002.a.3
Focal plane arrays, space qualified.	6A002.e
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 & mouth disease virus	1C352.a.4
FPGA's (Field programmable gate arrays)	3A001.a.7
FPLA's (Field programmable logic arrays)	3A001.a.8
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.9
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 sterilizable	2B352.e
Freon and chilled water cooling systems	1B999.d
Frequency agile (frequency hopping) radio equipment	5A001.b.3
Frequency agile systems	5A002.a.5
Frequency agile tubes	3A001.b.1
Frequency hopping development technology	5E001.b.4
Frequency analyzers (signal analyzers)	3A002.c.1
Frequency changers	3A999.a
Frequency changers (converters or inverters)	3A225
Frequency changers (converters or inverters)	0B001.c.11
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	3A002.b
Fuel oils	1C980
Fuel elements, (irradiated) reprocessing plant & equipment	0B006
Fuel element handling equipment, for nuclear reactors	0A001.b
Fuel element fabrication plant, for nuclear reactors	0B005
Fuel element chopping or shredding machines	0B006.a
Fuel cell air independent power systems	8A002.j
Full Authority Digital Electronic Engine Control software	9D003
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



Description	ECCN Citation
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.a.3.b
GaNAs photocathodes	6A002.a.2.a.3
Gallium organo-metallic compounds	3C003
Gallium III/V compound substrates, hetero-epitaxial grown-multi-layer	3C001.c
Gas blowers (positive displacement/centrifugal/axial flow)	0B001.d.3
Gas centrifuge rotor assembly equipment	2B228.a
Gas blowers, axial flow/centrifugal/positive displacement/turbo	0B001.b.2.a
Gas krytron tubes	3A228.a
Gas masks	1A004, 1A995
Gas centrifuge isotope separation plant	0B001.a.2
Gas centrifuge plant auxiliary equipment	0B002
Gas centrifuge rotor balancing equipment	2B229
Gas, manufactured, synthetic or natural liquid produced or derived from Naval Petroleum Reserves	1C984
Gas centrifuge isotope separation equipment & components	0B001.c
Gas centrifuges	0B001.c.1
Gas discharge & ion lasers	6A005.a
Gas lasers	6A005.a
Gas monitoring systems, toxic	2B351
Gas turbine aeroengines, civil non-certified/supersonic	9A001
Gas turbine blade, manufacturing or measuring equipment	9B001
Gas turbine blade technology	9E003.a
Gas turbine blades, vanes or tip shroud casting equipment, tooling or fixtures	9B991
Gas turbine brush seal production/test equipment	9B003
Gas turbine components, solid state joining equipment	9B004
Gas turbine engine development systems/instrumentation	9B002
Gas turbine engine development control systems or instrumentation	9B002
Gas turbine engine propulsion systems assemblies/components	9A003
Gas turbine engine technology	9E003
Gas turbine engine development and use software	9D004
Gas turbine engines, parts and components, not controlled by 9A001 or 9A101	9A991
Gas turbine engines & assemblies/components, marine	9A002
Gas turbine test/flow modeling software	9D004.a
Gas turbine (aero engine) test software	9D004.b
Gaseous diffusion barriers, UF6	0B001.b.3
Gaseous diffusion housings, UF6	0B001.b.4
Gaseous diffusion isotope separation equipment & components	0B001.b
Gaseous diffusion isotope separation plant	0B001.a.1
Gaseous diffusion plant auxiliary equipment	0B002
Gaskets, made from fluoroelastomers	1A001.c
Gaskets, aircraft/aerospace use	1A001.a
Gaskets, vacuum	2B999.k
Gate silicon intensifier target (SIT) videcon tubes	6A203.b.3.b
Gateways & bridges	5A991.b.4.b
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
Generator systems, neutron	3A231
Generators and other equipment for nuclear plants	2A290
Generators, digital time delay	3A999.e1
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
Gimbals, optical control	6A004.d.3
Glass fiber or filamentary materials	1C210.b
Glass fiber, for optical communications	5A001.c.1

Description	ECCN Citation
Glass matrix reinforced composite materials	1C007.f
Glass preforms, for optical fiber production	5C991
Glass Windows, nuclear radiation shielding	1A227
Glass, high homogeneity	6C004.e.3
Global positioning system (GPS) equipment & components	7A005, 7A105, 7A994
Glove boxes	0B999
Gloves, protective	1A004, 1A995
Glow discharge mass spectrometers (GDMS)	3A233.b
Goat pox virus	1C352.a.5
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
Graphics accelerators or coprocessors	4A994.g
Graphics accelerators or graphics coprocessors	4A003.d
Graphics accelerator development or production technology	4E993.a
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
Graphite, nuclear-grade, intended for use in a nuclear reactor	0C005
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
Guanarito (South American haemorrhagic fever)	1C351.a.30
Guanidine nitrate	1C011.c, 1C018.m
Guidance sets usable in missiles	7A117
Gun barrel rifling and broaching machines and tools therefor	2B018.e.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, 7B101
Gyro tuning test stations	7B003, 7B101
Gyro run-in/motor test stations	7B003, 7B101
Gyro evacuation/fill stations	7B003, 7B101
Gyro-astro compasses & devices	7A104
Gyros & gyro components	7A102
Gyros	7A002
Gyroscope production/manufacturing/test equipment	7B003

Description	ECCN Citation
Hafnium oxide (hafnia) (HfO <sub>2</sub> ) made/coated crucibles	2A225.a.5
Hafnium metal, alloys & compounds	1C231
Hafnium fluoride (HfF <sub>4</sub> ) 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.6
Hanzalova (Central European tick-borne encephalitis virus)	1C360.a.1.a.2
Hard surface coated substrates	3B991.b.2.b.1
Harnesses, complete	9A992
Head/disk assembly fabrication materials for controlled magnetic and magneto-optical hard disk drives	4C994
Head/disk assembly alignment equipment	4B994.c
Heading sensors, towed hydrophones	6A001.a.2.b.4
Heading sensors	6A001.a.2.d
Heat exchangers for use in nuclear reactors	0A001, 2A290.a
Heat exchangers	0A001.i
Heat exchangers	0B001.b.5
Heat exchangers & condensers	2B350.d
Heat exchangers (aerodynamic separation)	0B001.d.5
Heat exchangers, cryogenic	0B001.d.7.a
Heat pipe cooled mirrors	6A005.e.1
Heat source materials	1C012
Heavy water (Deuterium oxide)	0C004
Heavy water concentration equipment	0B004.b.4
Heavy water production plant, equipment & components	0B004
Helicopter system development technology	7E004.c
Helicopter power transfer system technology	9E003.d
Helium, enriched	1C232
Helium refrigeration units	1B231.b.1
Helium	1C980
Helium-3	1C232
Helix Tubes	3A001.b.1.a.4
Helmet, military	0A018.f
Helminthosporium oryzae (Cochliobolus miyabeanus)	1C354.b.2
Hemishell dimensional inspection equipment/systems	2B006.c
Hendra virus (Equine morbillivirus)	1C351.a.29
Herpes B virus (Cercopithecine herpesvirus 1)	1C360.a.1.b
Hetero-epitaxial grown multi-layer substrates	3C001
Hetero-structure semiconductor technology	3E003.b
High energy storage capacitors	3A001.e.2
High voltage power supplies for ion sources	0B001.j.5
High power electron beam guns	0B001.g.1
High power pulse shaping networks	3A999.c
High voltage capacitors	3A999.c
High voltage triggers	3A999.c
High-efficiency stage containers	0B004.b.2.b
High-pressure ammonia-hydrogen exchange towers	0B004.b.2.a
High-speed pulse generators	3A230
High-speed cameras	6A003
High-vacuum service equipment	2B999.k
High-velocity gun systems	2B232
HIPS (Hot Isostatic Presses)	2B204
HIPS (Hot Isostatic Presses)	2B004
HIPS (Hot Isostatic Presses)	2B104
Hogcholera virus (swine fever virus)	1C352.a.7
Holding or storage vessels, critically safe & resistant to nitric acid	0B006.e
Hollow cylinder centrifugal balancing machines	2B229.b
Honing machines, gear	2B003
Honing machines, gear	2B003
Hopping code generation capability, equipment with	5A002.a.5
Horses by sea	0A980

Description	ECCN Citation
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 packages	3B991.b.3.c
Hot cell manipulators	2B225
Hot cells	0B999
Hot isostatic presses (HIPS)	2B104
Housing/recipients, centrifuge	0B001.c.12
Hovercraft	8A001
HT-2 toxin	1C351.d.16
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 computer electronic systems/electronic assemblies	4A001.b
Hybrid rocket propulsion systems	9A009
Hybrid computers & components	4A001
Hybrid computers and electronic assemblies, and specially designed components therefor	4A994.k
Hybrid computers	4A102
Hybrid computer electronic systems/electronic assemblies	4A001.a
Hybrid rocket motors and components	9A109
Hydraulic fluids	1C006.a
Hydraulic fluids	1C980
Hydraulic fluids	1C996
Hydraulic forming equipment	2B999.b
Hydraulic pressing, direct-acting technology	2E003.b.1.c
Hydraulic stretch-forming machines and dies technology	2E003.c
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 vessels	8A001.h
Hydrofoils	8A002.m
Hydrogen	1C980
Hydrogen cyanide (74-90-8)	1C355.b.1.c
Hydrogen distillation plant	0B004.a.3
Hydrogen fluoride	1C350.d.7
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 sulphide-water exchange plant	0B004.a.1
Hydrogen sulphide gas compressors	0B004.b.1.b
Hydrogen sulphide-water exchange equipment & components	0B004.b.1
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.8
Hydroxy-terminated polybutadiene (HTPB)	1C111.b.2
Hypr (Central European tick-borne encephalitis virus)	1C360.a.1.a.3
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
Igniters	1C018.e, 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
Image transfer equipment	3B991.b.2

Description	ECCN Citation
Imaging cameras	6A003.b
Imaging cameras with focal plane arrays of 6A002a.3	6A003.b.4
Imaging cameras with image intensifiers of 6A002a.2.a	6A003.b.3
Imaging devices	6A203.b.3
Imaging equipment, visible & infrared	6A002.c
Imaging sensors, multispectral and monospectral	6A002.b
Imaging systems, underwater electronic	8A002.f
Immobilization guns and projectiles	0A985
Immunotoxins and vaccines	1C991
Impregnated cathodes for electronic tubes	3A001.b.1.c
Imprint lithography equipment	3B001.f.2
IMU platform balance fixture	7B003, 7B101
IMU platform tester	7B003, 7B101
IMU stable element handling fixture	7B003, 7B101
Incinerators designed to destroy the chemicals controlled by 1C350	2B350.j
Independent (air) power systems underwater	8A002.j
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 Equipment for Azimuth, Heading, or North Pointing, and specially designed components therefor	7A003.c
Inertial measurement equipment	7A003
Inertial measurement unit tester (IMU module)	7A003, 7B003, 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 replication competent forms of the 1918 pandemic influenza virus containing any portion of the coding regions of all eight gene segments)	1C360.a.1.c
Information security equipment, software for the development, production or use of	5D992
Information security technology support software	5D002.b
Information security equipment and components, n.e.s.	5A992
Information security software	5D002
Information security systems/equipment/devices	5A002
Information security technology	5E992
Information security - test, inspection, and production equipment	5B002
Infrared absorption analyzers	0B004.b.4.d
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
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
Input/output control units	4A994.e
Inspection equipment (linear-angular for hemishells)	2B006.c
Inspection equipment for composite materials	1B001.f
Inspection machines (dimensional), devices or systems, other than those controlled by 2B006	2B206
Instruction generators for machine tools - technology	2E003.d
Instrumentation for gas turbine development	9B002

Description	ECCN Citation
Instrumentation for wind tunnels . . . . .	9B005
Instrumentation systems, inertial navigation . . . . .	7A003
Instrumentation cameras . . . . .	6A003.a
Integrated circuit assembly equipment . . . . .	3B991.b.3
Integrated circuit test equipment, microwave . . . . .	3B002.c
Integrated circuit test equipment, capable of performing functional (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
Intercepting devices, communications . . . . .	5A980
Interconnect equipment (Computer) . . . . .	4A003.g
Interconnection equipment . . . . .	3B991.b.1.1
Interferometers, velocity (VISARs) . . . . .	6A225
Interlacing machines . . . . .	1B001.c
Intermediate amplifier equipment . . . . .	5A991.b Note a.3
Interstages for missiles . . . . .	9A117
Intrinsic magnetic gradiometers . . . . .	6A006.c.3
Inverse synthetic aperture radar (ISAR) . . . . .	6A008.d
Inverters (Frequency changers or converters) . . . . .	3A225
Inverters (Frequency changers or converters) . . . . .	0B001.c.11
Ion beam equipment for mask making/semiconductor devices . . . . .	3B001.f.2
Ion beam equipment for projection image transfer . . . . .	3B991.b.2.g
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
Ion collector plates, Uranium fluoride resistant . . . . .	0B001.j.2
Ion implantation equipment . . . . .	3B001.b
Ion implantation equipment . . . . .	3B991.b.1.g
Ion implantation production equipment . . . . .	2B005.b
Ion lasers . . . . .	6A005.a
Ion or laser beam lithography mask or reticle fabrication equipment . . . . .	3B991.b.2.d.2
Ion plating production equipment . . . . .	2B005.g
Ion sources, single or multiple . . . . .	0B001.j.1
Ion sources, mass spectrometers (UF6 enrichment plant) . . . . .	0B002.g
Ion-enhanced diffusion equipment . . . . .	3B991.b.1.g
Ion-exchange columns . . . . .	0B001.f.2
Ion-exchange isotope separation plant . . . . .	0B001.a.5
Ion-exchange processing equipment . . . . .	0B006.c
Ion-exchange reflux systems . . . . .	0B001.f.3
Ion-exchange resins, fast acting . . . . .	0B001.f.1
Ion-exchange separation process equipment & components . . . . .	0B001.f
ISDN development/production technology . . . . .	5E991
ISDN (integrated services digital network) switching and signaling systems . . . . .	5A991.c.2
Isolated live cultures - see Cultures	
Isolators capable of use with biological agents . . . . .	2B352.f.2
Isostatic presses, hot . . . . .	2B104
Isostatic presses, hot . . . . .	2B204
Isostatic presses, hot . . . . .	2B004
Isostatic presses, n.e.s. . . . .	2B999.a

Description	ECCN Citation
Isotope separation plant, systems, equipment & components	0B001
Isotope separation process, molecular laser	0B001.h
Isotope separation process, chemical exchange	0B001.e
Isotope separation process, atomic vapor laser	0B001.g
Isotope separation process, electromagnetic	0B001.j
Isotope separation process, plasma	0B001.i
Isotope separators, electromagnetic	1B226
Isotope separation process, gas centrifuge	0B001.c
Isotope separation process, Ion-exchange	0B001.f
Isotope separation plant, auxiliary systems, equipment, components	0B002
Jamming equipment	5A001.f
Japanese encephalitis virus	1C351.a.7
Jet engine lubricating oil	1C980
Jet vane, thrust vector control sub-systems	9A106.c
Jet engines/components, pulse	9A111
Jigs and fixtures for use in the manufacture of firearms, ordnance, and other stores and appliances for land, sea, or aerial warfare	2B018.n
Joule-Thomson self-regulating minicoolers	6A002.d.2.b.6
Junin virus	1C351.a.8
Kerr or Pocket cells, electro-optical shuttering	6A203.b.3.c
Kick motors	9A004
Krytron tubes, gas	3A228.a
Kumlinge (Central European tick-borne encephalitis virus)	1C360.a.1.a.4
Kyasanur Forest virus	1C351.a.21
Laboratories (mobile), crime science	9A980
Laminate or composite development software	1D002
Laminates & composite structures, organic metal or carbon	1A002
Laminates, rockets/propulsion systems/space vehicles	9A110
Land inertial navigation equipment	7A003
Land-based gravity meters production equipment	6B007
Laser based linear position feedback units	2B008.a
Laser based measuring instruments	2B006.b.1.c
Laser beam cutting machines (CNC)	2B001.e.1.c
Laser beam equipment for mask making/semiconductor devices	3B001.f.2
Laser beam lithography mask or reticle fabrication equipment	3B991.b.2.d.2
Laser beam systems, for probing semiconductor devices	3B992.b.5
Laser communication technique technology	5E001.b.2
Laser diagnostic equipment	6A005.f.2
Laser diodes	6A005.d.1
Laser diodes designed for telecommunication	5A991.b Note b.4
Laser gyro mirror characterization equipment	7B102
Laser isotope plant, systems, equipment & components	0B001.g
Laser isotope separation systems, equipment & components	0B001.h
Laser radar altimeters	7A106
Laser radar or Light Detection & Ranging (LIDAR) equipment	6A008.j
Laser radar systems	6A108
Laser ring gyro test equipment	7B002
Laser, technology	6E003.e
Laser welding machines	2B999.c
Lasers	6A005
Lasers	6A205
Lasers	6A995
Lasers for direct write on wafers	3B991.b.2.h
Lasers or laser systems, uranium isotope separation	0B001.h.6
Lasers or laser systems, uranium isotope separation	0B001.g.5
Lassa fever virus	1C351.a.9
Lathes (CNC)	2B001.a
Launch support equipment	9A115
Launch vehicle components/structures	9A010
Leg irons	0A982
Lenses for radiation hardened TV cameras	6A203.c
Liberobacter africanus (a.k.a. Candidatus Liberobacter africanus)	1C360.c.1.a

Description	ECCN Citation
Liberobacter asiaticus (a.k.a. Candidatus Liberobacter asiaticus)	1C360.c.1.b
Lidar equipment (Laser radar)	6A008.j
Life jackets	8A992.i
Lift fans, for surface effect vessels	8A002.1
Light gas guns(Multistage) systems	2B232
Light systems, Stroboscopic	8A992.c
Light systems, underwater	8A002.g
Light systems, underwater	8A002.d.2
Light-weight reduction gearing, marine transmissions	8A002.o.1.d
Lights, underwater	8A992.j
Lights, search	0A018.a
Lightweight composite or foam mirror structures	6A004.a.3
Lightweight monolithic mirrors	6A004.a.2
Lightweight turbofan/turbojet engines	9A101
Line terminating equipment	5A991.b Note a.2
Linear voltage displacement transformer (LVDT) based instruments	2B006.b.1.b.1
Linear position feedback units or sensors	2B008.a
Linear measuring equipment/instruments	2B006.b.1
Linear focal plane arrays	6A002.a.3
Linear-angular inspection equipment for hemishells	2B006.c
Liquid oxidizers, various nitrous oxides	1C111.a.3
Liquid or water jet cutting machines (CNC)	2B001.e.1.a
Liquid Uranium handling systems (cooled crucibles)	0B001.i.5
Liquid lasers	6A005.c
Liquid propellant tanks	9A103
Liquid rocket propulsion systems & components	9A106
Liquid rocket propulsion systems & components	9A006
Liquid rocket propulsion systems	9A005
Liquid propellant control systems	9A106.d
Liquid propellant rocket engines	9A105
Liquid-liquid exchange columns, for lithium amalgams	1B233.b.1
Lithium metal, alloys, compounds, mixtures, products or devices	1C233
Lithium isotope separation facilities, plant and equipment	1B233
Lithium amalgam electrolysis cells	1B233.b.3
Lithium amalgam pumps	1B233.b.2
Lithograph templates	3B001.i
Lithography equipment, imprint	3B001.f.2
Lithography equipment, mask making for semiconductor wafer-processing	3B001.f
Lithography mask or reticle fabrication equipment	3B991.b.2.d.2
Lithography software	3D003
Location & object detection systems, acoustic	6A001.a.1.b
Logic arrays, field programmable (FPLA)	3A001.a.8
Logic processors and assemblies	4A003
Louping ill virus	1C351.a.22
Lubricating materials	1C006.b
Lubricating oil	1C980
Lumpy skin disease virus	1C352..a.16
LVDT (Linear voltage displacement transformer) based instruments	2B006.b.1.b.1
Lymphocytic choriomeningitis virus	1C351.a.10
Lyssa virus	1C352.a.8
Machetes	0A988
Machine tools, E-beam	2B001.e.1.b
Machine tools, laser	2B001.e.1.c
Machine tools, numerically controlled	2B001
Machine tools, numerically controlled	2B201
Machine tools, numerically controlled and using a Magnetorheological finishing (MRF) process.	2B002
Machine tools, numerically controlled, optical finishing	2B002
Machine tools, water/other liquid jet	2B001.e.1.a
Machine tool assemblies, units or inserts	2B998
Machine tool components and assemblies for equipment controlled by 2B006 & 2B007	2B008
Machine tool cutting tools	2B008
Machine tools for generating optical quality surfaces	2B992



Description	ECCN Citation
Machine tools for grinding (CNC) .....	2B001.c
Machine tools for grinding (CNC) .....	2B201.b
Machines for milling (CNC) .....	2B001.b
Machines for milling (CNC) .....	2B201.a
Machine tools for turning, grinding, and milling .....	2B991.d.1
Machines for turning (CNC) .....	2B001.a
Machine tool instruction generators - development technology .....	2E003.d
Machine tool rotary position feedback units .....	2B008.b
Machine tool spindles .....	2B008.c
Machining centers (CNC) .....	2B201
Machining centers (CNC) .....	2B001
Machupo virus .....	1C351.a.10
Magnaporthe grisea (pyricularia grisea/pyricularia oryzae) .....	1C354.b.6
Magnesium (high purity) .....	1C228
Magnesium alloy, powder or particulate form .....	1C002.b.1.e
Magnesium alloys .....	1C002.a.2.e
Magnesium, metal and alloys of .....	1C011.a
Magnesium oxide (MgO) made or coated crucibles .....	2A225.a.6
Magnesium metal particulate .....	1C111.a.2.d
Magnet power supplies, high power (direct current) .....	0B001.j.6
Magnetic alloy strips .....	1C003.c
Magnetic and optical storage development and production equipment .....	4B994
Magnetic anomaly detection software .....	6D003.f.2
Magnetic bearings (suspension) .....	2A001.c
Magnetic bearings (suspension) .....	0B001.c.4
Magnetic coating equipment .....	4B994.a
Magnetic compensation systems for magnetic and underwater electric field sensors .....	6A006.d
Magnetic compensation systems software .....	6D003.f.1
Magnetic confinement CVD equipment .....	3B001.d.1.a
Magnetic confinement plasma dry etching equipment .....	3B001.c.1.a
Magnetic and Electric Field Sensors "software" .....	6D003.f
Magnetic gradiometers .....	6A006.c
Magnetic gradiometers, intrinsic .....	6A006.c.2
Magnetic hard disk drive development or production technology .....	4E993.c
Magnetic media (rigid) monitoring, grading, exercising or testing equipment .....	4B994.b
Magnetic metals .....	1C003
Magnetic pole pieces .....	0B001.j.4
Magnetically enhanced, sputtering equipment .....	3B991.b.1.f
Magnetometers .....	6A006
Magnetometers not controlled by 6A006 .....	6A996.a
Magnetometer systems .....	6A006
Magnetostrictive alloys .....	1C003.b
Malignant catarrhal fever virus .....	1C360.b.1.d
Mandrels for rotor assembly, bellows forming .....	2B228.a
Mandrels, bellows-forming .....	2B228.c
Mandrels (precision) for filament winding machines .....	1B201
Manganin gauges, pressure .....	6A226.a
Manifolds, vacuum .....	0B002.f.1
Manipulators, remote .....	2B225
Manipulators, for submersibles .....	8A002.i
Manned, tethered submersible vehicles .....	8A001.a
Manned, untethered submersible vehicles .....	8A001.b
Manufactured gas and synthetic natural gas produced or derived from Naval Petroleum Reserves .....	1C984
Maraging steel .....	1C116
Maraging steel .....	1C216
Marburg virus .....	1C351.a.12
Marine acoustic systems .....	6A001.a
Marine boiler .....	8A018.b.4
Marine engines and parts (both inboard and outboard, n.e.s.) .....	8A992.g
Marine gas turbine engines .....	9A002
Marine, terrestrial acoustic equipment .....	6A991
Marx generators .....	3A999.c

Description	ECCN Citation
Mask, gas	1A004, 1A995
Mask or reticle altering holders or equipment	3B991.b.2.d.3
Mask or reticle fabrication equipment	3B991.b.2.d
Mask or reticles or pellicles, stored program controlled inspection equipment	3B991.b.2.e
Mask software	3D003
Masks	8A992.i
Masks, integrated circuits of 3A001	3B001.g
Masks, mask substrates, mask-making equipment	3B991.b.2
Mass spectrometers & ion sources (UF6 enrichment plant)	0B002.g
Mass spectrometers & ion sources (UF6 enrichment plant)	3A233
Mass spectrometers, n.e.s	3A999.b
Materials for reduced electromagnetic reflectivity	1C101
Matrix, organic	1A002.b
MCT (HgCdTe) crystals & epitaxial wafers	6C002.b
Measurement equipment, radiation	1A999.a
Measurement equipment, underwater velocity	6A001.b
Measuring instruments or systems, dimensional	2B006
Measuring and analysis equipment	3B992.b.2
Mechanical cameras, framing	6A003.a.1-3
Media access units	5A991.b Note a.12
Melting furnaces	2B227.b
Menangle virus	1C360.b.1.e
Mercury amalgam pumps	1B233.b.2
Mercury cadmium telluride crystals & epitaxial wafers	6C002.b
Metal alloy powders or particulate form	1C002.b
Metal alloy particulate	1C111.a.2
Metal alloys	1C002.a
Metal alloys, aluminum or titanium	1C202
Metal alloys, beryllium	1C230
Metal alloys, hafnium	1C231
Metal alloys, lithium	1C233
Metal alloys, powder and material production systems and components	1B002
Metal alloys, tungsten	1C226
Metal alloys, tungsten or molybdenum	1C117
Metal alloys, zirconium	1C234
Metal alloys, zirconium, beryllium, boron, magnesium	1C111.a.2.e
Metal coated fiber preforms	9A110
Metal coated fiber preforms for fiber preregs in 9C110	9C110
Metal or carbon matrix	1A002.b
Metal organic chemical vapor deposition (MOCVD) reactors	3B001.a.2
Metal-organic compounds, aluminum/gallium/indium	3C003
Metal particulate	1C011
Metal powder production equipment	1B102
Metal vapor lasers	6A005.b
Metal working process tools, die & fixture technology	2E003.b.1
Metal working manufacturing processes technology	2E003.b
Metallo-organic or polymeric materials	1C007.e
Metallurgical melting & casting furnaces	2B227
Metals or carbon coated fibers	1C010.e
Metals with high initial relative (magnetic) permeability	1C003.a
Methyl centralites	1C018.a
Methyldiethanolamine (105-59-9)	1C355.b.2.b
Methyl phosphinyl dichloride	1C350.b.15
Methyl phosphinyl difluoride	1C350.b.16
Methyl phosphonous dichloride	1C350.b.15
Methyl phosphonous difluoride	1C350.b.16
Methyl phosphonyl dichloride	1C350.b.17
Methyl phosphonyl difluoride (DF)	1C350.a.3
Methyl benzilate	1C350.d.9
Microbiological disposal technology	1E351
Microchannel plates, image intensifier tubes	6A002.a.2
Microcomputer microcircuits	3A001.a.3

Description	ECCN Citation
Microcontroller microcircuits	3A001.a.3
Microcyclus ulei (syn. Dothidella ulei)	1C354b.3
Microcystins (Cyanginosin)	1C351d.4
Microfluorination ion sources	3A233.f
Micromachined Angular Rate Sensors	7A994
Microorganisms, genetically modified	1C353
Microprocessor microcircuits	3A001.a.3
Microprocessor microcircuits above 530 MTOPS development/production technology	3E002.g
Microwave amplifiers, solid state	3A001.b.4
Microwave frequency extenders, mixers/converters	3A001.b.7
Microwave integrated circuit test equipment	3B002.c
Microwave integrated circuits	3A001.b.2
Microwave modules	3A001.b.2
Microwave power modules (MPM)	3A001.b.9
Microwave power sources and antennae	0B001.i.3
Microwave transistors (discrete)	3A001.b.3
Microwave test receivers	3A002.f
Microwave wave components	3A001.b
MIG welders	2B999.d
Military explosive production equipment	1B018.a
Military helmet	0A018
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Milling machines, (CNC) with two or more coordinated axes	2B001.b
Milling machines, (CNC) with two or more coordinated axes	2B201.a
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Mills, fluid energy	1B119
Mining equipment	2B999.h
Mirror assemblies/segments, space assembly	6A004.c.3
Mirror characterization equipment, reflectometers	7B102.b
Mirror control equipment, phased array/segment	6A004.d.4
Mirror structures, lightweight foam or composite type	6A004.a.3
Mirrors, actively cooled or heat pipe cooled	6A005.e.1
Mirrors, beam steering	6A004.a.4
Mirrors, optical	6A005.e.2
Mirrors, optical	6A004.a
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Missile (usable) guidance sets	7A117
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Mixed Oxides of Nitrogen (MON)	1C111.a.3.d
Mixers, batch	1B117
Mixers, continuous	1B118
Mixers, frequency extenders	3A001.b.7
Mobile communications equipment, assemblies and components	5A991.g
Modeccin toxin	1C351.d.17
Modeling/simulation of guidance sets, software	7D103
Modems	5A991.b.2
Modular time interval meter	3A999.e.2
Modules, microwave	3A001.b.2
Modules/assemblies, fast switching function	3A228.c
Molecular beam epitaxial growth equipment using gas sources	3B001.a.3
Molecular beam epitaxial growth equipment	3B991.b.1.e
Molecular beam mass spectrometers	3A233.e
Molecular laser isotopic separation plant	0B001.a.7
Molecular pumps	0B001.c.9
Molybdenum alloy fibers	1C010.c Note 2
Molybdenum & tungsten metals & alloys	1C117
Monel equipment including valves, piping, tanks and vessels	2B999.f
Monel plate	1C999.c
Monitoring equipment, radiation	1A999.a
Monitoring systems, toxic gas	2B351

Description	ECCN Citation
Monitors or color displays	4A994.h
Monkey pox virus	1C351.a.13
Monolithic integrated circuits	3A001.a Note 2
Monolithic integrated circuit repair or trimming laser equipment	3B991.b.1.m
Monospectral imaging sensors	6A002.b
Motion control boards for machine tools	2B991.b
Motion simulators or rate tables	2B120
Motor stators	0B001.c.10
Multi-chamber central wafer handling systems	3B001.e
Multi-channel interval meter	3A999.e2
Multi-data-stream processing equipment, development or production technology for	4E993.b
Multi-data-stream processing software development tools and compilers, in source code	4D003.a
Multi-element detector arrays	6A002.a.3
Multi-layer hetero-epitaxial material substrates & wafers	3C001
Multi-layer masks (with phase shift layer), for integrated circuits	3B001.h
Multichip integrated circuits	3A001.a Note 2
Multilevel security capability, equipment	5A002.a.6
Multimode optical fiber & cables, high tensile strength	5A001.c.1
Multiple-seal pumps	2B350.i
Multiplex equipment	5A991.b Note a.7
Multipoint initiation systems	3A232.b
Multispectral imaging sensors	6A002.b
Multistage light gas gun systems	2B232
Multi-walled piping incorporating a leak detection port	2B350.h
Murray Valley encephalitis virus	1C351.a.23
Mycoplasma capricolum, except subspecies capripneumoniae	1C360.b.2.a
Mycoplasma capricolum subspecies capripneumoniae ("strain F38")	1C352.b.1.b
Mycoplasma mycoides capri	1C360.b.2.b
Mycoplasma mycoides subspecies mycoides SC (small colony) (a.k.a. contagious bovine pleuropneumonia)	1C352.b.1.a
N,N-diisopropyl-beta-aminoethane thiol	1C350.b.6
N,N-diisopropyl-(beta)-amino ethanol	1C350.b.8
N,N-diisopropyl-beta-aminoethyl chloride	1C350.b.9
N,N-diisopropyl-(beta)-aminoethyl chloride hydrochloride	1C350.b.7
NBC (Nuclear, biological and chemical) detection system software	1D003
NBC (Nuclear, biological and chemical) detection system libraries or parametric technical databases	1E002.g
NN-Diphenylurea (unsymmetrical diphenylurea)	1C018.b
Nanocrystalline alloy strips	1C003.c
Natural uranium	0C001
Natural gas liquids and derivatives produced or derived from Naval Petroleum Reserves	1C983
Navigation, airborne communication and other avionics equipment technology	7E994
Navigation, airborne communication and other avionics software n.e.s.	7D994
Navigation direction finding equipment	7A994
Navigation systems, equipment & components, inertial	7A103
Navigation systems, equipment & components, inertial	7A003
Navigation systems, underwater sonar	7A008
NDT (non-destructive test) inspection equipment (3D)	1B001.f
NDT (non-destructive test) inspection equipment	9B007
Neodymium lasers	6A005.d.6
Neodymium lasers	6A205.f
Neptunium-237	1C012.b
Network analyzers	3A002.e
Network access controllers contained in computer equipment	4A994.i
Network access controllers contained in telecommunications	5A991.b.4.a
Neural computers/assemblies/components	4A004.b
Neural network integrated circuits	3A001.a.9
Neutron generator systems & tubes	3A231
Neutronic calculations/modeling, software for	0D999.a
Newcastle disease virus	1C352.a.9
Nickel alloy	1C002.a.2.a
Nickel alloy/powder or particulate form	1C002.b.1.a
Nickel aluminides	1C002.a.1.a
Nickel based alloys	1C002.a.1

Description	ECCN Citation
Nickel electroplating equipment	2B999.i
Nickel metal (made from powder)	1C240
Nickel metal (made from powder metals/alloys/powders)	0C006.b
Nickel metal powders	0C006.a
Nickel powder	1C240
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Night vision devices and technology	6A002.a.2, 6A003.b.3, 6A003.b.4, 6A202, 6A203, 6E002, 6E101
Niobium alloys	1C002.a.2.b
Niobium alloy/powder or particulate form	1C002.b.1.b
Nipah virus	1C351.a.32
Nitrate-based	Advisory Note (a) 1C018
3-Nitroaza-1,5 pentane diisocyanate	1C018.1
Nitric acid	1C999.e
Nitrided niobium-titanium-tungsten alloy crucibles	2A225.a.7
2-Nitrodiphenylamine	1C111.c.3, 1C018.h
Nitrogen dioxide (dinitrogen tetroxide)	1C111.a.3.b
Nitroglycerin (in medicinal form)	1C992.1
Nitroguanidine	1C011.d
P-Nitromethylaniline	1C018.i
N,N-Dialkyl (Me, Et, n-Pr or i-Pr) aminoethyl-2-chlorides and corresponding protonated salts	1C355.a.2.d
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
Noise reduction equipment for vessels, acoustic mounts	8A002.o.3.a
Noise cancellation systems for vessels, active	8A002.o.3.b
Noise reduction systems for vessels, active	8A002.o.3.b
Non-destructive inspection equipment	1B001.f
Non-destructive test inspection equipment, rocket motor	9B007
Non-fluorinated polymeric substances	1C008
Non-fluorinated polymeric manufactures	1A003
Non-irritant smoke flares, canisters, grenades and charges	1A984
Non-linear optical materials	6C004.c
Non-planar absorbers	1C001.a Note 1.b
Non-tunable continuous wave (CW) lasers	6A005.a & 6A995.e
Non-tunable pulsed lasers	6A005.b & 6A995.d
Non-tunable solid state lasers	6A005a and b & 6A995.f
Nozzles, aerodynamic isotope separation	0B001.d.1
Nozzles, for producing pyrolytically derived materials	1B116
Nozzles, rocket motor (liquid)	9A106.b
Nuclear heat source materials	1C012
Nuclear material handling and processing equipment	2A291
Nuclear materials, facilities, and equipment software	0D001
Nuclear plant commodities, parts and accessories	2A291.d
Nuclear reactor, eddy current test equipment	2A291.d
Nuclear reactor equipment	2A291
Nuclear reactor, simulators	2A291.b
Nuclear reactor, ultrasonic test equipment	2A291.d
Nuclear reactors fuel element fabrication plant/equipment	0B005
Nuclear reactors fuel element (irradiated) reprocessing plant/equipment	0B006
Nuclear reactors, civil	0A001
Nuclear reactors & reactor components	0A001
Nuclear technology for the development, production or use of nuclear materials, facilities, and equipment	0E001
Nuclear-grade graphite	0C005
Numerical control for machine tools - software	2D002
Numerical control for machine tools - technology	2E003.d
Numerical control units for machine tools and numerically controlled machine tools, n.e.s	2B991
Numerically controlled machine tools	2B290
Numerically controlled machine tools that can be equipped with electronic devices for simultaneous contouring control	2B991.c
Object detection and location systems (acoustic)	6A001.a.1.b
Ocean salvage systems	8A001.e
Off highway wheel tractors	9A990

Description	ECCN Citation
Oil well cartridges	1C018.f, 1C992.g
Oil, lubricating, cutting, or quenching	1C980
Oils, distillate fuel	1C980
Omsk haemorrhagic fever virus	1C351.a.24
On-highway tractors	9A990
Operating systems for real time processing equipment, software	4D993.c
Operating system software, development tools & compilers	4D003.a
Operating system software, multi-data-stream processing equipment	4D003.a
Operating system software for real time processing equipment	4D993.c
Optical absorption materials, low	6C994.a
Optical components, space-qualified	6A004.c
Optical components for lasers	6A005.e
Optical components for lasers	6A004.b
Optical computers	4A004.c
Optical control equipment	6A004.d
Optical detectors, radiation hardened	6A102
Optical detectors & sensors	6A002
Optical element inspection or testing equipment and components	3B992.a
Optical element manufacturing equipment and components	3B991.a
Optical elements, aspheric	6A004.e
Optical equipment	6A005.f
Optical equipment	6B004
Optical equipment other than optical surface scattering measurement equipment	6B004.b
Optical fabrication technologies	6E003.d.2
Optical fabrication technologies	6E993.a
Optical fiber characterization equipment	5A991.b Note b.3
Optical fiber couplers or connectors for underwater use	8A002.c
Optical fiber & accessories, communications	5A001.c.1
Optical fiber & accessories, underwater use	5A001.c.2
Optical fiber preforms	6C994.b
Optical fiber preforms	5C991
Optical fibers/fiber cable, sensing	6A002.d.3
Optical fiber sensing elements, hydrophones	6A001.a.2.a.2
Optical filters	6A994.a
Optical filters technology	6E993.b
Optical finishing processes	2B002.d
Optical (Infrared) tracking (range) radars	6A108.b.2
Optical integrated circuits	3A001.a.6
Optical materials	6C994
Optical materials, with non-linear characteristics	6C004.b.3
Optical mirrors (reflectors)	6A004.a
Optical mirrors (reflectors)	6A005.e.2
Optical sensing fibers not controlled by 6A002	6C992
Optical Sensors	6A992
Optical sensor cryocoolers	6A002.d.1
Optical sensors - flight control systems - technology	7E004
Optical sensors, optical fiber	6A002.d.3
Optical sensor materials	6C002
Optical sighting devices for firearms	0A987
Optical surface coating/treatment technology	6E003.d.1
Optical switching equipment	5A991.c.10.c
Optical switching equipment, equipment for the development of equipment employing	5B001.b.3
Optical switching equipment, software for the development of equipment employing	5D001.d.3
Optical switching equipment, technology for the development of equipment employing	5E001.c.3
Optical-electro shutters, Kerr or Pockel cells	6A203.b.3.c
Optics	6A994
Optics, (optical components)	6A004
Optimization of rocket systems trajectory technology	7E104
Organic fibers & filamentary materials	1C010.a
Organic matrix	1A002.a
Organo-metallic compounds	3C003
Oropouche virus	1C351.a.25

Description	ECCN Citation
Oscilloscopes (analog and digital)	3A292
Oxide matrix reinforced materials	1C007.f
Oxygen Iodine (O <sub>2</sub> -I) laser	6A005.d.5.c.1
PABXs (Private Automatic Branch exchanges)	5A991.c
Packet switching equipment	5A991.c.10
Parachutes, military	9A018.e
Paraffin wax	1C980
Parametric technical databases	1E002.g
Particle accelerators	1B999.b
Particle measuring systems employing lasers	3B992.b.7
Passive coherent location systems or equipment	5A001.g
Passive sensors, direction finding systems	7A115
Passive acoustic systems	6A001.a.1.d
Pathogens, genetically modified microorganisms	1C353.a
Pathogens, animal	1C352
Pathogens, human	1C351
Pathogens, plant	1C354
Pathogens, zoonotic	1C351
PBAA (Polybutadiene-acrylic acid)	1C111.b.3
PBAN (Polybutadiene-acrylic acid-acrylonitrile)	1C111.b.4
PEEK (Polyether ether ketone)	1C998
PEK (Polyether ketone)	1C998
PEKEKK (Polyether ketone ether ketone ketone)	1C998
PEKK (Polyether ketone ketone)	1C998
1,1,3,3,3-Pentafluoro-2-(trifluoromethyl)-1-propene (382-21-8) (PFIB)	1C355.a.1.a
Perfluoroaliphatic-ethers, monomeric or polymeric	1C006.d.1.a
Perfluoroalkanes	1C006.d.1.d
Perfluorocycloalkanes	1C006.d.1.c
Perfluoropolyalkylether-triazines, monomeric or polymeric	1C006.d.1.a
Performance improvement software, navigation systems	7D003.a
Performance improvement source code, navigation systems	7D003.b
Peronosclerospora philippinensis	1C360.c.2.a
Peste des petits ruminants virus	1C352.a.10
Petroleum products produced or derived from Naval Petroleum Reserves	1C982
Petroleum, crude or reconstituted	1C981
PFIB (1,1,3,3,3-Pentafluoro-2-(trifluoromethyl)-1-propene (382-21-8))	1C355.a.1.a
Phased array antennae (in radar)	6A008.e
Phased array/segment mirror control equipment	6A004.d.4
Phased array antennae (in radar)	5A001.d
Phased array antennae	5A991.f
Phenylene, as lubricating fluids	1C006.b.1
Phosgene: Carbonyl dichloride (75-44-5)	1C355.b.1.a
Phosphate glass	6C004.e
Phosphor bronze or copper mesh packings	1A226
Phosphor image plates, storage	1A999.b
Phosphorus hydrides	3C004
Phosphorus oxychloride	1C350.c.3
Phosphorus pentachloride	1C350.c.4
Phosphorus pentasulphide	1C350.d.10
Phosphorus trichloride	1C350.c.5
Photo-enhanced CVD equipment	3B991.b.1.i
Photo-enhanced diffusion equipment	3B991.b.1.g
Photo-optical step and repeat cameras	3B991.b.2.d.1
Photocathodes	6A002.a.2.b
Photographic still cameras, underwater	8A001.e
Photographic still cameras, for underwater use	8A992.b
Photomultiplier tubes	6A202
Photovoltaic arrays, space qualified or radiation hardened	3A001.e.1.c
Physics-based simulation "software" specially designed for the "development" of lithographic, etching or deposition processes	3D003
Piezoelectric polymer & copolymer, made from vinylidene fluoride materials	1A001.b
Piezoelectric sensing elements, hydrophones	6A001.a.2.a.2.b

Description	ECCN Citation
Pinacolone	1C350.d.11
Pinacolyl alcohol	1C350.b.18
Piping, austenitic stainless steel	2B999.n
Piping, fittings and valves of or lined with stainless steel, copper-nickel alloy or other alloy steel	2A292
Piping, monel	2B999.f
Piping, multi-walled incorporating a leak detection port	2B350.h
Piping, stainless steel	2B999.g
Piping, vacuum	2B999.k
Pitch-impregnated fibers	1C010.e
Planar absorbers	1C001.a Note 1.c&d
Plant pathogens, bacteria or fungi	1C354
PLAs (Programmable Logic Arrays)	3A001.a.8
Plasma atomization & melting furnaces	2B227.b
Plasma dry etching equipment	3B001.c
Plasma enhanced CVD equipment	3B001.d
Plasma-enhanced CVD (PECVD) equipment	3B991.b.1.i
Plasma enhanced or plasma assisted CVD production equipment	2B005.a.1.c
Plasma isotope separation plant	0B001.a.8
Plasma separation process equipment & components	0B001.i
Plasma spraying production equipment, with controlled atmosphere	2B005.d
Platforms, complete	9A992
Platinized catalysts	1A225
Plutonium metal production systems	0B006.g
Plutonium nitrate conversion systems	0B006.f
Plutonium-238	1C012.a
Pocket cell electro-optical shuttering	6A203.b.3.c
Police helmets and shields	0A979
Polyarylene ketones	1C008.d
Polybiphenylenethersulphone	1C008.f
Polybromotetrafluoroethylene	1C006.c.3
Polybutadiene-acrylic acid (PBAA)	1C111.b.3
Polybutadiene-acrylic acid-acrylonitrile (PBAN)	1C111.b.4
Polycarbosilazanes	1C007.e.3
Polychlorotrifluoroethylene	1C006.c.2
Polycrystalline alumina fibers	1C010.c Note 1
Polycrystalline silicon and materials production equipment	3B991.b.1.a
Polydiorganosilanes, precursor for silicon carbide	1C007.e.1
Polyether ketone ether ketone ketone (PEKEKK)	1C998
Polyether ketone (PEK)	1C998
Polyether ether ketone (PEEK)	1C998
Polyether ketone ketone (PEKK)	1C998
Polyetherimides, fibrous & filamentary materials composed of	1C010.d.1.a
Polygraphs	3A981
Polymeric or metallo-organic materials	1C007.e
Polymeric substances	1C111.b
Polymeric substances, non-fluorinated	1C008
Polymeric substances, non-fluorinated	1C998
Polysilazanes, precursor for silicon nitride	1C007.e.2
Polythiophene	1C001.c.3
Porcine enterovirus type 9	1C352.a.11
Porcine herpes virus (Aujeszky' disease)	1C352.a.6
Porous nickel metal	1C240
Porous nickel metal	0C006.b
Portable electric generator development or production software	2D994
Portable electric generators	2A994
Positioning equipment/components, global	7A005
Positioning equipment	7A105
Positioning systems, acoustic	6A001.a.1.d
Positioning tables or rate tables	2B120
Positioning tables or rate tables	2B121
Positive resists for semiconductor lithography	3C002.a
Post-flight data processing software	6D103



Description	ECCN Citation
Potassium cyanide	1C350.d.12
Potassium bifluoride	1C350.d.14
Potassium fluoride	1C350.d.13
Potassium hydrogen fluoride see potassium bifluoride	1C350.d.14
Potassium titanyl arsenate (KTA)	6C004.b.1
Powassan virus	1C351.a.26
Powder metallurgy rotor component manufacturing equipment	9B009
Power generating equipment, nuclear reactor	0A002
Power supplies, high current/voltage/power (direct current)	0B001.j.5
Power supplies, direct current high power (dc)	3A226
Power supplies, direct current high-voltage	3A227
Power supplies, direct current (high current/voltage/power)	0B001.j.6
Power systems, air independent, for underwater use	8A002.j
Power transmission shaft systems, marine	8A002.o.1
Power transmission shaft systems, marine	8A002.o.1.e
Precision mandrels for filament winding machines	1B201
Precision rotor forming mandrels	2B209.b
Precision tracking systems, usable for missiles	6A108.b
Precursors for toxic chemical agents	1C350
Preform production equipment	1B101.d
Preforms, metal coated, for fiber prepregs in 9C110	9C110
Preforms production equipment	1B001
Preforms production equipment, n.e.s.	1B999.e
Preforms production equipment controlled by 1B999, software for	1D999.b
Preforms, fibrous or filamentary materials	1C010.e
Preforms, glass for optical fibers	5C991
Preforms for space vehicles (metal coated fiber)	9A110
Preforms, fibrous or filamentary materials	9A110
Preforms, metal coated fiber (for propulsion systems)	9A110
Prepreg production equipment	1B001.e
Prepreg production equipment	1B101.d
Prepregs production equipment, n.e.s.	1B999.e
Prepregs production equipment controlled by 1B999, software for	1D999.b
Prepregs, fibrous or filamentary materials	1C010.e
Prepregs, resin impregnated fiber, for 9A110 items	9C110
Prepregs production equipment	1B001
Prepregs, when impregnated with phenolic or epoxy resins	1C010.e Note 2
Prepregs, fibrous or filamentary materials	9A110
Presses, hot isostatic	2B204
Presses, hot isostatic	2B104
Presses, hot isostatic	2B004
Presses, hot isostatic n.e.s.	2B999.a
Pressure vessels, for nuclear reactors	0A001.a
Pressure tubes, for fuel elements & primary coolant	0A001.e
Pressure transducers	2B230
Pressure regulators, air cylinders, hoses, valves and backpacks	8A992.h
Pressure sensors, manganin & quartz	6A226
Primary cells and secondary cells	3A001.e.1.a, 3A991.j
Printed circuit boards for numerical control units, machine tools or feed back devices	2B998.c
Private automatic branch exchanges (PABXs)	5A991.c
Probing (test) systems, semiconductor devices	3B002.d
Process control instrumentation, for reprocessing plant	0B006.d
Process control hardware/systems designed for power industries	1B999
Process control hardware/systems designed for power industries controlled by 1B999, software for	1D999.a
Process control systems for use in nuclear reactor equipment	2A290.b
Process control systems for use in nuclear material handling and processing equipment	2A291.a
Processing equipment for bay or bottom cable systems	6A001.a.2.e.3
Processors, digital array	3A001.a.3 Note
Processors, digital signal	3A001.a.3 Note
Processors, digital signal	4A003
Processors, digital array	4A003
Product & tails collectors, for uranium vapor	0B001.i.1

Description	ECCN Citation
Product & tails stations, UF6	0B002.c
Product & tails collector systems, uranium vapor	0B001.g.3
Production facilities, reentry vehicles	9B116
Production equipment, propulsion systems & components	9B115
Production equipment, reentry vehicles	9B115
Production facilities, rockets/propulsion systems	9B116
Profilometers	7B002.b
Program proof and validation software for real time processing equipment	4D993
Programmable gate & logic arrays (FPGA's & FPLA's), field	3A001.a.7
Programmable & logic arrays (FPGA's & FPLA's), field	3A001.a.8
Programming controls for filament winding machines	1B201
Projectile accelerators	2B232
Projection image transfer equipment	3B991.b.2.g
Projection telescopes, laser diagnostics	6A005.f.4
Projectors, acoustic	6A001.a.1.c
Prolifometers, to characterize mirrors for laser gyro equipment	7B102.c
Propellant additives and agents	1C111.c
Propellants and constituent materials	1C111
Propellant control systems	9A106.d
Propellant (liquid) production equipment and components	1B115
Propellant (liquid) test and handling equipment and components	1B115
Propellant (solid) production equipment and components	1B117
Propeller blades or propfans composite technology	9E003.b.2
Propeller noise reduction technology	8E002.a
Propeller noise reduction software	8D002
Propellers, contrarotating	8A002.o.1.b
Propellers, water screw	8A002.o.1
Propulsion equipment, nuclear	0A002
Propulsion systems/components, production equipment	9B115
Propulsion systems, rocket	9A005
Propulsion equipment, underwater	8A992.j
Propulsion system components/structures, launch-vehicle	9A010
Propulsion system composite components/structures	9A110
Propulsion system use software	9D101
Propulsion systems, rocket	9A009
Propulsion systems, rocket	9A007
Propulsive substances	1C111.a
Protective and detection equipment	1A004, 1A995, 2B351
Protective clothing, Independently ventilated	2B352.f.1
Protective suits, gloves, shoes	1A004, 1A995, 2B352.f.1
Proximity focused image intensifier tubes	6A203.b.3.a
Pseudomonas mallei (Burkholderia mallei)	1C351.c.5
Pseudomonas pseudomallei (Burkholderia pseudomallei)	1C351.c.6
Psychological stress analysis equipment	3A981
Puccinia striiformis (syn. Puccinia glumarum)	1C354.b.5
Puccinia graminis (syn. Puccinia graminis f. sp. tritici)	1C354.b.4
Pulmonary and renal syndrome-haemorrhagic fever viruses (Seoul, Dobrava, Puumala, Sin Nombre)	1C351.a.31
Pulsating Chemical Vapor Deposition production equipment	2B005.a.1.a
Pulse amplifiers	3A999.c
Pulse excited Q switched neodymium-doped lasers	6A205.f
Pulse generators, high-current for detonators	3A229
Pulse generators, high-speed	3A230
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, liquid propellant	9A106.d
Pumps, lithium amalgam	1B233.b.2
Pumps, mercury or lithium amalgam	1B233.b.2
Pumps, molecular	0B001.c.9
Pumps, multiple-seal	2B350.i

Description	ECCN Citation
Pumps, nuclear reactor coolant	0A001.g
Pumps, potassium amide in liquid ammonia	1B230
Pumps, seal-less	2B350.i
Pumps, submersible stage recirculation	0B004.b.2.c
Pumps, vacuum	0B002.f.2
Pumps, vacuum	2B231
Pumps, vacuum	2B350.i
Pumps designed for industrial service	2B999.j
Pumps designed to move molten metals by electromagnetic force	2A293
Puumala (pulmonary and renal syndrome-haemorrhagic fever viruses)	1C351.a.31
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
Pyrolyzed carbon-carbon components	1A102
Pyrolyzed 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
Pyrolysis process control equipment (other than those controlled by 2B004, 2B005.a, 2B104, or 2B105)	2B117
Pyrotechnic articles, dual use	1A984
Pyrotechnic devices, commercial	1C018.j, 1C992.k
QRS11-00100-100/101 Micromachined Angular Rate Sensors	7A994
Q-switched lasers	6A005.a or b
Q-switched lasers	6A205.f
Quadrature-amplitude-modulation (QAM) based radio equipment operating above level 4	5A991.b.7.a
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	5C001.c.4.a
Quantum cryptography	5A002.a.9
Quartz pressure sensors/transducers	6A226.b
3-Quinuclidinol	1C350.b.19
3-Quinuclidone	1C350.d.15
Radar cross section measurement systems, missile	6B108
Radar systems & components	6A008
Radar altimeters	7A106
Radar software	6D003.h
Radar systems, employing automatic pattern recognition	6A008.1.3
Radar systems, employing signal processing	6A008.h
Radial ball bearings	2A001
Radiation detection, monitoring and measurement equipment	1A999.a
Radiation hardened detectors	6A002
Radiation hardened detectors	6A102
Radiation hardened designed (or rated) robots	2B007.c
Radiation hardened electronic computers	4A001.a.2
Radiation hardened integrated circuits	3A001.a.1
Radiation hardened sensors	6A002
Radiation hardened TV cameras	6A203.c
Radiation hardened TV cameras not specified in 6A203	6A999.b
Radiation transport calculations/modeling, software for	0D999.b
Radiation sensors, optical fibers	6A002.d.3
Radiation shielding windows	1A227
Radio frequency ion excitation coils	0B001.i.2
Radio equipment	5A001.b.2-4

Description	ECCN Citation
Radio equipment	5A991.b.6-7
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
Raman shift lasers	6A205.e
Ramjet engines/components	9A011
Range gated illumination systems, underwater	8A002.d.2
Range instrumentation radars	6A108.b.2
Rankine cycle engine, air independent	8A002.j.1
Rate tables and positioning tables	2B121
Rate tables, positioning tables, and motion simulators	2B120
Reactor vessels, chemical	2B350.a
Reactors, nuclear	0A001
Reactors, metal organic chemical vapor deposition (MOCVD)	3B001.a.2
Real time processing	2D002.b
Real time processing operating systems	4D993.c
Real time processing equipment operating system software	4D993.c
Real time processing proof and validation software	4D993
Receivers, microwave test	3A002.f
Receivers, radio	5A001.b.2-4
Reciprocating diesel engine & component technology	9E003.e.1
Reconstructed replication competent forms of the 1918 pandemic influenza virus containing any portion of the coding regions of all eight gene segments	1C360.a.1.c
Recording equipment, analog & digital tape recorders	3A002.a
Recovery of source code - software	5D001.c.2
Reduced observables analysis software	1D103
Reduction gearing, light-weight marine transmissions	8A002.o.1.d
Reentry vehicles & equipment	9A116
Reentry vehicles/components, production equipment	9B115
Reflectance measuring equipment, absolute	6B004
Reflectivity (electromagnetic) reducing materials	1C101
Reflectometers, mirror characterization	7B102.b
Reflectors (mirrors), optical	6A004.a.1
Refrigeration units, cryogenic	0B001.d.7.b
Refrigeration units, hydrogen or helium	1B231.b.1
Reinforced composite materials	1C007.f
Reinforcement fiber, production equipment	1B001.d
Release mechanisms, electronic	9A992
Remote manipulators	2B225
Remotely operated filling equipment, chemical	2B350.f
Remotely piloted vehicles (RPVs), non-military	9A012
Remotely controlled manipulators, for submersibles	8A002.i
Repeater/regenerator equipment	5A991.b Note a.4.5
Reprocessing plant, nuclear fuel	0B006
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
Resins, fast reacting ion-exchange	0B001.f.1
Resist materials, semiconductor lithography	3C002
Resists (positive), semiconductor lithography	3C992
Resist material, coated (semiconductor) substrates	3C002
Restraint devices (electronic monitoring)	3A981

Description	ECCN Citation
Restraint devices, including leg irons, shackles, and handcuffs; straight jackets, plastic handcuffs	0A982
Reticles, integrated circuits of 3A001	3B001.g
Reticles and designs	3B991.b.2
Ricin	1C351.d.5
Rickettsia prowasecki (a.k.a. Rickettsia prowazekii)	1C351.b.3
Rickettsia quintana	1C351.b.1
Rickettsia rickettsii	1C351.b.4
Rickettsiae	1C351.b
Rift Valley fever virus	1C351.a.14
Rinderpest virus	1C352.a.12
Ring laser gyro mirror characterizing equipment	7B002
Ring Magnets	0A999
Ring-shaped motor stators for multiphase AC motors	0B001.c.10
Rings or bellows, gas centrifuge	0B001.c.6
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
Robots specially designed for underwater use	8A002.h
Rochalimea quintana	1C351.b.1
Rocio virus	1C351.a.27
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
Roller bearings, solid	2A001.b
Rollers for prepregs/preform production	1B101.d
Rotary shaft seals (for compressors/blowers), UF6 resistant	0B001.b.2.b
Rotary position feedback units	2B008.b
Rotary shaft seals	0B001.d.3
Rotary shaft seals for compressors	0B001.h.4
Rotor assembly mandrels, bellows forming	2B228.a
Rotor assemblies, gas centrifuge	0B001.c.2
Rotor blade tip clearance control, compensating system software	9D004.d
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
Rotor tube baffles, gas centrifuge	0B001.c.7
Rotor tube caps, gas centrifuge	0B001.c.8
Rotor tube cylinders & components, gas centrifuge	0B001.c.3
Routers, telecommunications	5A991.c.10
Ruby lasers	6A995.c
Russian Spring-Summer encephalitis virus	1C351.a.15
S-parameter test/measurement equipment	3B002.a
S20 and S25 photocathodes	6A002
Sabia (South American haemorrhagic fever)	1C351.a.30
Safety cabinets, capable of biological use	2B352.f.2
Salmonella typhi	1C351.c.10
Salvage systems, ocean	8A001.e

Description	ECCN Citation
Saps	0A978
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.6
Scanning electronic beam guns	0B001.g.1
Scanning cameras & systems	6A003.b.2
Scatterometers	7B002.a
Scatterometers, to characterize mirrors for laser gyro equipment	7B102.a
Sclerophthora rayssiae var. zeae	1C360.c.2.b
Scoops for UF6 extraction in gas centrifuges	0B001.c.13
Scramjet engines/components	9A011
Screw reactors, UF6 production	0B003.b.1
Scuba gear	8A992.h
SDH (Synchronous Digital Hierarchy) technology	5E001.b.4
SDH (Synchronous Digital Hierachy) technology	5E991.a.2
Sea-induced motion control systems, automatic	8A002.n
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
Seals, for surface effect vessels	8A002.k
Seals, made from fluoroelastomers	1A001.c
Seals, rotary shaft	0B001.d.3
Seals, rotary shaft for compressors	0B001.h.4
Search lights	0A018.a
Security equipment, information	5A002
Security equipment, information, software	5D002
Segmented mirrors, assembly in space	6A004.c.3
Seismic detection equipment	6A999.a
Semiconductor, test equipment	3B002
Semiconductor compound photocathodes	6A002.a.2.b.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
Semiconductor materials purifying or processing equipment	3B991.b.1.b
Semiconductor probing systems, electron & laser beam	3B002.d
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 (pulmonary and renal syndrome-haemorrhagic fever viruses)	1C351.a.31
Separation mechanisms for missiles	9A117
Separation nozzles, aerodynamic isotope separation	0B001.d.1
Separation nozzles, UF6/Carrier gas separation	0B001.d.7.c
Separation plant, aerodynamic isotope separation	0B001.a.3
Separation process (aerodynamic) equipment	0B001.d
Separation systems for separating UF6 from carrier gas	0B001.h.5

Description	ECCN Citation
Separation tubes, aerodynamic isotope separation	0B001.d.2
Separator module housings (cylindrical or rectangular vessels)	0B001.g.4
Separator module housings, uranium metal plasma source	0B001.i.6
Separators, centrifugal (biological)	2B352.c
Separators, electromagnetic isotope	1B226
Separators, molecular laser isotopic separation	0B001.h
Servo valves, propellant control systems	9A106.d
Shackles	0A982
Shaft encoders (rotary input type)	3A001.f
Shale oil	1C981
Shaving machines, gear	2B003
Sheep pox virus	1C352.a.13
Shields, police	0A979
Shiga toxin	1C351.d.7
Shiga-like ribosome inactivating proteins other than verotoxin	1C351.d.10
Shigella dysenteriae	1C351.c.11
Ship vessel positioning systems, acoustic	6A001.a.1.d
Shock batons	0A985
Shock tubes	1C018, 1C992.c
Shoes, protective	1A004, 1A995
Shortwave radio technology	5E001.c.4.c
Shotgun shells	0A986
Shotgun shell manufacturing equipment	0B986
Shotgun shells, buckshot	0A984
Shotguns and shotgun shells, technology for the development or production of	0E984
Shotguns, barrel length 18 inches or over	0A984
Shrink fit machines for rotor fabrication/assembly	2B228.a
Sidelooking airborne radar (SLAR)	6A008.d
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 (digital) transmission equipment	5A991.b.8
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 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
Silahydrocarbon oils	1C006.a.1
Silicon carbide (SiC) substrate blanks	6C004.d
Silicon, hetero-epitaxial grown multi-layer substrates	3C001.a
Silicon microcircuits	3A001.a
Silicon carbide wafers	3C005
Silicon-on-sapphire integrated circuits	3A001.a Note 2
Silicone fluid, fluorinated	1C006.b.2
Silver gallium selenide (AgGaSe <sub>2</sub> )	6C004.b.2
Silylated resists for semiconductor lithography	3C002.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
Single crystals	6C002.b
Single mode optical fiber & cable	5A991
Single point diamond turning techniques, technology	6E003.d.2
Single-element & focal plane arrays, space-qualified	6A002.e
Sin Nombre (pulmonary and renal syndrome-haemorrhagic fever viruses)	1C351.a.31
Skin friction transducers, wall	9B008
Skirts, for surface effect vessels	8A002.k

Description	ECCN Citation
Slapper detonators (Electric)	3A232.a.3
Slurry propellant control systems	9A106.d
Small waterplane area vessels	8A001.i
Smoke bombs	1A984
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, 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, multi-data-stream processing equipment operating systems	4D003.a
Software, numerical control	2D002
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 equipment controlled by 2A983	2D983
"Software" specially designed for the "development" of the equipment controlled by 3A003	3D004
Software, multi-data-stream processing equipment compilers	4D003.a
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 storage equipment	4A994.d
Sonar processing equipment	6A001.a.2.b
Sonar log equipment	6A001.b
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
Source code automatic generation software	4D993.b
Source code, for multi-data-stream processing equipment	4D003.a
Source code, development of goods as specified	7D003.d
Source code recovery software	5D001.c.2
South American haemorrhagic fever (Sabia, Flexal, Guanarito)	1C351.a.30
Space launch vehicles	9A004
Space probes	9A004
Space qualified focal plane arrays	6A002.e
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	9A004
Spacecraft components	9A010
Spacecraft inertial navigation equipment/components	7A003
Spark-gaps, triggered	3A228.b



Description	ECCN Citation
Spectrometry analytical instruments	3A999.f
Spherical aluminum powder	1C111.a.1
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.c
Spray booms or arrays of aerosol generating units, specially designed for fitting to aircraft, "lighter than air vehicles," or "UAVs"	2B352.h.2
Spray cooling thermal management systems	3A003
Spraying or fogging systems, specially designed for fitting to aircraft, "lighter than air vehicles," or "UAVs"	2B352.h.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.a.5
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
Staging mechanisms for missiles	9A117
Stainless steel plate	1C999.b
Staphylococcus aureus toxins	1C351.d.8
Statistical multiplex equipment	5A991.b Note a.7
Stators, ring shaped (centrifugal rotor motor)	0B001.c.10
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
Step & repeat equipment, semiconductor wafer processing	3B001.f.1
Stirling cycle engine, air independent	8A002.j.4
St. Louis encephalitis virus	1C351.a.28
Storage & holding vessels, critically safe & resistant to nitric acid	0B006.e
Storage integrated circuits	3A001.a.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
Strap down/gimbal inertial navigation systems or equipment	7A003
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
Strip electronic beam guns	0B001.g.1
Stroboscopic light systems	8A992.c
Structural composites production equipment	1B101
Structures and composite structures, laminate, and manufacturers for missiles	9A110
Stun guns	0A985
Subcavitating hydrofoils	8A002.m
Submarine engines, n.e.s.	8A992.g
Submarine net	8A018.b.5
Submarine vessel positioning systems, acoustic	6A001.a.1.d
Submersible stage recirculation pumps	0B004.b.2.c
Submersible systems	8A992.e
Submersible vehicles/vehicle systems, equipment, or components	8A002.a

Description	ECCN Citation
Submersible vehicles/vehicle systems or equipment	8A001
Subscriber line interfaces	5A991.c.2.a
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
Suits, protective	1A004, 1A995, 2B352.f.1
Sulphur dichloride	1C350.c.7
Sulphur monochloride	1C350.c.6
Super-ventilated propellers	8A002.o.1.a
Supercavitating hydrofoils	8A002.m
Supercavitating propellers	8A002.o.1.a
Supercomputers, see Computers	
Superconducting quantum interference devices (SQUIDs)	6A006.a.1
Superconductive composite conductor	1C005
Superconductive gates, current switching	3A001.d.1
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
Supersonic expansion nozzles for UF6 carrier gas	0B001.h.1
Surface irregularity measuring equipment/instruments	2B006.c
Surface coating & processing equipment	2B005
Surface skimming (shallow bulk) acoustic wave devices	3A001.c.1
Surface acoustic wave devices	3A001.c.1
Surface vessel positioning systems, acoustic	6A001.a.1.d
Surface vessels & components	8A001
Surface finishing equipment	3B991.b.1.k
Surface-effect vehicles, (fully skirted variety)	8A001.f
Surface-effect vehicles, (fully skirted variety)	8A002.k
Surface-effect vehicles,(rigid sidewalls)	8A001.g
Surreptitious interception devices	5A980
Survey systems, bathymetric	6A001.a.1.b
Swine fever virus (African)	1C352.a.1
Swine fever virus (Hog cholera virus)	1C352.a.7
Switch fabric development/production technology	5A991.c.10
Switch-terminal interfaces	5A991.c.2.a
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	1C360.c.2.c
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

Description	ECCN Citation
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
<i>Technology, see product group E for controls for each category.</i>	
Technology, airborne equipment	7E004.a
Technology, development of frequency hopping techniques	5E001.b.4
Technology, development of spread spectrum techniques	5E001.b.4
Technology, diamond substrate film	3E003.d
Technology, gas turbine engine components	9E003.c
Technology, gas turbine engine components	9E003.a
Technology, helicopter power transfer systems	9E003.d
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” 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, superconductive electronic device	3E003.c
Technology, tilt rotor/wing power transfer systems development	9E003.d
Technology, vacuum microelectronic device	3E003.a
TEGDN (Triethylene glycol dinitrate) propellant additive	1C111.c.2
Telecommunications equipment	5A001
Telecommunications equipment, high and low temperature tolerant	5A991.a
Telecommunication equipment not controlled by 5A001	5A991
Telecommunications equipment/system software	5D001.c.1
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, underwater	8A002.d.1.b
Television systems (camera, lights, monitoring and signal transmission equipment), remote operation with submersible vehicle	8A992.a.1
Television cameras, underwater	8A002.d.1
Television cameras, underwater	8A002.d.1.a
Television cameras, underwater	8A992.a.2
Tellurium (Te)	6C002.a
Tempest type equipment	5A002.a.4
Tension stretchers for prepregs/preform production	1B101.d
Terminal interface equipment	4A994.i
Terrestrial, marine acoustic equipment	6A991
Teschen disease virus	1C352.a.14
Test benches/stands, for rockets/motors/rocket engines	9B117
Test, calibration or alignment equipment for equipment controlled by 7A	7B001
Test chambers, aerosol challenge	2B352.g
Test equipment - propellants and their constituents	1B115
Test equipment - specially designed for testing finished or unfinished semiconductor devices	3B002
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
Tetrodotoxin	1C351.d.9
Thallium arsenic selenide (Tl <sub>3</sub> AsSe <sub>3</sub> or TAS)	6C004.b.3

Description	ECCN Citation
Thermal ionization mass spectrometers (TIMS)	3A233.c
Thermal shields	0A001.h
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
Thorium	0C001
Thrust tabs, thrust vector control subsystems	9A106.c
Thrust vector control sub-system	9A106.c
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
Thyristor devices and modules, solid-state pulsed power switching	3A001.g
Tick-borne encephalitis virus	1C351.a.15
Tilt rotor/tilt wing power transfer system technology	9E003.d
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
Titanium alloys	1C002.a.2.c
Titanium alloys, as tubes/solid forms/forgings	1C202.b
Titanium alloy/powder or particulate form	1C002.b.1.c
Titanium aluminides	1C002.a.1.b
Titanium-based alloys	1C002.a.1
Titanium doped sapphire laser host material	6C005.a
Titanium-sapphire (Ti: Al <sub>2</sub> O <sub>3</sub> ) lasers	6A005.c.1, c.2. or c.3
Titanium-stabilized duplex stainless steel 9Ti-DSS)	1C118
TMETN (trimethylolethane trinitrate)	1C111.c.4
Tooling for powder metallurgy rotor component manufacture	9B009
Torpedo net	8A018
Torture, specially designed implements of	0A983
Tow-placement machines	1B001.b
Towed acoustic hydrophone arrays	6A001.a.2.b
Toxic gas monitoring systems	2B351
Toxins	1C350, 1C351, 1C355, 1C395
Tracking radar	6A008.1.1
Tracking systems, precision	6A108.b.1
Tracking systems	6A008.1
Tractors and parts	9A990
Transceivers, radio	5A001.b.2-10
Transceivers, radio	5A991.b.6-7
Transcoders (translation encoders)	5A991.b Note a.6
Transducers, wall skin friction	9B008
Transducers, acoustic projectors	6A001.a.1.c
Transient recorders (Waveform digitizers)	3A002.a.5, 3A292.d
Transistor test equipment, S-parameter measurement	3B002.a
Transistors, microwave	3A001.b.3
Translation encoders (transcoders)	5A991.b Note a.6
Transmission fluids, automatic	1C980
Transmission equipment	5A991.b
Transmultiplex equipment	5A991.b Note a.9
Traveling wave tubes (TWTs), industrial	3A001.b.1.a
Tray exchange towers, hydrogen sulphide-water	0B004.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

Description	ECCN Citation
Triggered spark-gaps	3A228.b
Triggers, high voltage	3A999.c
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
Trusted Computer System Evaluation Criteria (TCSEC) capability	5A002.f
Tubes, cylindrical or conical tangential inlet flow-driven	0B001.d.2
Tubes, gas krytron	3A228.a
Tubes, pressure, nuclear reactors	0A001.e
Tubes, vacuum sprytron	3A228.a
Tubes, zirconium	0A001.f
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
Turbines, gas aero engines	9A001
Turbo prop engines	9A018.a.2
Turbocompound engines	9A101
Turboexpanders and turboexpander-compressors	0B004.b.3.b
Turboexpanders and turboexpander-compressors	1B232
Turbofan & turbojet engines, lightweight	9A101
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	6A203.c
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
UF6	0B001.d.3
UF6 / carrier gas separation systems	0B001.h.5
UF6 / carrier gas separation systems	0B001.d.7
UF6 cold traps	0B001.d.7.d
UF6 cold traps	0B002.b
UF6 desublimers	0B002.b
UF6 Gaseous diffusion barriers & housing	0B001.b.3,4
UF6 liquefaction and solidification stations	0B002.d
UF6 mass spectrometers/ion sources	0B002.g
UF6 piping & header systems	0B002.e
UF6 product & tails stations	0B002.c
UF6 production plant, equipment & components	0B003
UF6 resistant compounds & powders	0C201
UF6 resistant or protected systems, equipment & components	0B002
UF6 vacuum headers	0B002.f.1
UF6 vacuum pumps	0B002.f.2
UF6 vacuum manifolds	0B002.f.1
Ultrasonic test equipment for nuclear reactors	2A291.d
Underwater breathing apparatus, self-contained	8A992.h
Underwater cameras, photographic	8A002.d-f
Underwater camera equipment, n.e.s.	8A992.d
Underwater communications systems	5A001.b.1
Underwater electronic imaging systems	8A002.f
Underwater electric field sensors	6A006.b
Underwater lights	8A992.j

Description	ECCN Citation
Underwater noise reduction technology	8E002
Underwater optical fiber cables & accessories	5A001.c.2
Underwater (propeller) noise reduction software	8D002
Underwater propulsion equipment	8A992.j
Underwater rebreathing apparatus	8A018.a
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
Unmanned aerial vehicles and associated systems, production equipment	9B010
Unmanned aerial vehicles, associated equipment, systems, and components	9A012.b
Unmanned air vehicle systems (UAVs) Non-military	9A012.a
Unmanned tethered submersible vehicles	8A001.c
Unmanned untethered submersible vehicles	8A001.d
Uranium cooling equipment	0B001.g.2
Uranium conversion plant & equipment	0B003
Uranium, depleted	1A290
Uranium electromagnetic separator vacuum housings	0B001.j.3
Uranium fluoride (UF5) product filter collectors	0B001.h.2
Uranium hexafluoride (UF6) production plant, equipment & components	0B003
Uranium hexafluoride (UF6) resistant compounds & powders	0C201
Uranium hexafluoride (UF6) resistant compounds & powders	0C006
Uranium isotopes separation, lasers or laser systems	0B001.h.6
Uranium, natural or depleted	0C001
Uranium oxidation systems	0B001.e.6
Uranium plasma generation systems	0B001.i.4
Uranium titanium alloys	1C004
Uranium vapor product & tails collector systems	0B001.g.3
Vaccines and immunotoxins	1C991
Vacuum furnaces	2B226
Vacuum furnaces	2B227
Vacuum induction furnaces	2B226
Vacuum induction furnace, power supplies	2B226
Vacuum headers	0B002.f.1
Vacuum housings for uranium electromagnetic separators	0B001.j.3
Vacuum manifolds	0B002.f.1
Vacuum melting, remelt & casting furnaces	2B227
Vacuum microelectronic device development/production technology	3E003.a
Vacuum pumps	2B231
Vacuum pumps	2B350.i
Vacuum pumps for UF6 bearing atmospheres	0B002.f.2
Vacuum tubes, electronic microwave	3A001.b.1
Vacuum sprytron tubes	3A228.a
Vacuum valves, piping, flanges, gaskets	2B999.k
Valve seats, made from fluoroelastomers	1A001.c
Valves, austenitic stainless steel	2B999.n
Valves, bellows seal	2A226
Valves, bellows	2B350.g
Valves, bellows	0B001.d.6
Valves, double-seal	2B350.g
Valves, of or lined with stainless steel, copper-nickel alloy or other alloy steel	2A292
Valves, diaphragm	2B350.g
Valves, gaseous diffusion isotope separation	0B001.b.1
Valves, monel	2B999.f
Valves, multiple seal incorporating a leak detection port	2B350.g
Valves, non-return (check)	2B350.g

Description	ECCN Citation
Valves, stainless steel	2B999.g
Valves, vacuum	2B999.k
Variola virus	1C351.a.16
Vector processing unit technology	3E002
Vector processors/assemblies	4A003
Vehicle position determination software	6D103
Vehicles, specially designed or modified for military purposes	9A018.b
Velocity interferometers (VISARs)	6A225
Velocity measurement equipment, underwater	6A001.b
Venezuelan equine encephalitis virus	1C351.a.17
Ventilated full or half (protective clothing) suits	2B352.f.1
Ventilated propellers	8A002.o.1.a
Verotoxin	1C351.d.10
Vesicular stomatitis virus	1C352.a.15
Vessels, austenitic stainless steel	2B999.n
Vessel positioning systems, acoustic	6A001.a.1.d
Vessel noise reduction equipment	8A002.o.3
Vessels, marine	8A001
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.12
Video cameras incorporating solid state sensors	6A003.b.1
Vinylidene fluoride copolymers	1C009.a
Vinylidene fluoride copolymers, components of	1A001
virulans, fungi (Colletotrichum kahawae)	1C354.b.1
Virus protection software	5D992
Viruses	1C351, 1C352, 1C353
Viruses, animal pathogens	1C352.a
Viruses, human pathogens	1C351.a
Viruses, plant pathogens	1C354.c
Viscous software, 2D or 3D engine flow modeling	9D004.a
Viscum Album Lectin 1 (Viscumin)	1C351.d.19
Vision systems, underwater	8A992.a
Vision systems, underwater	8A002.d
Voice print identification and analysis equipment and parts	3A980
Volkensin toxin	1C351.d.18
Vortex tubes, aerodynamic isotope separation	0B001.d.2
Vortex tube units, UF6 separation from carrier gas	0B001.d.7.c
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 distillation towers, heavy	0B004.b.4.a
Water jet cutting machines (CNC)	2B001.e.1.a
Water jet (pumpjet) propulsion systems	8A002.p
Water tunnels, propulsion model acoustic field measurement	8B001
Water-hydrogen sulphide exchange tray columns	1B229
Water-screw propellers	8A002.o.1
Wave division multiplex equipment	5A991.b.5
Waveform digitizers (Transient recorders)	3A002.a.5
Wax pattern preparation equipment, ceramic shell	9B991.e
Weaving machines	1B001.c
Weight belts	8A992.i

Description	ECCN Citation
Welders, MIG	2B999.d
Welders, E-beam	2B999.e
Welding machines, laser	2B999.c
Western equine encephalitis virus	1C351.a.18
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
White pox	1C351.a.19
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
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, all flash	3A999.c
X-ray (non planar) inspection equipment, rocket motors	9B007
X-ray sensitive resist materials	3C002.c
Xanthomonas campestris pv. Citrumelo	1C354.a.2
Xanthomonas citri	1C354.a.2
Xanthomonas albilineans	1C354.a.1
Xanthomonas campestris pv. aurantifolia	1C354.a.2
Xanthomonas campestris pv. Citri	1C354.a.2
Xylella fastidiosa pv. citrus variegated chlorosis (CVC)	1C360.c.1.c
Yellow fever virus	1C351.a.20
Yersinia pestis	1C351.c.13
Yttrium oxide (yttria) (Y <sub>2</sub> O <sub>3</sub> ), crucibles made or coated	2A225.a.8
Zinc selenide (ZnSe), substrate blanks	6C004.a
Zinc sulphide (ZnS), substrate blanks	6C004.a
Zirconium fluoride (ZrF <sub>4</sub> ) glass	6C004.e
Zirconium metal and alloy tubes & assemblies	0A001.f
Zirconium metal particulate	1C111.a.2.a
Zirconium metal, alloy, compounds, or manufacturers	1C234
Zirconium oxide (zirconia) (ZrO <sub>2</sub> ) made/coated crucibles	2A225.a.9
Zoonotic pathogens and "toxins"	1C351