

**ALPHABETICAL INDEX
TO THE COMMERCE CONTROL LIST**

This index is not an exhaustive list of controlled items.

Description	ECCN Citation
Ablative liners, thrust or combustion chambers	9A106.a
Abrin	1C351.d.1
Absettarov (Central European tick-borne encephalitis virus).....	1C360.a.1.a.1
Absolute reflectance measurement equipment	6B004.a
Absorbers of electromagnetic waves	1C001
Absorbers, hair type	1C001.a Note 1.a
Absorbers, non-planar & planar.....	1C001.a Note 1.b&c
Absorption columns	2B350.e
Accelerators (electro-magnetic radiation).....	3A101.b
Accelerators or coprocessors, graphics	4A003.d
Accelerometer axis align stations	7B003, 7B101
Accelerometer test station.....	7B003, 7B101
Accelerometers & components therefor	7A101
Accelerometers & accelerometer components.....	7A001
Acoustic beacons	6A001.a.1.b
Acoustic beam forming software	6D003.a.1
Acoustic hydrophone arrays, towed	6A001.a.2.b
Acoustic location & object detection systems	6A001.a.1.b
Acoustic, marine, terrestrial equipment	6A991
Acoustic mounts, noise reduction equipment for vessels	8A002.o.3.a
Acoustic-optic signal processing devices	3A001.c.3
Acoustic positioning systems.....	6A001.a.1.d
Acoustic projectors	6A001.a.1.c
Acoustic seabed survey equipment.....	6A001.a.1.a
Acoustic systems, diver deterrent	8A002.r
Acoustic systems, marine.....	6A001.a
Acoustic transducers	6A001.a.2.c
Acoustic underwater communications systems	5A001.b.1
Acoustic vibration test equipment	9B006
Acoustic wave devices	3A001.c
Acoustic-wave device manufacturing equipment and systems	3B991.b Note
Active compensating system rotor clearance control software.....	9D004.d
Active flight control system software	7D003.e
Active flight control system technology	7E004.b
Active magnetic bearing systems.....	2A001.c
Active acoustic systems	6A001.a.1

Actively cooled mirrors 6A005.e.1

Adaptive control software..... 2D992.a

Adaptive control software..... 2D002.b.2

ADCs (analog-to-digital converters)..... 3A101.a

ADCs (analog-to-digital converters)..... 3A001.a.5

ADCs (analog-to-digital converters)..... 4A003.e

Aero gas turbine engine/assemblies/component test software..... 9D004.b

Aero gas turbine engines..... 9A001

Aerodynamic isotope separation plant/element housings..... 0B001.a.3

Aerodynamic separation process systems & components 0B001.d

Aerosol challenge testing chambers..... 2B352.g

Aerosol generating units specially designed for fitting to the system
 s specified in 2B352.h.1 or h.2 2B352.h.3

Aflatoxins..... 1C351.d.2

African horse sickness virus 1C352.a.17

African swine fever virus (animal pathogens) 1C352.a.1

Agitators (chemical manufacturing) 2B350.b

AHRS (Attitude Heading Reference Systems), source code 7D002

Air traffic control software 6D003.h.1

Air independent power systems (for underwater use) 8A002.j

Air compressors and filtration systems designed for filling air cylinders 8A992.1

Air Traffic Control software application programs 6D993

Airtight vaults 0A981

Airborne altimeters 7A006

Airborne altimeters 7A106

Airborne communication equipment 7A994

Airborne radar equipment..... 6A998

Aircraft..... 7A994

Aircraft, civil..... 9A991.b

Aircraft, demilitarized..... 9A991.a

Aircraft, n.e.s..... 9A991

Aircraft, trainer 9A018

Aircraft breathing equipment and parts 9A991.e

Aircraft (military) pressurized breathing equipment 9A018.d

Aircraft inertial navigation systems & equipment 7A103.a

Aircraft inertial navigation systems & equipment 7A003

Aircraft parts and components 9A991.d

Akabane virus 1C360.b.1.a

Alexandrite..... 6C005.b

Alexandrite lasers..... 6A005.c.2.b

Align & expose step & repeat equipment (wafer processing) 3B001.f.1

Alignment equipment for equipment controlled by 7A..... 7B001

Description	ECCN Citation
Alkylphenylene ethers or thio-ethers, as lubricating fluids	1C006.b.1
Alloy strips, magnetic	1C003.c
Alloyed materials production systems and components	1B002
Alloyed metal materials in powder or particulate form	1C002.b
Alloyed metal materials in the form of uncomminuted flakes, ribbons, or thin rods	1C002.c
Alloys, aluminum.....	1C202.a
Alloys, aluminum.....	1C002.a.2.d
Alloys, magnesium	1C002.a.2.e
Alloys, metal powder or particulate form	1C002.b
Alloys, nickel	1C002.a.2.a
Alloys, niobium.....	1C002.a.2.b
Alloys, titanium.....	1C202.b
Alpha-emitting radionuclides, compounds, mixtures, products or devices	1C236
Altimeters, airborne	7A006
Altimeters, radar or laser types	7A106
Alumina fibers	1C010.c Note 1
Aluminides.....	1C002.a.1
Aluminides, nickel	1C002.a.1.a
Aluminides, titanium.....	1C002.a.1.b
Aluminum alloys.....	1C002.a.2.d
Aluminum alloy/powder or particulate form	1C002.b.1.d
Aluminum alloys as tubes/solid forms/forgings	1C202.a
Aluminum electroplating equipment	2B999.i
Aluminum gallium nitride (AlGaN) “substrates”, ingots, boules, or other preforms of those materials	3C005
Aluminum nitride (AlN) “substrates”, ingots, boules, or other preforms of those materials	3C005
Aluminum organo-metallic compounds	3C003
Aluminum oxide powder, fine	0C201
Aluminum powder, spherical	1C111.a.1
Aluminum powder (spherical) production equipment.....	1B102
Amalgam electrolysis cells, lithium isotope separation	1B233.b.3
Amalgam pumps, lithium and/or mercury	1B233.b.2
Ammonia, aqueous	1C980
Ammonia crackers	0B004.b.2.d
Ammonia distillation towers.....	0B004.b.4.b
Ammonia synthesis converters & units	1B227
Ammonia-hydrogen exchange plant.....	0B004.a.2
Ammonia-hydrogen exchange equipment and components.....	0B004.b.2
Ammonium bifluoride	see ammonium hydrogen fluoride
Ammonium hydrogen fluoride	1C350.d.1
Ammonium nitrate, including certain fertilizers containing ammonium nitrate	1C997

Description	ECCN Citation
Ammunition hand-loading equipment	0B986
Amorphous alloy strips	1C003
Amplifiers, microwave solid state	3A001.b.4
Amplifiers, pulse	3A999.d
Analog instrumentation tape recorders	3A002.a.1
Analog computers	4A101
Analog-to-digital converters	3A101.a
Analog-to-digital converters, integrated circuits	3A001.a.5
Analog-to-digital conversion equipment	4A003.e
Analyzers, network	3A002.e
Analyzers, spectrum	3A002.c.1
Andes virus	1C351.a.1
Angular displacement measuring instruments	2B206.c
Angular measuring instruments	2B006.b.2
Angular measuring instruments	2B206
Angular-linear inspection equipment (hemishells)	2B206
Angular-linear inspection equipment (hemishells)	2B006.c
Angular rate sensors	7A002
Animal pathogens	1C352
Annealing or recrystallizing equipment	3B991.b.1.c.1
Antennae, for microwave power source	0B001.i.3
Antennae, phased array	5A001.d
Antennae, phased array (for radar)	6A008.e
Anti-vibration mounts (noise reduction), civil vessels	8A002.o.3.a
Antimony hydrides	3C004
Aramid fibers & filamentary materials	1C210.a
Aramid fibers & filamentary materials	1C010.a
Arc remelt & casting furnaces	2B227.a
Argon ion lasers	6A205.a
Argon ion lasers	6A005.a
Armor body	1A005
Armor plate drilling machines	2B018.a
Armor plate planing machines	2B018.b
Armor plate quenching presses	2B018.c
Arms machinery, equipment, gear, parts, and accessories	2B018
Arms (small) chambering machines	2B018.o
Arms (small) deep hole drilling machines and drills therefor	2B018.p
Arms (small) rifling machines	2B018.q
Arms (small) spill boring machines	2B018.r
Aromatic polyimides	1C008.a.3
Aromatic polyamide-imides	1C008.a.2
Aromatic polyetherimides	1C008.a.4

Description	ECCN Citation
Array processor microcircuits.....	3A001.a.3 Note
Array processors/assemblies.....	4A004
Array processors/assemblies.....	4A003
Arrays of aerosol generating units or spray booms, specially designed for fitting to aircraft, “lighter than air vehicles,” or “UAVs”.....	2B352.h.2
Arsenic trichloride	1C350.b.1
Arsenic hydrides	3C004
Asphalt paving mixtures	1C980
Aspheric optical elements	6A004.e
Assemblies to enhance performance by aggregation of computing elements	4A994.c
Asynchronous transfer mode (ATM) equipment.....	5A991.c.10.d
Asynchronous transfer mode (ATM), technology for the development of equipment employing	5E001.c.1
Atomic vapor laser isotope separation plant.....	0B001.a.6
Atomic vapor laser isotope separation process equipment.....	0B001.g
Atomic frequency standards	3A002.g
Atomic transition solid state lasers	6A005.a or b
Attitude Heading Reference Systems (AHRS), source code software	7D002
Attitude control equipment for missiles.....	7A116
Aujeszky’ disease virus (Porcine herpes virus)	1C352.a.6
Austenitic stainless steel plate, valves, piping, tanks and vessels	2B999.n
Autoclave temperature, pressure or atmosphere regulation technology.....	1E103
Autoclaves, ovens and systems.....	0B002.a
Automated control systems, submersible vehicles	8A002.b
Automatic drug injection systems.....	0A981
Automotive, diesel, and marine engine lubricating oil	1C980
Avian influenza virus.....	1C352.a.2
Aviation engine lubricating oil	1C980
Avionic equipment, parts, and components	7A994
Avionics EMP/EMI protection technology	7E102
Bacillus anthracis	1C351.c.1
Bacteria	1C351.c
Bacteria	1C354.a
Bacteria	1C352.b
Baffles.....	0A001.h
Baffles (rotor tube), gas centrifuge	0B001.c.7
Balancing machines	2B119.a
Balancing machines	7A104.a
Balancing instrumentation	7A104.b
Balancing machines, centrifugal multiplane.....	2B229
Balancing machines, centrifugal multiplane.....	2B999.m
Ball bearings, precision hardened steel and tungsten carbide.....	1C999.a

Description	ECCN Citation
Ball bearings, Radial.....	2A101
Ball & solid roller bearings.....	2A001.a
Band-pass filters, tunable.....	3A001.b.5
Barium metal vapor lasers	6A005.b
Bartonella quintana	1C351.b.1
Batch mixers	1B117
Bathymetric survey systems	6A001.a.1.b
Batons, shock	0A985
Batons, spiked.....	0A983
Bay cable systems.....	6A001.a.2.e
Bay cable systems software	6D003.a.3
Bayonets.....	0A918.b
Beam lead bonders, stored program controlled equipment	3B991.b.3.b
Beam steering mirrors.....	6A004.a.4
Beamforming techniques	6A001.a.2.c
Bearings, ball & solid roller.....	2A001.a
Bearings, gas centrifuge.....	0B001.c.4
Bearings, gas centrifuge.....	0B001.c.5
Bearings, high precision/temperature/special	2A001
Bearings, magnetic (active)	2A001.c
Bearings, magnetic (suspension)	0B001.c.4
Bearings, precision hardened steel and tungsten carbide.....	1C999.a
Bellow valves.....	0B001.b.1
Bellow valves.....	0B001.d.6
Bellows forming dies	2B999.b
Bellows manufacturing equipment	2B999.b
Bellows or rings, gas centrifuge.....	0B001.c.6
Bellows seal valves	2A226
Bellows seal valves.....	2B350.g
Bellows sealed valves, n.e.s.	2A999
Bellows-forming mandrels.....	2B228.c
Bellows-forming dies.....	2B228.c
Benzilic acid.....	1C350.b.2
Beryllium metal, alloys, compounds, or manufactures.....	1C230
Beryllium metal particulate.....	1C111.a.2.a.4
Beryllium/beryllium substrate blanks	6C004.d
Biological containment facilities, ACDP level 3 or 4.....	2B352.a
Biological isolators	2B352.f.2
Biological manufacturing equipment & facilities.....	2B352
Biological safety cabinets	2B352.f.2
Bismaleimides.....	1C008.a.1
Bismuth.....	1C229

Description	ECCN Citation
Bladders for aircraft/aerospace, fuel	1A001.a
Bladders for aircraft/aerospace/missiles, fuel	1A001.c
Blanks, beryllium/beryllium (Be/Be) deposited material	6C004.d
Blanks, Zinc selenide (ZnSe) substrate	6C004.a
Blanks, Zinc sulphide (ZnS) substrate	6C004.a
Blowers, axial flow/centrifugal/positive displacement/turbo	0B001.b.2.b
Blowers, positive displacement/centrifugal/axial flow), gas	0B001.d.3
Bluetongue virus	1C352.a.3
Boats	8A992.f
Body armor	1A005
Boilers, Marine	8A918
Bombs, smoke.....	1A984
Bonding equipment.....	3B991.b.3.b
Boring equipment, large.....	2B999.h.1
Boring machines (CNC)	2B001
Boring machines (CNC)	2B201
Boron.....	1C011.b
Boron alloys particulate	1C011.b
Boron & boron compounds.....	1C225
Boron fibers	1C010.c Note 3
Bottom cable systems	6A001.a.2.e
Bottom cable systems software.....	6D003.a.3
Botulinum toxin	1C351.d.3
Boules of electro-optic materials	6C004.b
Bovine spongiform encephalopathy agent.....	1C360.b.1.b
Brayton cycle engine, air independent.....	8A002.j.1
Breathing equipment and parts, pressurized aircraft.....	9A991.e
Bridges & gateways, telecommunication	5A991.b.4.a
Bridges & gateways, telecommunication	5A991.c.9
Brucella abortus	1C351.c.2
Brucella melitensis.....	1C351.c.3
Brucella suis.....	1C351.c.4
Buckshot shotgun shells.....	0A984
Bulk acoustic wave devices	3A001.c.2
Bulk fluoride glass, low optic absorption	6C004.e.2
Bulletproof and bullet resistant vests.....	1A005
Burkholderia mallei (Pseudomonas mallei).....	1C351.c.5
Burkholderia pseudomallei (Pseudomonas pseudomallei)	1C351.c.6
Butacene.....	1C111.c.1
Cable - optical fiber & accessories for underwater use	5A001.c.2
Cables, Optical fiber	5A001.c.1
Cables with surreptitious intrusion detection.....	5A002.a.7

Description	ECCN Citation
CAD (Computer-aided-design) software for semiconductors	3D003
Cadmium telluride (CdTe) single crystals/epitaxial wafers.....	6C002.b
Cadmium zinc telluride (CdZnTe) single crystals & epitaxial wafers	6C002.b
Calcium	1C227
Calcium fluoride (CaF ₂) made/coated crucibles	2A225.a.1
Calcium zirconate (metazirconate) (Ca ₂ ZrO ₃) crucibles	2A225.a.2
Calibration, test or alignment equipment for equipment controlled by 7A	7B001
Camel pox virus	1C360.b.1.c
Camera equipment, underwater , n.e.s.	8A992.d
Camera, designed or modified for remote operation with submersible vehicle	8A992.a.1
Cameras, electronic framing type	6A003.a.4
Cameras, electronic framing type	6A203.b.2
Cameras, electronic streak type	6A003.a.3
Cameras, electronic streak type	6A203.b.1
Cameras, framing	6A003.a
Cameras, framing	6A203
Cameras, imaging	6A003.b
Camera, imaging, thermal, software for increasing frame rate.....	6D994
Cameras, mechanical	6A203.a.1
Cameras, mechanical	6A003.a
Cameras, photo-optical step and repeat	3B991.b.2.d.1
Cameras, radiation hardened TV	6A203.c
Cameras, scanning & scanning camera systems.....	6A003.b.2
Cameras (still), underwater photographic.....	8A002.e
Cameras (still), for underwater use.....	8A992.b
Cameras, video using solid state sensors	6A003.b.1
Cameras and components	6A003
Cameras and components not controlled by 6A003	6A203
Cameras not controlled by 6A003 or 6A203	6A993
Canopies, complete	9A992
Capacitors	3A001.e.2
Capacitors	3A201.a
Capacitors, high voltage.....	3A999.c
Caps (rotor tube), gas centrifuge.....	0B001.c.8
Carbon dioxide and monoxide	1C980
Carbon dioxide (CO ₂) lasers	6A005.d.3
Carbon fiber & filamentary materials	1C010.b
Carbon fiber & filamentary materials	1C210.a
Carbon fiber preforms.....	1C010.e
Carbon fibrous or filamentary materials	1A002.b.1
Carbon monoxide (CO) lasers	6A005.d.2
Carbon or alumina fiber conversion equipment.....	1B001.d.4

Description	ECCN Citation
Carbon-carbon components, resaturated pyrolized.....	1A102
Carbon-carbon materials, resaturated pyrolized	1C102
Carbonyl dichloride (75-44-5) (Phosgene)	1C355.b.1.a
Carboxy-terminated polybutadiene (CTPB)	1C111.b.1
Casks for transport of radioactive material	2A291.c
Casting and remelt arc furnaces	2B227.a
Catalysts, platinized	1A225
Catalytic burners, deuterium conversion to heavy water	0B004.b.4.c
Cathodes (Impregnated) for electronic tubes	3A001.b.1.c
Cathodes.....	3A001.b.1
Cathodic arc deposition production equipment	2B005.f
Cedar, Western red.....	1C988
Cells, primary & secondary	3A001.e.1, 3A991.j
Cellular radio equipment/system software.....	5D991
Central European tick-borne encephalitis viruses (i.e., Absettarov, Hanzalova, Hypr, and Kumlinge)	1C360.a.1.a
Centralized network control.....	5A991.e
Centralized network control development/production technology.....	5E991
Centrifugal decanters	2B352.c
Centrifugal fixtures for gyro bearings.....	7B003, 7B101
Centrifuge housing/recipient	0B001.c.12
Centrifugal isotope separation equipment & components	0B001.c
Centrifugal isotope separation plant auxiliary equipment	0B002
Centrifugal isotope separation plant, equipment & components	0B001.a.2
Centrifugal multiplane balancing machines.....	2B999.m
Centrifugal multiplane balancing machines for flexible rotors	2B229.a
Centrifugal separators	2B352.c
Centrifuge rotor balancing equipment	2B229
Centrifuge rotor assembly equipment.....	2B228.a
Centrifuges capable of imparting accelerations above 100 g	2B122
Centrifuges, gas.....	0B001.c.1
Ceramic based materials	1C007
Ceramic base materials, of single or complex borides of titanium.....	1C007.a
Ceramic composite materials, useable for radomes or nose tips	1C107.b
Ceramic cores for blades & vanes	9B001.b
Ceramic core manufacturing equipment.....	9B991.d
Ceramic fibers.....	1C010.c Note 4
Ceramic non-composite materials.....	1C007.b
Ceramic shells for blades & vanes.....	9B001.b
Ceramic shell wax pattern preparation equipment.....	9B991.e
Ceramic-ceramic composite materials	1C007.f
Ceramic-ceramic-matrix composite materials	1C007.d

Description	ECCN Citation
Ceramic-matrix composite materials	1C007.c
Cercopithecine herpesvirus 1 (Herpes B virus)	1C360.a.1.b
Cerium sulphide (Ce ₂ S ₃) made/coated crucibles	2A225.a.3
Certification software for information security software.....	5D002.c.2
Chambers, aerosol challenge testing (capacity of 1 m ³ or more)	2B352.g
Changers, frequency	3A999.a
Changers, frequency (converters or inverters).....	0B001.c.11
Changers, frequency (converters or inverters).....	3A225
Chapare virus	1C351.a.2
Charges, containing military explosives for civil applications.....	1C018.o
Charges, non-irritant smoke.....	1A984
Charges, shaped for oil well operations.....	1C992.a
Chemical agents	1A984
Chemical disposal technology	1E351
Chemical exchange isotope separation process plant, components.....	0B001.e
Chemical exchange isotope separation process plant, equipment.....	0B001.a.4
Chemical incinerators	2B350.j
Chemical production process control software.....	1D390
Chemical production facility technology.....	1E350
Chemical vapor deposition (CVD) equipment, plasma enhanced.....	3B001.d
Chemical warfare (CW) precursors	1C350
Chemical lasers	6A005.d.5
Chemical manufacturing equipment.....	2B350
Chemical manufacturing facilities	2B350
Chemical (precursor) mixtures and test kits	1C395
Chemical (precursor) mixtures, used in the production of chemical warfare agents.....	1C995
Chemical storage tanks & containers.....	2B350.c
Chemical Vapor deposition (CVD) equipment.....	3B991.b.1.i
Chemical vapor deposition (CVD) equipment, epitaxial growth	3B001
Chemical vapor deposition (CVD) equipment, production (fiber).....	1B001.d.2
Chemical vapor deposition (CVD) equipment, production	2B005.a
Chemicals, CWC Schedule 2 and 3	1C355
Chemicals, precursors for toxic chemical agents.....	1C350
Chikungunya virus (Human pathogen).....	1C351.a.3
Chip carrier bonders, stored program controlled equipment	3B991.b.3.b
Chlamydomydia psittaci (formerly known as Chlamydia psittaci)	1C351.c.7
Chlorine trifluoride (ClF ₃)	1C238
2-Chloroethanol	1C350.d.2
Chlorofluorocarbon, as hydraulic fluids.....	1C006.a.2
Chloropicrin (trichloronitromethane)(76-06-2)	1C355.b.3
Choclo virus	1C351.a.4
Cholera toxin.....	1C351.d.4

Description	ECCN Citation
Chromatography analytical instruments	3A999.f
Chronometry equipment	3A999.e.2
Cinema recording cameras.....	6A003.a.1
Clean room filters	3B991.b.4
Clicker dies	1B101.d
Clostridium perfringens, epsilon toxin producing types.....	1C351.c.9
Clostridium perfringens toxins	1C351.d.5
Clostridium botulinum.....	1C351.c.8
Clothing & materials, bullet-resistant.....	1A005
CNTD (Controlled nucleation thermal decomposition) equipment	2B005.a.1.b
Coating application & processing technology, optic fibers	5E991.a.1
Coating application technology, for non-electronic substrates.....	2E003.f
Coating application & processing technology, optic fibers	5E001.b.3
Coating equipment for prepregs/preform production	1B101.d
Coating & processing equipment, for non-electronic substrates	2B005
Coatings for reduced electromagnetic visibility	1C101
Coccidioides immitis	1C351.e.1
Coccidioides posadasii.....	1C351.e.2
Cochliobolus miyabeanus (Helminthosporium oryzae).....	1C354.b.2
Coils, radio frequency ion excitation	0B001.i.2
Cold boxes, hydrogen distillation	0B004.b.3.a
Cold traps/desublimers for UF6 removal.....	0B002.b
Cold traps/desublimers for UF6 removal.....	0B001.d.7.d
Cold-cathode tubes.....	3A228.a
Collector systems, UF6 product and tails	0B001.g.3
Colletotrichum coffeanum var. Virulans (Colletotrichum Kahawae).....	1C354.b.1
Colletotrichum Kahawae (Colletotrichum coffeanum var. Virulans).....	1C354.b.1
Color center lasers.....	6A005.c.1, c.2. or c.3
Column, absorption or distillation	2B350.e
Column, liquid-liquid exchange, for lithium amalgams	1B233.b.1
Combined cycle engines/components.....	9A011
Combustion regulation devices, missile engines	9A118
Common channel signaling equipment/systems	5A991.c.8
Common channel signaling, equipment for the development of equipment employing.....	5B001.b.5
Common channel signaling, technology for the development of equipmen t employing	5D001.c.5
Communication channel controllers	5A991.b.4.b
Communication equipment, airborne.....	7A994
Communication (mobile) equipment, assemblies and components.....	5A991.g
Communications interception devices, parts and accessories.....	5A980, 5D980, 5E980
Communications cable systems, secure	5A002.a.7

Description	ECCN Citation
Communications Systems (underwater)	5A001.b.1
Compasses.....	8A992.j
Compasses (gyro-astro) & other position or orientation deriving devices	7A004
Compasses (gyro-astro) & devices, other than those of 7A004.....	7A104
Components made from Fluorinated compounds	1A001
Components/structures for spacecraft.....	9A010
Composite conductors, superconductive	1C005
Composite or laminate development software.....	1D002
Composite structures, as tubes.....	1A202
Composite structures or laminates	1A002
Composite (structural) production equipment, n.e.s.....	1B999.e
Composite (structural) production equipment controlled by 1B999, software for	1D999
Composite materials, ceramic-ceramic	1C007.f
Composites production equipment	1B001
Composite structures for propulsion systems or space vehicles	9A110
Composites (structural) production equipment.....	1B101
Compound rotary tables for machine tools	2B008.c
Compound semiconductor integrated circuits	3A001.a.11
Compound semiconductor photocathodes	6A002.a.2.b.3
Compressors.....	0B001.d.3
Compressors, hydrogen sulphide gas.....	0B004.b.1.b
Compressors, turboexpander.....	1B232
Compressors, turbo/centrifugal/axial flow.....	0B001.b.2.a
Compressors, UF6 resistant	0B001.h.4
Computer, electronic assemblies & equipment & components	4A001, 4A003, 4A004, 4A994
Computer, electronic components	4A101
Computer, electronic components	4A102
Computer aided design (CAD) equipment for semiconductor devices or integrated circuits	3B991.b.2.c
Computer-aided-design (CAD) software for IC's & semiconductors	3D003
Computer interconnect equipment.....	4A003.g
Computer/assemblies/components, neural.....	4A004.b
Computer/assemblies/components, optical.....	4A004.c
Computers, electronic assemblies, and related equipment and components not controlled by 4A001 or 4A003	4A994
Computers, analog & analog ruggedized	4A101
Computers for fingerprint equipment	4A980
Computers, digital ruggedized	4A101
Computers/assemblies/components, systolic array.....	4A004.a
Computers, analog	4A001
Computers, digital	4A003
Computers, digital	4A004

Description	ECCN Citation
Computers, digital.....	4A001
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
Concealed object detection equipment	2A984, 2D984, 2E984
Condensers for use in nuclear reactors	2A290.a
Condensers or heat exchangers	2B350.d
Conductive polymers	1C001.c
Conductors, superconductive composite	1C005
Congo-Crimean haemorrhagic fever virus (a.k.a. Crimean-Congo haemorrhagic fever virus)	1C351.a.5
Conotoxin	1C351.d.6
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

Description	ECCN Citation
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.5
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
Cryoseparators	0B001.d.7.a
Cryptanalytic equipment or devices, digital	5A002.a.2
Cryptoanalytic equipment and components, n.e.s.	5A992
“Cryptographic activation” equipment	5A002.j
Cryptographic enabling systems, equipment, integrated circuits, etc.....	5A002.b
Cryptographic enabling software	5D002.d
Cryptographic enabling technology	5E002.b
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

Description	ECCN Citation
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.6
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	1A004.d, 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.....	1A008, 1C992.c

Description	ECCN Citation
Detonator detection.....	2A983, 2D983, 2E983
Detonators and multipoint initiation systems	3A229
Detonator firing sets, for multiple detonators of 3A232.....	1A007, 3A229
Detonators, electric or non-electric.....	1C018.d, 1C992.e
Detonators, exploding bridge wire (EBW)	1A007
Detonators, exploding bridge (EB)	1A007
Detonators, exploding foil initiators (EB)	1A007
Detonators, slapper (electric).....	1A007
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-CO ₂) lasers.....	6A005.d.5
Deuterium fluoride (DF) lasers.....	6A005.d.5
Di-isopropylamine	1C350.d.4
Diacetoxyscirpenol toxin	1C351.d.7
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

Description	ECCN Citation
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
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
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

Description	ECCN Citation
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, no t 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
Disruptors.....	1A006.b
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
Diver deterrent acoustic systems	8A002.r
Dobrava-Belgrade virus	1C351.a.7
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.8
EB-PVD (Electron beam physical vapor deposition) equipment	2B005.c
Ebola virus	1C351.a.9
Eddy current test equipment for nuclear reactors	2A291.d
EDMs, non-wire feed types	2B001.d

Description	ECCN Citation
EDMs, wire feed type	2B991d.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
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

Description	ECCN Citation
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
Electric chairs.....	0A981
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
Engines (submarine), n.e.s.....	8A992.g
Engines (air breathing reciprocating or rotary internal combustion type).....	9A012.b.4
Enrichment plant, isotope.....	0B001
Enterohaemorrhagic Escherichia coli, serotype O157 and other verotoxin producing serotypes.....	1C351.c.10
Environmental chambers.....	1B018.b, 9B106.b

Description	ECCN Citation
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.12
Erbium oxide (erbia) (Er ₂ O ₃) 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 phosphonyl dichloride	1C350.b.14
Ethyl phosphonyl 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
Execution of human beings, equipment for	0A981
Expert systems - integration systems technology	2E003.e
Exploding foil initiators (EFI)	1A007
Exploding bridge (EB) detonators	1A007
Exploding bridge wire (EBW) detonators	1A007
Explosive, high	1C239
Explosive/munitions environment handling robots	2B007.b
Explosive detection.....	1A004.d
Explosive detonator firing sets.....	1A007.a
Explosives or detonator detection equipment, software, or technology ...	2A983, 2D983, 2E983
Explosive detonators, electric	1A007.b, 3A232
Explosive devices , charges, components - commercial.....	1A008, 1C992.1
Explosives (military) production equipment	1B018.a
Explosives (military) in charges for civil applications	1A008, 1C018
FADEC (Full authority digital electronic engine control) software	9D003
FADEC (Full authority digital electronic engine control) technology	9E003.h
Fan blade (hollow) technology	9E003

Description	ECCN Citation
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
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
Fiber optic gyro coil winding machines	7B003
Fiber optic magnetometers	6A006.c
Fiber optic hull penetrators/connectors	8A002.c
Fiber optic wave division multiplex equipment	5A991.b.5
Fiber preforms, metal coated, for fiber prepregs in 9C110	9C110
Fiber prepregs, resin impregnated, for items in 9A110	9C110
Fiber 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

Description	ECCN Citation
Filters, tunable band-pass	3A001.b.5
Filters for clean rooms	3B991.b.4
Filters, optical	6A994.a
Fine aluminum oxide powder	0C201
Finger cuffs	0A983
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	1A007, 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
Flash X-ray machines	3A999. c
Flexal virus.....	1C360.a.1.c
Flexible rotor centrifugal balancing machines.....	2B229.a
Flexible sensors for hydrophones	6A001.a.2.a.1
Flexible nozzles, thrust vector control sub-system	9A106.c
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
Fluorinated compounds, components	1A001

Description	ECCN Citation
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.11
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

Description	ECCN Citation
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.....	3A001.b.11
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
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
GaInAs photocathodes.....	6A002.a.2.a.3
Gallium organo-metallic compounds.....	3C003
Gallium III/V compound substrates, hetero-epitaxial grown-multi-layer	3C001.c
Gallium nitride (GaN) “substrates”, ingots, boules, or other preforms of those materials.....	3C005
Gallows	0A981
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

Description	ECCN Citation
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

Description	ECCN Citation
Glass fiber or filamentary materials.....	1C210.b
Glass fiber, for optical communications	5A001.c
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

Description	ECCN Citation
Grinding machines	2B001.c
Guanarito virus.....	1C351.a.10
Guanidine nitrate.....	1C011.c, 1C018.m
Guidance sets usable in missiles.....	7A117
Guillotines.....	0A981
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
Hafnium oxide (hafnia) (HfO ₂) made/coated crucibles.....	2A225.a.5
Hafnium metal, alloys & compounds	1C231
Hafnium fluoride (HfF ₄) glass	6C004.e
Hair type absorbers	1C001.a Note 1.a
Handcuffs.....	0A982
Handling equipment for propellants and their constituents	1B115
Handling systems, semiconductor wafers.....	3B001.e
Hantaan virus	1C351a.11
Hanzalova (Central European tick-borne encephalitis virus).....	1C360.a.1.a.2
Hard surface coated substrates.....	3B991.b.2.b.1
Harnesses, complete.....	9A992
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

Description	ECCN Citation
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.12
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
Holographic sights.....	0A987
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	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.8
HTPB (Hydroxy-terminated polybutadiene) propellant additive	1C111.b.2
Hull penetrators/connectors, fiber optic.....	8A002.c
Human pathogens and “toxins”	1C351
Hybrid integrated circuits	3A001.a Note 2
Hybrid rocket propulsion systems	9A009
Hybrid computers & components	4A001
Hybrid computers and electronic assemblies.....	4A994.k
Hybrid computers	4A102
Hybrid computer electronic systems/electronic assemblies	4A001.a
Hybrid rocket motors and components	9A109
Hydraulic fluids	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

Description	ECCN Citation
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
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
Improvised explosive devices (specially designed or modified disposal equipment , components, and accessories)	1A006
Improvised Explosive Devices (IED) activation devices	5A001.h
IMU platform balance fixture	7B003, 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

Description	ECCN Citation
Induction furnace, controlled environment inert gas	2B226
Induction furnace, vacuum.....	2B226
Inductively coupled plasma mass spectrometers (ICP/MS)	3A233.a
Industrial process control hardware/systems designed for power industries.....	1B999.c
Industrial process control hardware/systems designed for power industries controlled by 1B999, software for.....	1D999.a
Inert gas environment induction furnaces.....	2B226
Inertial Measurement Equipment.....	7A003.c
Inertial measurement equipment.....	7A003
Inertial measurement unit tester (IMU module)	7A003, 7B003, 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	1C360.a.1c
Information security equipment software	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/components.....	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 in 2B006	2B206
Instruction generators for machine tools - technology	2E003.d

Description	ECCN Citation
Instrumentation for gas turbine development	9B002
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, forl (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

Description	ECCN Citation
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.f
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
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.13
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.14
Kerr or Pocket cells, electro-optical shuttering.....	6A203.b.3.c
Kick motors.....	9A004

Description	ECCN Citation
Krytron tubes, gas	3A228.a
Kumlinge (Central European tick-borne encephalitis virus)	1C360.a.1.a.4
Kyasanur Forest virus	1C351.a.15
Laboratories (mobile), crime science.....	9A980
Laguna Negra virus.....	1C351.a.16
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 acoustic detection equipment	6A005.a
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 microphone.....	6A005.g
Laser pointing devices for use on firearms	0A987
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.17
Lathes (CNC).....	2B001.a
Launch support equipment.....	9A115
Launch vehicle components/structures	9A010

Description	ECCN Citation
Leg irons	0A982
Lenses for radiation hardened TV cameras	6A203.c
Lidar equipment (Laser radar)	6A008.j
Life jackets.....	8A992.i
Lift fans, for surface effect vessels	8A002.l
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

Description	ECCN Citation
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.18
Low Light Level (LLL) camera software	6D003
Lubricating materials	1C006.b
Lubricating oil.....	1C980
Lujo virus	1C351.a.19
Lumpy skin disease virus.....	1C352.a.16
LVDT (Linear voltage displacement transformer) based instruments	2B006.b.1.b.1
Lymphocytic choriomeningitis virus	1C351.a.20
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 2B006 & 2B007 equipment.....	2B008
Machine tool cutting tools	2B008
Machine tools for generating optical quality surfaces	2B992
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.21
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

Description	ECCN Citation
Magnesium, metal and alloys of.....	1C011.a
Magnesium oxide (MgO) made or coated crucibles.....	2A225.a.6
Magnesium metal particulate.....	1C111.a.2.a.4
Magnet power supplies, high power (direct current).....	0B001.j.6
Magnetic alloy strips.....	1C003.c
Magnetic anomaly detection software.....	6D003.f.2
Magnetic bearings (suspension).....	2A001.c
Magnetic bearings (suspension).....	0B001.c.4
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 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.e.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.22
Marine acoustic systems.....	6A001.a
Marine boiler.....	8A018.b.4

Description	ECCN Citation
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
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.f
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.a.4
Metal alloys	1C002.a
Metal alloys, aluminum or titanium	1C202
Metal alloys, beryllium	1C230
Metal alloys, boron	1C011.b
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 coated fiber preforms	9A110

Description	ECCN Citation
Metal coated fiber preforms for fiber prepregs 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
Microcontroller microcircuits	3A001.a.3
Microcyclus ulei (syn. Dothidella ulei)	1C354b.3
Microcystins (Cyanginosin).....	1C351d.9
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 n 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 or millimeter wave components	3A982
Microwave or millimeter wave components software.....	3D982

Description	ECCN Citation
Microwave or millimeter wave components technology.....	3E982
Microwave Monolithic Integrated Circuit (MMIC) power amplifier technology.....	5E001.d and .e
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
Military vehicles	9A018
Military commodities.....	0A919
Millimeter wave components.....	3A001.b
Milling machines, (CNC) with two or more coordinated axes.....	2B001.b
Milling machines, (CNC) with two or more coordinated axes.....	2B201.a
Milling machines (CNC).....	2B991.d.1
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
Missile engine combustion regulation devices	9A118
Missile (usable) guidance sets	7A117
Missile telemetry.....	5A101
Missile modeling, simulation & integration software.....	9D103
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.10
Modeling/simulation of guidance sets, software	7D103
Modems.....	5A991.b.2
Modular time interval meter	3A999.e2
Modules, microwave	3A001.b.2

Description	ECCN Citation
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
Monitors or color displays	4A994.h
Monkey pox virus	1C351.a.23
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-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
Multiple-seal pumps.....	2B350.i
Multiplex equipment.....	5A991.b Note a.7
Multipoint initiation systems	3A232.b
Multipoint restraint devices	0A982
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.24
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

Description	ECCN Citation
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
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

Description	ECCN Citation
Nickel powder.....	1C240
Nickel powder or porous nickel metal.....	0C006
Night vision devices.....	6A002.a.2, 6A003.b.3, 6A003.b.4, 6A202, 6A203
Night vision technology.....	6E002, 6E101
Niobium alloys.....	1C002.a.2.b
Niobium alloy/powder or particulate form	1C002.b.1.b
Nipah virus	1C351.a.25
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

Description	ECCN Citation
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
Oil well cartridges.....	1C018.f, 1C992.g
Oil, lubricating, cutting, or quenching	1C980
Oils, distillate fuel.....	1C980
Omsk haemorrhagic fever virus.....	1C351.a.26
On-highway tractors.....	9A990
Operating systems for real time processing equipment, software	4D993.c
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

Description	ECCN Citation
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
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, 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.27
Oscillators or oscillator assemblies.....	3A001.b.10

Description	ECCN Citation
Oscilloscopes (analog and digital)	3A292
Oxide matrix reinforced materials	1C007.f
Oxygen Iodine (O ₂ -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 flow detection microphone	6A005.g
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 (a.k.a. Peronosclerospora sacchari).....	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

Description	ECCN Citation
Phenylene, as lubricating fluids	1C006.b.1
Phoma glycinicola (formerly Pyrenochaeta glycines)	1C360.c.2.d
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.4
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
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

Description	ECCN Citation
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
Polybromotrifluoroethylene	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

Description	ECCN Citation
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
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.28
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

Description	ECCN Citation
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
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

Description	ECCN Citation
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
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

Description	ECCN Citation
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
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.e.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
Pyrolitic deposition nozzles	1B116
Pyrolitic deposition systems (“isostatic presses”, other than those controlled by 2B004).....	2B104
Pyrolitic deposition systems (chemical vapor deposition furnaces, other than those controlled by 2B005.a).....	2B105
Pyrolitic deposition systems, for rocket nozzles and reentry vehicle nose tips	2B117
Pyrolitically derived materials production technology	1E104
Pyrolized carbon-carbon components.....	1A102
Pyrolized carbon-carbon materials	1C102
Pyrolysis equipment, for rocket nozzles and reentry vehicle nose tips (“isostatic presses”, other than those controlled by 2B004)	2B104
Pyrolysis equipment, for rocket nozzles and reentry vehicle nose tips (chemical vapor deposition furnaces, other than those controlled by 2B005.a)	2B105
Pyrolysis equipment, for rocket nozzles and reentry vehicle nose tips (other than those controlled by 2B004, 2B005.a, 2B104, or 2B105)	2B117
Pyrolysis process control equipment, for “isostatic presses”, other than those controlled by 2B004	2B104
Pyrolysis process control equipment, for chemical vapor deposition furnaces, other than those controlled by 2B005.a.....	2B105
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

Description	ECCN Citation
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 signal processing.....	6A008.h
Radial ball bearings.....	2A101
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
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

Description	ECCN Citation
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
Rathayibacter toxicus	1C360.c.1.a
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.d
Recording equipment, analog & digital tape recorders	3A002.a
Recovery of source code - software	5D001.c.2
Red dot sights	0A987
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
Reflex sights	0A987
Refrigeration units, cryogenic	0B001.d.7.b
Refrigeration units, hydrogen or helium	1B231.b.1
Reinforced composite materials	1C007.f

Description	ECCN Citation
Reinforcement fiber, production equipment	1B001.d
Release mechanisms, electronic.....	9A992
Remote manipulators	2B225
Remotely operated vehicles	1A006.a
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
Restraint devices, law enforcement, including leg irons, shackles, and handcuffs; straight jackets, stun cuffs; shock belts; shock sleeves, multipoint restraint devices, restraint chairs	0A982
Reticles, integrated circuits of 3A001.....	3B001.g
Reticles and designs	3B991.b.2
Reticle sights	0A987
Ricin	1C351.d.11
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.29
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

Description	ECCN Citation
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.30
Rocket fuels	1C111
Rocket/rocket motor, test benches/stands	9B117
Rocket engines, solid propellant	9A107
Rocket motors, hybrid	9A109
Rocket nozzles	9A106.b
Rocket stages, other than those of 9A005/7/9, 9A105/107/109	9A119
Rocket motor inspection equipment	9B007
Rockets, sounding.....	9A104
Roller bearings, solid	2A001.a
Rollers for prepregs/preform production	1B101.d
Rotary 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.35
S-parameter test/measurement equipment	3B002.a
S20 and S25 photocathodes	6A002
Sabia.....	1C351.a.31
Safety cabinets, capable of biological use	2B352.f.2

Description	ECCN Citation
Salmonella typhi	1C351.c.12
Salvage systems, ocean	8A001.e
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.12
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
Security imaging equipment	2A984, 2D984, 2E984
Security scanning equipment	2A984, 2D984, 2E984
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

Description	ECCN Citation
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 virus	1C351.a.32
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
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.13
Shiga-like ribosome inactivating proteins other than verotoxin	1C351.d.17

Description	ECCN Citation
Shigella dysenteriae	1C351.c.13
Ship vessel positioning systems, acoustic.....	6A001.a.1.d
Shock batons	0A985
Shock belts	0A982
Shock shields	0A985
Shock sleeves	0A982
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
and shotgun shells, technology for the development or production of	0E984
Shotguns, barrel length 18 inches or over.....	0A984
Shotgun trigger mechanisms, barrels, magazines, magazine extension tubes, receivers	0A984
Shrink fit machines for rotor fabrication/assembly	2B228.a
Side Scan Sonar designed for seabed imaging	6A001.a.1.a.3
Sidelooking airborne radar (SLAR).....	6A008.d
Sights and sighting devices for firearms	0A987
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
Silicone carbide wafers	3C005
Silicon-on-sapphire integrated circuits	3A001.a Note 2
Silicone fluid, fluorinated	1C006.b.2

Description	ECCN Citation
Silver gallium selenide (AgGaSe ₂)	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 virus	1C351.a.33
Skin friction transducers, wall	9B008
Skirts, for surface effect vessels.....	8A002.k
Slapper detonators (Electric).....	1A007, 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, dedicated, for toxic gas monitoring systems and their dedicated detecting components controlled by 2B351	2D351
Software, electronic devices	2D002
Software, for coordinating function of multiple subsystems for use in missiles	9D105
Software, for potable electric generator development or production	2D994
Software for Nuclear materials, facilities and equipment.....	0D001
Software, numerical control.....	2D002
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
Solar cells, cell-interconnect-coverglass (CIC) assemblies, solar	

Description	ECCN Citation
panels, and solar arrays (space qualified)	3A001.e.4, 3A991
Solenoids, superconductive.....	3A001.e.3
Solenoids, superconductive	3A201.b
Solid propellant rocket engines.....	9A107
Solid rocket propulsion systems	9A007
Solid rocket propulsion system, components.....	9A008
Solid rocket propulsion system, components.....	9A108
Solid state cameras.....	6A003.b.1
Solid state joining equipment, tools/dies/fixtures	9B004
Solid state imaging devices.....	6A203.b.3
Solid-state imaging devices	6A002
Solid-state pulsed power switching thyristor devices and thyristor modules	3A001.g
Solid state lasers, tunable.....	6A005.c
Solid state microwave amplifiers.....	3A001.b.4
Solid-state power semiconductor switches, diodes, or 'modules'	3A001.h
Solid state storage equipment	4A994.d
Sonar, active individual	6A001.a.1.e
Sonar processing equipment	6A001.a.2.b
Sonar log equipment	6A001.b
Sonar, Side Scan Sonar (SSS) designed for seabed imaging.....	6A001.a.1.a.3
Sonar, Synthetic Aperture Sonar (SAS) designed for seabed imaging.....	6A001.a.1.a.3
Sonar, underwater navigation system	7A008
Sonar signal processing equipment.....	6A001.a.1.d Note a
SONET (Synchronous Optical Network) technology.....	5E001.b.4
SONET (Synchronous Optical Network) technology.....	5E991.a.2
Sounding rocket use software	9D101
Sounding rockets.....	9A104
Source code automatic generation software	4D993.b
Source code, development of goods as specified.....	7D003.d
Source code recovery software	5D001.c.2
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
Spectrometry analytical instruments.....	3A999.f

Description	ECCN Citation
Spherical aluminum powder	1C111.a.1
Spiked batons	0A983
Spin forming machines	2B009
Spin forming machines	2B209
Spin forming machines	2B999I
Spin forming machines capable of flow-forming functions	2B209
Spin forming machines combining spin-forming and flow-forming function.....	2B009
Spindle assemblies	2B998.a
Spindle assemblies, machine tools.....	2B008.c
Spray booms or arrays of aerosol generating units, specially designed for fitting to aircraft, lighter than air vehicles,” or “UAVs”	2B352.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.14
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.34
Storage & holding vessels, critically safe & resistant to nitric acid	0B006.e
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

Description	ECCN Citation
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
Stun cuffs	0A982
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
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
Substrates with at least one epitaxial layer of silicon carbide, gallium nitride, aluminum nitride or aluminum gallium nitride	3C006
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

Description	ECCN Citation
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 equipment, surface vessel.....	6A001.a.1.a.1
Survey equipment, underwater	6A001.a.1.a.2
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

Description	ECCN Citation
Syntactic foam, underwater use	8C001
Synthetic crystalline laser host material	6C005
Synthetic diamond material	6C004.f
Synthetic aperture radar (SAR).....	6A008.d
Systolic array computers/assemblies/components	4A004.a
T-2 toxin.....	1C351.d.15
Tanks, austenitic stainless steel.....	2B999.n
Tanks, chemical storage (capacity greater than 100 L)	2B350.c
Tanks, monel.....	2B999.f
Tanks, stainless steel	2B999.g
Tank turret rings and sprockets induction hardening machines.....	2B018.m
Tank turret bearing grinding machines	2B018.s
Tantalum crucibles coated with tantalum carbide/nitride/boride.....	2A225.c
Tantalum made or lined crucibles.....	2A225.b
Tape designed for testing recording equipment of entry 3A002a.....	3A002.a
Tape bonders, stored program controlled equipment	3B991.b.3.b
Tape recording equipment	3A002.a
Tape-laying machines	1B101.b
Tape-laying machines	1B001.b
Tar sands	1C981
Tear gas.....	1A984
<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 2D98	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

Description	ECCN Citation
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.16
Thallium arsenic selenide (Tl ₃ AsSe ₃ or TAS)	6C004.b.3
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

Description	ECCN Citation
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.35
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 ₂ O ₃) lasers.....	6A005.c.1, c.2. or c.3
Titanium-stabilized duplex stainless steel 9Ti-DSS).....	1C118
TMETN (trimethylolethane trinitrate)	1C111.c.4
Tooling for powder metallurgy rotor component manufacture	9B009
Torpedo net	8A018
Torture, specially designed implements of.....	0A983
Tow-placement machines	1B001.g
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

Description	ECCN Citation
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
Transmission equipment for Improvised Explosive Devices (IED)	5A001.h
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
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 sphytron	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

Description	ECCN Citation
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.f
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.e.1
UF6 vacuum pumps	0B002.e.2
UF6 vacuum manifolds.....	0B002.e.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 ElectroMagnetic Receivers (UEMR)	6A006.e
Underwater ElectroMagnetic Receivers (UEMR) software	6D003.f.3 and .f.4
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 (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.e.1
Vacuum housings for uranium electromagnetic separators	0B001.j.3
Vacuum manifolds	0B002.e.1

Description	ECCN Citation
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.e.2
Vacuum tubes, electronic microwave	3A001.b.1
Vacuum sphytrion 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
Valves, stainless steel.....	2B999.g
Valves, vacuum.....	2B999.k
Variola virus.....	1C351.a.36
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.37
Ventilated full or half (protective clothing) suits.....	2B352.f.1
Ventilated propellers.....	8A002.o.1.a
Verotoxin	1C351.d.17
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

Description	ECCN Citation
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.14
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.18
Vision systems, underwater	8A992.a
Vision systems, underwater	8A002.d
Voice print identification and analysis equipment and parts	3A980
Volkensin toxin.....	1C351.d.19
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

ECCN	Description	
	Weight belts	8A992.i
	Welders, MIG	2B999.d
	Welders, E-beam	2B999.e
	Welding machines, laser	2B999.c
	Western equine encephalitis virus	1C351.a.38
	Western red cedar, logs and timber.....	1C988
	Wet-spinning equipment for refractory ceramics	1B101.c.3
	Wet-spinning equipment for refractory ceramics	1B001.d.3
	Wetsuits.....	8A992.i
	Wide-swath bathymetric survey systems.....	6A001.a.1
	Wigglers (free electron laser magnet) manufacturing or inspection equipment.....	6B995.a.1
	Wind tunnel aero-model technology.....	9E003.b.1
	Wind tunnel, control systems.....	9B005
	Wind tunnels, usable for missiles	9B105
	Winding machines, fiber optic gyro coil.....	7B003
	Windows, glass for nuclear radiation shielding.....	1A227
	Work stations, as computers having a CTP above 260 Mtops	4A003.b
	X-ray converters.....	1A999.b
	X-ray equipment for projection image transfer	3B991.b.2.g
	X-ray generators, radiographic	3A201.c
	X-ray machines, flash	3A999.c
	X-ray (non planar) inspection equipment, rocket motors	9B007
	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.b
	Yellow fever virus.....	1C351.a.39
	Yersinia pestis.....	1C351.c.15
	Yttrium oxide (yttria) (Y ₂ O ₃), crucibles made or coated.....	2A225.a.8
	Zinc selenide (ZnSe), substrate blanks	6C004.a
	Zinc sulphide (ZnS), substrate blanks.....	6C004.a
	Zirconium fluoride (ZrF ₄) glass	6C004.e
	Zirconium metal and alloy tubes & assemblies	0A001.f
	Zirconium metal particulate.....	1C111.a.2.a.1
	Zirconium metal, alloy, compounds, or manufacturers	1C234
	Zirconium oxide (zirconia) (ZrO ₂) made/coated crucibles.....	2A225.a.9
	Zoonotic pathogens and “toxins”.....	1C351