

UNCLASSIFIED

**REPORT BY THE DEPARTMENT OF STATE  
PURSUANT TO SECTION 655 OF THE FOREIGN ASSISTANCE  
ACT OF 1961, AS AMENDED**

**Direct Commercial Sales Authorizations for Fiscal Year 2011**

**Overview**

This report covers defense articles and defense services licensed for permanent export during Fiscal Year 2011 under Section 38 of the Arms Export Control Act, as amended. It is provided pursuant to Section 655 of the Foreign Assistance Act of 1961, as amended. The report specifies the aggregate dollar value and quantity of defense articles and defense services, by category, authorized to each foreign country, including any international organizations operating in each country, as well as data on the actual shipments occurring during the Fiscal Year. Actual shipment data contained herein shows the total dollar value of all shipments to each destination. Authorizations in this report are categorized based on the destination country licensed. This includes articles exported for use by U.S. Government agencies within the country of export as well as articles exported for use by U.S. and Allied forces operating on foreign soil.

In accordance with subsection (c) of Section 655, this report is also being made available to the public on the Internet through the Department of State, Directorate of Defense Trade Controls, at [www.pmdtdc.state.gov](http://www.pmdtdc.state.gov).

Authorizations applicable to multiple countries are included under the designation "Various". Since documentation for shipping purposes requires a definitive destination be declared, actual shipments for those articles approved under the designation "Various" are attributed to the country listed on the shipping documentation.

Importantly, the value of authorizations provided under Section 38 for defense articles and defense services does not precisely correlate to the value of articles actually transferred during this same time frame. Most licenses issued for articles are valid for four years and may be used throughout the period of validity to carry out the authorized export transactions. Similarly, manufacturing license and technical assistance agreements cover a wide range of programmatic activities for multi-year periods (generally exceeding the four-year validity period of defense article export licenses). Because the scope of the Department's regulatory

authority over such agreements continues for as long as these multi-year agreements remain in effect, export authorizations furnished in Fiscal Year 2011 also include certain activities occurring in prior years.

The Categories of the U.S. Munitions List (USML) used throughout this report are as follows; sub-categories are provided for reference only:

Category I      Firearms, Close Assault Weapons and Combat Shotguns

- (a) Non-automatic and semi-automatic firearms
- (b) Fully automatic firearms
- (c) Firearms and other weapons
- (d) Combat shotguns
- (e) Silencers, mufflers, sound and flash suppressors
- (f) Riflescopes
- (g) Barrels, cylinders, receivers, and complete breech mechanisms
- (h) Components, parts, and associated equipment
- (i) Technical data

Category II      Guns and Armament

- (a) Guns over caliber .50
- (b) Flame throwers
- (c) Devices for launching or delivering ordnance
- (d) Kinetic energy weapon systems
- (e) Signature control materials, techniques, and equipment
- (f) Engines specifically designed for self-propelled guns and howitzers
- (g) Tooling and equipment
- (h) Test and evaluation equipment
- (i) Autoloading systems for electronic programming of projectile function
- (j) Components, parts, and associated equipment
- (k) Technical data

Category III      Ammunition/Ordnance

- (a) Ammunition/ordnance for Categories I & II articles
- (b) Ammunition/ordnance handling equipment
- (c) Equipment and tooling
- (d) Components, parts, and associated equipment:

- (1) Guidance and control components
- (2) Safing, arming, and fuzing components
- (3) All other components, parts, and associated equipment

(e) Technical data

Category IV Launch Vehicles, Guided Missiles, Ballistic Missiles, Rockets, Torpedoes, Bombs and Mines

- (a) Rockets, bombs, grenades, torpedoes, depth charges, land and naval mines, launchers for such defense articles, and demolition blocks and blasting caps
- (b) Launch vehicles and missile and anti-missile systems
- (c) Devices and materials for the handling, control, activation, monitoring, detection, protection, discharge, or detonation of the articles in (a) and (b)
- (d) Missile and space launch vehicle power plants
- (e) Military explosive excavating devices
- (f) Ablative materials fabricated or semi-fabricated from advanced composites for the articles in this category
- (g) Non-nuclear warheads for rockets and guided missiles
- (h) Components, parts, and associated equipment
- (i) Technical data

Category V Explosives and Energetic Materials, Propellants, Incendiary Agents and Their Constituents

- (a) Explosives
- (b) Propellants
- (c) Pyrotechnics, fuels, and related substances
- (d) Oxidizers
- (e) Binders
- (f) Additives
- (g) Precursors
- (h) Technical data

Category VI Vessels of War and Special Naval Equipment

- (a) Warships, amphibious warfare vessels, landing craft, mine warfare vessels, and patrol vessels

- (b) Patrol craft without armor, armament or mounting surfaces for weapon systems more significant than .50 caliber machine guns and auxiliary vessels
- (c) Turrets and gun mounts, arresting gear, special weapons systems, protective systems, submarine storage batteries, catapults, mine sweeping equipment and other significant naval systems
- (d) Harbor entrance detection devices and controls
- (e) Naval nuclear propulsion plants, their land prototypes, and facilities for their construction, support, and maintenance
- (f) Components, parts, and associated equipment
- (g) Technical data

Category VII      Tanks and Military Vehicles

- (a) Military type armed or armored vehicles, military railway trains, and vehicles specifically designed to accommodate military equipment
- (b) Military tanks, combat engineer vehicles, bridge launching vehicles, half-tracks and gun carriers
- (c) Military trucks, trailers, hoists, and skids specifically designed, modified, or equipped to mount or carry weapons
- (d) Military recovery vehicles
- (e) Amphibious vehicles
- (f) Engines specifically designed or modified for the vehicles in (a), (b), and (e)
- (g) Components, parts, and associated equipment
- (h) Technical data

Category VIII      Aircraft and Associated Equipment

- (a) Aircraft, including but not limited to helicopters, non-expansive balloons, drones, and lighter-than-air aircraft
- (b) Military aircraft engines
- (c) Cartridge-actuated devices utilized in emergency escape of personnel and airborne equipment
- (d) Launching and recovery equipment for the articles in (a)
- (e) Inertial navigation systems, aided or hybrid inertial navigation systems, Inertial Measurement Units, and Attitude and Heading Reference Systems
- (f) Developmental aircraft, engines, and components

- (g) Ground effect machines and components, parts, and associated equipment specifically designed for use with such machines
- (h) Components, parts, and associated equipment
- (i) Technical data

Category IX Military Training Equipment and Training

- (a) Training equipment
- (b) Simulation devices for the items covered by this subchapter
- (c) Tooling and equipment specifically designed or modified for the production of articles controlled by this category
- (d) Components, parts, and associated equipment
- (e) Technical data

Category X Protective Personnel Equipment and Shelters

- (a) Protective personnel equipment
- (b) Permanent or transportable shelters specifically designed and modified to protect against the effect of articles covered by this subchapter
- (c) Tooling and equipment specifically designed or modified for the production of articles controlled by this category
- (d) Components, parts, and associated equipment
- (e) Technical data

Category XI Military Electronics

- (a) Electronic equipment not included in Category XII. This equipment includes but is not limited to:
  - (1) Underwater sound equipment
  - (2) Underwater acoustic active and passive countermeasures and counter-countermeasures
  - (3) Radar systems, with capabilities such as:
    - (i) Search
    - (ii) Acquisition
    - (iii) Tracking
    - (iv) Moving target indication
    - (v) Imaging radar systems
    - (vi) Ground air traffic control radar
  - (4) Electronic combat equipment

- (5) Command, control and communications systems to include radios (transceivers), navigation, and identification equipment
- (6) Computers specifically designed for military application and any computer specifically modified for use with any defense article
- (7) Any experimental or developmental electronic equipment specifically designed or modified for military application
- (b) Electronic systems or equipment for use in surveillance, and electronic systems or equipment designed to counteract electronic surveillance
- (c) Components, parts, and associated equipment
- (d) Technical data

Category XII      Fire Control, Range Finder, Optical and Guidance and Control Equipment

- (a) Fire control systems; gun and missile tracking and guidance systems; gun range, position, height finders, spotting instruments and laying equipment; aiming devices; bomb sights, bombing computers, military television sighting and viewing units; periscopes
- (b) Lasers
- (c) Infrared focal plane array detectors; image intensification and other night sighting equipment or systems; second generation and above military image intensification tubes, and infrared, visible and ultraviolet devices
- (d) Inertial platforms and sensors for weapons or weapon systems; guidance, control and stabilization systems except for those systems covered in Category VIII; astro-compasses and star trackers and military accelerometers and gyros
- (e) Components, parts, and associated equipment
- (f) Technical data

Category XIII      Auxiliary Military Equipment

- (a) Cameras and specialized processing equipment, photointerpretation, stereoscopic plotting, and photogrammetry equipment, and components
- (b) Military Information Security Assurance Systems and equipment, cryptographic devices, software, and components
- (c) Self-contained diving and underwater breathing apparatus

- (d) Carbon/carbon billets and preforms not elsewhere controlled by this subchapter which are reinforced with continuous unidirectional tows, tapes, or woven cloths in three or more dimensional planes
- (e) Armor, and reactive armor and components, parts and accessories not elsewhere controlled by this subchapter
- (f) Structural materials
- (g) Concealment and deception equipment
- (h) Energy conversion devices for producing electrical energy from nuclear, thermal, or solar energy, or from chemical reaction
- (i) Metal embrittling agents
- (j) Hardware and equipment that is associated with the measurement or modification of system signatures for detection of defense articles
- (k) Tooling and equipment specifically designed or modified for the production of articles controlled by this category
- (l) Technical data

Category XIV Toxicological Agents, Including Chemical Agents, Biological Agents, and Associated Equipment

- (a) Chemical agents
- (b) Biological agents and biologically derived substances
- (c) Chemical agent binary precursors and key precursors
- (d) Tear gases and riot control agents
- (e) Defoliants
- (f) Components, parts, and associated equipment specifically designed or modified for military operations and compatibility with military equipment
- (g) Antibodies, polynucleoides, biopolymers or biocatalysts specifically designed or modified for use with articles controlled in (f)
- (h) Medical countermeasures specifically designed or modified for use with the chemical agents listed in (a), and vaccines with the sole purpose of protecting against biological agents identified in (b)
- (i) Modeling or simulation tools specifically designed or modified for chemical or biological weapons design, development or employment
- (j) Test facilities specifically designed or modified for the certification and qualification of articles controlled in (f)
- (k) Components, parts, and associated equipment, exclusive of incinerators, specifically designed or modified for destruction of the chemical agents in (a) or the biological agents in (b)

- (l) Tooling and equipment specifically designed or modified for the production of articles controlled in (f)
- (m) Technical data

Category XV      Spacecraft Systems and Associated Equipment

- (a) Spacecraft, including communications satellites, remote sensing satellites, scientific satellites, research satellites, navigation satellites, experimental and multi-mission satellites
- (b) Ground control stations for telemetry, tracking and control of spacecraft or satellites, or employing any of the cryptographic items controlled under Category XIII
- (c) Global Positioning System (GPS) receiving equipment
- (d) Radiation-hardened microelectronic
- (e) Components, parts, and associated equipment specifically designed or modified for the systems or subsystems of this category: satellite fuel, ground support equipment, test equipment, etc.
- (f) Technical data

Category XVI    Nuclear Weapons, Design and Testing Related Items

- (a) Any article, material, equipment, or device which is specifically designed or modified for use in the design, development, or fabrication of nuclear weapons or nuclear explosive devices
- (b) Any article, etc. specifically designed for use in the devising, carrying out, or evaluating of nuclear weapons tests or any other nuclear explosions (including for modeling or simulating the employment of nuclear weapons)
- (c) Nuclear radiation detection and measurement devices
- (d) Components, parts and associated equipment specifically designed or modified for the articles in this category
- (e) Technical data

Category XVII    Classified Articles, Technical Data and Defense Services Not Otherwise Enumerated

- (a) All articles, technical data, and defense services which are classified in the interests of national security and which are not otherwise enumerated in the USML

Category XVIII    Directed Energy Weapons



- (a) Directed energy weapon systems
- (b) Equipment specifically designed or modified for the detection or identification of, or defense against, articles controlled in (a)
- (c) Tooling and equipment specifically designed or modified for the production of defense articles controlled by this category
- (d) Test and evaluation equipment and test models specifically designed or modified for the defense articles controlled by this category
- (e) Components, parts, and associated equipment specifically designed or modified for the articles in (a) through (d)
- (f) Technical data

Category XIX      Reserved

Category XX      Submersible Vessels, Oceanographic and Associated  
Equipment

- (a) Submersible vessels, manned or unmanned, tethered or untethered, designed or modified for military purposes, or powered by nuclear propulsion plants
- (b) Swimmer delivery vehicles
- (c) Components, parts, and associated equipment specifically designed or modified for any of the articles in (a) and (b)
- (d) Technical data

Category XXI    Miscellaneous Articles

- (a) Any article not specifically enumerated in the other categories which has substantial military applicability and which has been specifically designed, developed, etc. for military purposes
- (b) Technical data