

■ 4. Supplement No. 1 to part 774 (the Commerce Control List), Category 1—Materials, Chemicals, “Microorganisms” & “Toxins”, Export Control Classification Number (ECCN) 1C111, List of Items Controlled Section is amended by revising the “Related Controls” and “Items” paragraphs to read as follows:

1C111 Propellants and constituent chemicals for propellants, other than those specified in 1C011, as follows (see List of Items Controlled).

* * * * *

List of Items Controlled

Unit: * * *

Related Controls: Butacene as defined by 1C111.c.1 is subject to the export licensing authority of the U.S. Department of State, Office of Defense Trade Controls (See 22 CFR 121.12.b(6), other ferrocene derivatives)

Related Definitions: * * *

Items

a. Propulsive substances:

a.1. Spherical aluminum powder, other than that specified on the U.S. Munitions List, with particles of uniform diameter of less than 200 micrometer and an aluminum content of 97% by weight or more, if at least 10 percent of the total weight is made up of particles of less than 63 micrometer, according to ISO 2591:1988 or national equivalents such as JIS Z8820.

Technical Note: A particle size of 63 micrometer (ISO R-565) corresponds to 250 mesh (Tyler) or 230 mesh (ASTM standard E-11).

a.2. Metal fuels, other than that controlled by the U.S. Munitions List, in particle sizes of less than 260×10^{-6} m (60 micrometers), whether spherical, atomized, spheroidal, flaked or ground, consisting 97% by weight or more of any of the following:

a.2.a Zirconium;

a.2.b Beryllium;

a.2.c Magnesium; or

a.2.d Alloys of the metals specified by a.2.a to a.2.c above.

Technical Note: The natural content of hafnium in the zirconium (typically 2% to 7%) is counted with the zirconium.

a.3. Liquid oxidizers, as follows:

a.3.a. Dinitrogen trioxide;

a.3.b. Nitrogen dioxide/dinitrogen tetroxide;

a.3.c. Dinitrogen pentoxide;

a.3.d. Mixed Oxides of Nitrogen (MON)

Technical Note: Mixed Oxides of Nitrogen (MON) are solutions of Nitric Oxide (NO) in Dinitrogen Tetroxide/ Nitrogen Dioxide (N_2O_4/NO_2) that can be used in missile systems. There are a

range of compositions that can be denoted as MON_i or MON_{ij}, where i and j are integers representing the percentage of Nitric Oxide in the mixture (e.g., MON₃ contains 3% Nitric Oxide, MON₂₅ 25% Nitric Oxide. An upper limit is MON₄₀, 40% by weight).

b. Polymeric substances:

b.1. Carboxy-terminated polybutadiene (CTPB);

b.2. Hydroxy-terminated polybutadiene (HTPB), other than that controlled by the U.S. Munitions List;

b.3. Polybutadiene-acrylic acid (PBAA);

b.4. Polybutadiene-acrylic acid-acrylonitrile (PBAN);

c. Other propellant additives and agents:

c.1. Butacene ;

c.2. Triethylene glycol dinitrate (TEGDN);

c.3. 2-Nitrodiphenylamine;

c.4. Trimethylolethane trinitrate (TMETN);

c.5. Diethylene glycol dinitrate (DEGDN).

■ 5. Supplement No. 1 to Part 774 (the Commerce Control List), Category 7—Navigation and Avionics, ECCN 7A005 is amended by adding a Note to read as follows:

7A005 Global navigation satellite systems (i.e. GPS or GLONASS) receiving equipment, and specially designed components therefor. (These items are subject to the export licensing authority of the U.S. Department of State, Office of Defense Trade Controls. See 22 CFR part 121.)

Note to 7A005: See also 7A105 and 7A994.

■ 6. Supplement No. 1 to Part 774 (the Commerce Control List), Category 7—Navigation and Avionics, ECCN 7A103, List of Items Controlled Section, is amended by revising the “Items” paragraph to read as follows:

7A103 Instrumentation, navigation equipment and systems, other than those controlled by 7A003, and specially designed components therefor.

* * * * *

List of Items Controlled

Unit: * * *

Related Controls: * * *

Related Definitions: * * *

Items:

a. Inertial or other equipment using accelerometers or gyros controlled by 7A001, 7A002, 7A101 or 7A102 and systems incorporating such equipment;

Note: 7A103.a does not control equipment containing accelerometers specially designed and developed as MWD (Measurement While

Drilling) sensors for use in down-hole well services operations.

b. Integrated flight instrument systems, which include gyrostabilizers or automatic pilots, designed or modified for use in “missiles”.

c. Integrated Navigation Systems, designed or modified for use in “missiles” and capable of providing a navigational accuracy of 200m Circular Error Probable (CEP) or less.

Technical Note: An ‘integrated navigation system’ typically incorporates the following components:

1. An inertial measurement device (e.g., an attitude and heading reference system, inertial reference unit, or inertial navigation system);

2. One or more external sensors used to update the position and/or velocity, either periodically or continuously throughout the flight (e.g., satellite navigation receiver, radar altimeter, and/or Doppler radar); and

3. Integration hardware and software.

■ 7. Supplement No. 1 to Part 774 (the Commerce Control List), Category 7—Navigation and Avionics, ECCN 7A105 is revised to read as follows:

7A105 Receiving equipment for Global Navigation Satellite Systems (GNSS) (e.g. GPS, GLONASS, or Galileo) having any of the following characteristics, and specially designed components therefor. (These items are subject to the export licensing authority of the U.S. Department of State, Office of Defense Trade Controls. See 22 CFR part 121.)

1. Designed or modified for use in “missiles”; or

2. Designed or modified for airborne applications and having any of the following:

a. Capable of providing navigation information at speeds in excess of 600 m/s (1,165 nautical mph).

b. Employing decryption, designed or modified for military or governmental services, to gain access to GNSS secured signal/data; or

c. Being specially designed to employ anti-jam features (e.g. null steering antenna or electronically steerable antenna) to function in an environment of active or passive countermeasures.

Note to 7A105: See also 7A005 and 7A994.

■ 8. Supplement No. 1 to Part 774 (the Commerce Control List), Category 7—Navigation and Avionics, ECCN 7A994, List of Items Controlled Section is amended by revising the “Related Controls” paragraph to read as follows: