

## Group 3 – International Atomic Energy List

Definitions to the terms set out in quotations are listed in pages 49 to 55 of this Guide and apply in respect to this Group.

### 3000. General Technology Note

Member Governments have determined to restrict the export of "technology" applicable to the "development", "production" and "use" of products as defined in the International Lists, including those subject to Administrative Exceptions Notes and those for which shipments are permitted without reporting to the Committee. This Note applies equally to "technology" specific to the integration or "use" of components in products as defined in the International List, even if the components themselves are unembargoed.

"Technology" covered by this Note remains restricted even when applicable to the "development", "production" and "use" of an unembargoed product.

This Note does not apply to that "technology" which is the minimum necessary for the installation, operation, maintenance (checking) and repair of those products whose export has been authorized.

This Note does not apply to "technology" "in the public domain" or to "basic scientific research".

## A. Nuclear Materials

### Technical Notes

#### 1. Raw materials

The embargo on raw materials covers all materials from which the metal can be usefully extracted, i.e. ores, concentrates, matte, regulus, residues and dross (ashes).

#### 2. Metals and alloys

Unless provision to the contrary is made, the words 'metals' and 'alloys' cover crude and semi-fabricated forms, as follows: Crude forms: Anodes, balls, bars (including notched bars and wire bars), billets, blocks, blooms, bricks, cakes, cathodes, crystals, cubes, dice, grains, granules, ingots, lumps, pellets, pigs, powder, rondelles, shot, slabs, slugs, sponge, sticks; Semi-fabricated forms (whether or not coated, plated, drilled or punched):

- a. Wrought or worked materials fabricated by rolling, drawing, extruding, forging, impact extruding, pressing, graining, atomising, and grinding, i.e.: angles, channels, circles, discs, dust, flakes, foils and leaf, forging, plate, powder, pressings and stampings, ribbons, rings, rods (including bare welding rods, wire rods, and rolled wire), sections, shapes, sheets, strip, pipe and tubes (including tube rounds, squares, and hollows), drawn or extruded wire;
- b. Cast material produced by casting in sand, die, metal, plaster or other types of moulds, including high pressure castings, sintered forms, and forms made by powder metallurgy.

The object of the embargo should not be defeated by the export of non-listed forms alleged to be finished products but representing in reality crude forms or semi-fabricated forms.

### 3001. "Special fissile materials" and other fissile materials, except:

- a. Shipments of one "effective gramme" or less;
- b. Shipments of four "effective grammes" or less when contained in a sensing component in instruments.

### 3002. Natural or depleted uranium in the forms of metal, hexafluoride, tetrafluoride or tetrachloride, except:

- a. Shipments having a natural uranium content in any of the forms described above, of:
  1. 10 kg or less for any application; or
  2. 100 kg or less for civil non-nuclear applications;
- b. Uranium depleted in the isotope 235 in which the uranium 235 isotope comprises less than 0.35 weight percent (o/w) of the total uranium assay;

- c. Depleted uranium specially fabricated for the following civil applications:
  1. Ionising radiation shielding;
  2. Packaging;
  3. Ballasts;
  4. Counter-weights.

(For titanium-uranium alloys, see International Industrial List Category 1013.4.)

**3003. Deuterium, heavy water, deuterated paraffins, and simple or complex lithium deuterides, and mixtures and solutions containing deuterium, in which the isotopic ratio of deuterium to hydrogen exceeds 1: 5,000, except shipments of the above having a deuterium content of 10 kg or less.**

**3004. Zirconium metal; alloys containing more than 50 weight percent (o/w) zirconium; compounds in which the ratio of hafnium to zirconium is less than 1:500 parts by weight; and manufactures wholly thereof; except:**

- a. Zirconium metal, alloys or compounds in shipments of 5 kg or less;
- b. Zirconium in the form of foil or strip having a thickness not exceeding 0.10 mm, in shipments of 200 kg or less.

**3005. Nickel powder and porous nickel metal, as follows:**

- a. Powder with a nickel purity content of 99.9 weight percent (o/w) or more and a mean particle size of less than 10 µm measured by the ASTM B 330 standard and a high degree of particle size uniformity;
- b. Porous nickel metal produced from materials embargoed by 3005.a. except single porous nickel metal sheets not exceeding 930 cm<sup>2</sup> intended for use in batteries for civil applications.

#### Note:

3005.b. refers to porous nickel metal manufactured from nickel powder defined in 3005.a. which has been compacted and sintered to form a metal material with fine pores interconnected throughout the structure.

**3006. Nuclear-grade graphite, i.e. graphite having an impurity level of less than one part per million boron equivalent and with a density greater than 1.5 g/cm<sup>3</sup>, except individual shipments of 100 kg or less.**

**3007. Lithium, as follows:**

- a. Metal, hydrides or alloys containing lithium enriched in lithium 6 to a concentration higher than the one existing in nature (7.5 weight percent (o/w));
- b. Any other materials containing lithium enriched in lithium 6 (including compounds, mixtures and concentrates), except lithium enriched in the 6 isotope incorporated in thermoluminescent dosimeters.  
(For the deuteride of natural lithium or of lithium enriched in lithium 7, see 3003.)

**3008. Hafnium, as follows: metal, alloys and compounds of hafnium containing more than 60 weight percent (o/w) hafnium, and manufactures thereof, except shipments of the above having a hafnium content of 1 kg or less.**

**3009. Beryllium, as follows: metal, alloys containing more than 50 weight percent (o/w) beryllium by weight, compounds containing beryllium and manufactures thereof, except:**

- a. Metal windows for X-ray machines;
- b. Oxide shapes in fabricated or semi-fabricated forms specially designed for electronic component parts or as substrates for electronic circuits;
- c. Shipments of 500 g or less of beryllium having a purity of 99% or less, or 100 g or less of beryllium having a purity of greater than 99%, provided shipments exclude single crystals;
- d. Shipments of 5 kg or less of beryllium contained in compounds with a purity of less than 99%.