GROUP 7 – CHEMICAL AND BIOLOGICAL WEAPONS NON-PROLIFERATION

7011. Chemical Weapon Agent Precursor Chemicals, as follows:

7011. 1. thiodiglycol, 111-48-8;
2. phosphorus oxychloride, 10025-87-3;
3. dimethyl methylphosphonate, 756-79-6;
4. methyl phosphonyl difluoride, 676-99-3;
5. methyl phosphonyl dichloride, 676-97-1;
6. dimethyl phosphite, 868-85-9;
7. phosphorus trichloride, 7719-12-2;
8. trimethyl phosphite, 121-45-9;
9. thionyl chloride, 7719-09-7;
10. 3-hydroxy-1-methylpiperidine, 3554-74-3;
11. N,N-diisopropyl--aminoethyl chloride, 96-79-7;
12. N,N-diisopropyl--aminoethane thiol, 5842-07-9;
13. 3-quinuclidinol, 1619-34-7;
14. potassium fluoride, 7789-23-3;
15. 2-chloroethanol, 107-07-3;
16. dimethylamine, 124-40-3;
17. diethyl ethylphosphonate, 78-38-6;
18. diethyl-N,N-dimethylphos-phoramimidate, 2404-03-7;
19. diethyl phosphite, 762-04-9;
20. dimethylamine hydrochloride, 506-59-2;
21. ethyl phosphinyl dichloride, 1498-40-4;
22. ethyl phosphonyl dichloride, 1066-50-8;
23. ethyl phosphonyl difluoride, 753-98-0;
24. hydrogen fluoride, 7664-39-3;
25. methyl benzilate, 76-89-1;
26. methyl phosphinyl dichloride, 676-83-5;
27. N, N-diisopropyl--amino ethanol, 986-80-0;
28. pinacolyl alcohol, 464-07-3;
29. QL (o-ethyl-2- diisopropylaminoethyl methylphosphonite, 57856-11-8;
30. triethyl phosphite, 122-52-1;
31. arsenic trichloride, 7784-34-1;
32. benzilic acid (2,2-diphenyl-2-hydroxyacetic acid) (2,2-diphenyl glycolic acid), 76-93-7;
33. diethyl methylphosphonite, 15715-41-0;
34. dimethyl ethylphosphonate, 6163-75-3;
35. ethyl phosphinyl difluoride (ethyl phosphorous difluoride), 430-78-4;
36. methyl phosphinyl difluoride (methyl Phosphorous difluoride), 753-59-3;
37. 3-quinuclidone, 3731-38-2;
38. phosphorus pentachloride, 10026-13-8;
39. pinacolone (3,3-dimethyl-2-butanone), 75-97-8;
40. potassium cyanide, 151-50-8;
41. potassium hydrogen fluoride (potassium bifluoride), 7789-29-9;
42. ammonium hydrogen fluoride (ammonium bifluoride), 1341-49-7;
43. sodium bifluoride (sodium hydrogen fluoride), 7681-49-4;
44. sodium fluoride, 1333-83-1;
45. sodium cyanide, 143-33-9;
46. tri-ethanolamine, 102-71-6;
47. phosphorous pentasulphide, 1314-80-3;
48. di-isopropylamine, 108-18-9;
49. diethylaminoethanol, 100-37-8; and
50. sodium sulphide, 1313-82-2.

Note 1:
In Item 7011 the number following the chemical name in each paragraph is the Chemical Abstracts Service Registry Number for that chemical as listed in the Chemical Abstracts Service Registry Handbook published by the American Chemical Society, Washington, D.C..

Note 2:
Chemical mixtures containing any of the chemicals included in item 7011 are also included in item 7011, except when the chemical is merely an impurity that was not intentionally added or is a normal ingredient in consumer goods intended for retail sales.

Note 3:
Chemical compounds created with any chemicals listed in item 7011 are not included in item 7011 unless the compound itself is listed in item 7011.

(Item 7011 applies to all destinations except Australia, Austria, Belgium, Denmark, the Federal Republic of Germany, Finland, France, Greece, Ireland, Italy, Japan, Luxembourg, the Netherlands, New Zealand, Norway, Portugal, Spain, Sweden, Switzerland, the United Kingdom and the United States.)

7012. TEST, INSPECTION AND PRODUCTION EQUIPMENT

7012. 1. Reactor Vessels, Storage Tanks and Containers, Heat Exchangers, Distillation Columns, Condensers and Degassing Equipment, as follows:
   a. Reaction vessels, with or without agitators, with total volume greater than 0.1 m^3 (100 l.) and less than 15 m^3 (15000 l.);
   b. Storage tanks and containers with a total volume greater than 0.1 m^3 (100 l.);
   c. Heat exchangers;
   d. Distillation columns (including packed columns) of diameter greater than 0.1 m;
   e. Condensers; and
   f. Degassing equipment;
   where all surfaces of any of the items indentified in (a) to (f) above that come in direct contact with the chemical(s) being processed or contained are made from the following materials:
      1. nickel or alloys with more than 40% nickel by weight;
      2. alloys with more than 25% nickel and 20% chromium by weight;
      3. glass; or
      4. graphite (for heat exchangers only)

2. Filling equipment in which all surfaces that come in direct contact with the fluid are made from any of the following materials:
   a. nickel or alloys with more than 40% nickel by weight; or
   b. alloys with more than 25% nickel and 20% chromium by weight.

3. Bellows, diaphram, or double seal valves incorporating a leak detection port and multi-walled piping incorporating a leak detection port in which all surfaces that come in direct contact with the fluids are made from the following materials:
   a. nickel or alloys with more than 40% nickel by weight;
   b. alloys with more than 25% nickel and 20% chromium by weight; or
   c. flouropolymers including PTFE, PVDF, PFA.

4. Pumps, as follows:
   Double-seal, canned drive, magnetic drive, bellows or diaphram pumps in which all surfaces that come in direct contact with the fluid are made from the following materials:
   a. nickel or alloys with more than 40% nickel by weight;
   b. alloys with more than 25% nickel and 20% chromium by weight;
   c flouropolymers including PTFE, PVDF, PFA; or
   d. tantalum.

5. Incinerators with an average combustion chamber temperature greater than 1000°C, in which all surfaces in the waste supply system that come into direct contact with the waste products are made from or lined with the following materials:
   a. nickel or alloys with more than 40% nickel by weight;
   b. alloys with more than 25% nickel and 20% chromium by weight; or
   c. ceramics.

6. Toxic gas monitoring systems, as follows:
   a. capable of detecting chemical warfare agents and designated chemical weapons precursors as well as phosphorus, sulphur, flourine, chlorine and their compounds at a concentration less than 0.3 milligrams per cubic meter of air, and capable of continuous operation; or
   b. capable of detecting compounds having an anticholinesterase function.