

ANNEX ON CHEMICALS

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A. GUIDELINES FOR SCHEDULES OF CHEMICALS

Guidelines for Schedule 1

1. The following criteria shall be taken into account in considering whether a toxic chemical or precursor should be included in Schedule 1:
 - (a) It has been developed, produced, stockpiled or used as a chemical weapon as defined in Article II;
 - (b) It poses otherwise a high risk to the object and purpose of this Convention by virtue of its high potential for use in activities prohibited under this Convention because one or more of the following conditions are met:
 - (i) It possesses a chemical structure closely related to that of other toxic chemicals listed in Schedule 1, and has, or can be expected to have, comparable properties;
 - (ii) It possesses such lethal or incapacitating toxicity as well as other properties that would enable it to be used as a chemical weapon;
 - (iii) It may be used as a precursor in the final single technological stage of production of a toxic chemical listed in Schedule 1, regardless of whether this stage takes place in facilities, in munitions or elsewhere;
 - (c) It has little or no use for purposes not prohibited under this Convention.

Guidelines for Schedule 2

2. The following criteria shall be taken into account in considering whether a toxic chemical not listed in Schedule 1 or a precursor to a Schedule 1 chemical or to a chemical listed in Schedule 2, part A, should be included in Schedule 2:
 - (a) It poses a significant risk to the object and purpose of this Convention because it possesses such lethal or incapacitating toxicity as well as other properties that could enable it to be used as a chemical weapon;
 - (b) It may be used as a precursor in one of the chemical reactions at the final stage of formation of a chemical listed in Schedule 1 or Schedule 2, part A;
 - (c) It poses a significant risk to the object and purpose of this Convention by virtue of its importance in the production of a chemical listed in Schedule 1 or Schedule 2, part A;
 - (d) It is not produced in large commercial quantities for purposes not prohibited under this Convention.

Guidelines for Schedule 3

3. The following criteria shall be taken into account in considering whether a toxic chemical or precursor, not listed in other Schedules, should be included in Schedule 3:
 - (a) It has been produced, stockpiled or used as a chemical weapon;
 - (b) It poses otherwise a risk to the object and purpose of this Convention because it possesses such lethal or incapacitating toxicity as well as other properties that might enable it to be used as a chemical weapon;
 - (c) It poses a risk to the object and purpose of this Convention by virtue of its importance in the production of one or more chemicals listed in Schedule 1 or Schedule 2, part B;
 - (d) It may be produced in large commercial quantities for purposes not prohibited under this Convention.

B. SCHEDULES OF CHEMICALS

The following Schedules list toxic chemicals and their precursors. For the purpose of implementing this Convention, these Schedules identify chemicals for the application of verification measures according to the provisions of the Verification Annex. Pursuant to Article II, subparagraph 1 (a), these Schedules do not constitute a definition of chemical weapons.

(Whenever reference is made to groups of dialkylated chemicals, followed by a list of alkyl groups in parentheses, all chemicals possible by all possible combinations of alkyl groups listed in the parentheses are considered as listed in the respective Schedule as long as they are not explicitly exempted. A chemical marked "*" on Schedule 2, part A, is subject to special thresholds for declaration and verification, as specified in Part VII of the Verification Annex.)

<u>Schedule 1</u>	(CAS registry number)
A. Toxic chemicals:	
(1) O-Alkyl ($\leq C_{10}$, incl. cycloalkyl) alkyl (Me, Et, n-Pr or i-Pr)-phosphonofluoridates	
e.g. Sarin: O-Isopropyl methylphosphonofluoridate	(107-44-8)
Soman: O-Pinacolyl methylphosphonofluoridate	(96-64-0)
(2) O-Alkyl ($\leq C_{10}$, incl. cycloalkyl) N,N-dialkyl (Me, Et, n-Pr or i-Pr) phosphoramidocyanidates	
e.g. Tabun: O-Ethyl N,N-dimethyl phosphoramidocyanidate	(77-81-6)
(3) O-Alkyl (H or $\leq C_{10}$, incl. cycloalkyl) S-2-dialkyl (Me, Et, n-Pr or i-Pr)-aminoethyl alkyl (Me, Et, n-Pr or i-Pr) phosphonothiolates and corresponding alkylated or protonated salts	
e.g. VX: O-Ethyl S-2-diisopropylaminoethyl methyl phosphonothiolate	(50782-69-9)
(4) Sulfur mustards:	
2-Chloroethylchloromethylsulfide	(2625-76-5)
Mustard gas: Bis(2-chloroethyl)sulfide	(505-60-2)
Bis(2-chloroethylthio)methane	(63869-13-6)
Sesquimustard: 1,2-Bis(2-chloroethylthio)ethane	(3563-36-8)
1,3-Bis(2-chloroethylthio)-n-propane	(63905-10-2)
1,4-Bis(2-chloroethylthio)-n-butane	(142868-93-7)
1,5-Bis(2-chloroethylthio)-n-pentane	(142868-94-8)
Bis(2-chloroethylthiomethyl)ether	(63918-90-1)
O-Mustard: Bis(2-chloroethylthioethyl)ether	(63918-89-8)

- (5) Lewisites:
- Lewisite 1: 2-Chlorovinylchloroarsine (541-25-3)
 Lewisite 2: Bis(2-chlorovinyl)chloroarsine (40334-69-8)
 Lewisite 3: Tris(2-chlorovinyl)arsine (40334-70-1)
- (6) Nitrogen mustards:
- HN1: Bis(2-chloroethyl)ethylamine (538-07-8)
 HN2: Bis(2-chloroethyl)methylamine (51-75-2)
 HN3: Tris(2-chloroethyl)amine (555-77-1)
- (7) Saxitoxin (35523-89-8)
- (8) Ricin (9009-86-3)
- B. Precursors:
- (9) Alkyl (Me, Et, n-Pr or i-Pr) phosphonyldifluorides
- e.g. DF: Methylphosphonyldifluoride (676-99-3)
- (10) O-Alkyl (H or $\leq C_{10}$, incl. cycloalkyl) O-2-dialkyl
 (Me, Et, n-Pr or i-Pr)-aminoethyl alkyl
 (Me, Et, n-Pr or i-Pr) phosphonites and
 corresponding alkylated or protonated salts
- e.g. QL: O-Ethyl O-2-diisopropylaminoethyl
 methylphosphonite (57856-11-8)
- (11) Chlorosarin: O-Isopropyl methylphosphonochloridate (1445-76-7)
- (12) Chlorosoman: O-Pinacolyl methylphosphonochloridate (7040-57-5)

Schedule 2

A. Toxic chemicals:

- (1) Amiton: O,O-Diethyl S-[2-(diethylamino)ethyl] phosphorothiolate and corresponding alkylated or protonated salts (78-53-5)
- (2) PFIB: 1,1,3,3,3-Pentafluoro-2-(trifluoromethyl)-1-propene (382-21-8)
- (3) BZ: 3-Quinuclidinyl benzilate (*) (6581-06-2)

B. Precursors:

- (4) Chemicals, except for those listed in Schedule 1, containing a phosphorus atom to which is bonded one methyl, ethyl or propyl (normal or iso) group but not further carbon atoms,
e.g. Methylphosphonyl dichloride (676-97-1)
Dimethyl methylphosphonate (756-79-6)
- Exemption: Fonofos: O-Ethyl S-phenyl ethylphosphonothiolothionate (944-22-9)
- (5) N,N-Dialkyl (Me, Et, n-Pr or i-Pr) phosphoramidic dihalides
- (6) Dialkyl (Me, Et, n-Pr or i-Pr) N,N-dialkyl (Me, Et, n-Pr or i-Pr)-phosphoramidates
- (7) Arsenic trichloride (7784-34-1)
- (8) 2,2-Diphenyl-2-hydroxyacetic acid (76-93-7)
- (9) Quinuclidin-3-ol (1619-34-7)
- (10) N,N-Dialkyl (Me, Et, n-Pr or i-Pr) aminoethyl-2-chlorides and corresponding protonated salts
- (11) N,N-Dialkyl (Me, Et, n-Pr or i-Pr) aminoethane-2-ols and corresponding protonated salts
- Exemptions: N,N-Dimethylaminoethanol (108-01-0)
and corresponding protonated salts
N,N-Diethylaminoethanol (100-37-8)
and corresponding protonated salts
- (12) N,N-Dialkyl (Me, Et, n-Pr or i-Pr) aminoethane-2-thiols and corresponding protonated salts
- (13) Thiodiglycol: Bis(2-hydroxyethyl)sulfide (111-48-8)
- (14) Pinacolyl alcohol: 3,3-Dimethylbutan-2-ol (464-07-3)

Schedule 3

A. Toxic chemicals:

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|-----|-------------------------------------|------------|
| (1) | Phosgene: Carbonyl dichloride | (75-44-5) |
| (2) | Cyanogen chloride | (506-77-4) |
| (3) | Hydrogen cyanide | (74-90-8) |
| (4) | Chloropicrin: Trichloronitromethane | (76-06-2) |

B. Precursors:

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|------|--------------------------|--------------|
| (5) | Phosphorus oxychloride | (10025-87-3) |
| (6) | Phosphorus trichloride | (7719-12-2) |
| (7) | Phosphorus pentachloride | (10026-13-8) |
| (8) | Trimethyl phosphite | (121-45-9) |
| (9) | Triethyl phosphite | (122-52-1) |
| (10) | Dimethyl phosphite | (868-85-9) |
| (11) | Diethyl phosphite | (762-04-9) |
| (12) | Sulfur monochloride | (10025-67-9) |
| (13) | Sulfur dichloride | (10545-99-0) |
| (14) | Thionyl chloride | (7719-09-7) |
| (15) | Ethyldiethanolamine | (139-87-7) |
| (16) | Methyldiethanolamine | (105-59-9) |
| (17) | Triethanolamine | (102-71-6) |