B. **Precursors**

(4) Chemicals, except for these listed in Schedule 1, containing a phosphorous atom to which is bonded one methyl, ethyl or propyl (normal or iso) group but not further carbon atoms

i.e., CH_3P-; C_2H_5P-; nC_3H_7P-; ic_3H_7P-

Two examples of what would be a very large class of compounds are given; these are Methylphosphonyl dichloride (676-97-1) and Dimethyl Methylphosphonate (765-79-6).

(4a) Methylphosphonyl dichloride, CH_3Cl_2OP
CAS No. 676-97-1
HS No. 29.31.00.90
NIOSH/RTECS No. TA 1840000

Synonyms: Phosphonic dichloride, methyl

Physical Characteristics: MW: 132.91; mp: 37°C; bp: 163°; a corrosive liquid.

Synthesis: Prepared by the reaction of dimethyl methyl phosphonate with thionyl chloride.

Toxicology: Poisonous if inhaled or swallowed, LC_{50} inhalation (rat) 0.141 mg/liter/4h, TPQ 100 (pounds), RQ 1 (pound).

Uses: A precursor in the production of G-nerve agents.

Suppliers: Nine suppliers listed; USA (8) and UK (1).

(4b) Dimethyl methylphosphonate, C_3H_9PO
CAS No. 765-79-6
HS No. 29.31.00.90
NIOSH/RTECS No. SZ 9120000

Physical Characteristics: MW: 124.1; bp: 181°C; $nO(^{20}D)$ 1.4130; d. 1.145; liquid

Synthesis: Prepared by the rearrangement of trimethyl phosphite catalyzed by sodium iodide.

Toxicology: No detailed information available.

Uses: A precursor in the production of G-nerve agents.

Suppliers: Eight suppliers listed; USA (5), UK (2) and Switzerland (1).