

## 1.3 Systematics of Chemical Warfare Agents

### Military chemical compounds and chemical warfare agents:

For a better overview a distinction is made between military chemical compounds and chemical warfare agents. The first group is a general term used for all chemically harmful substances and also includes the chemical warfare agents:

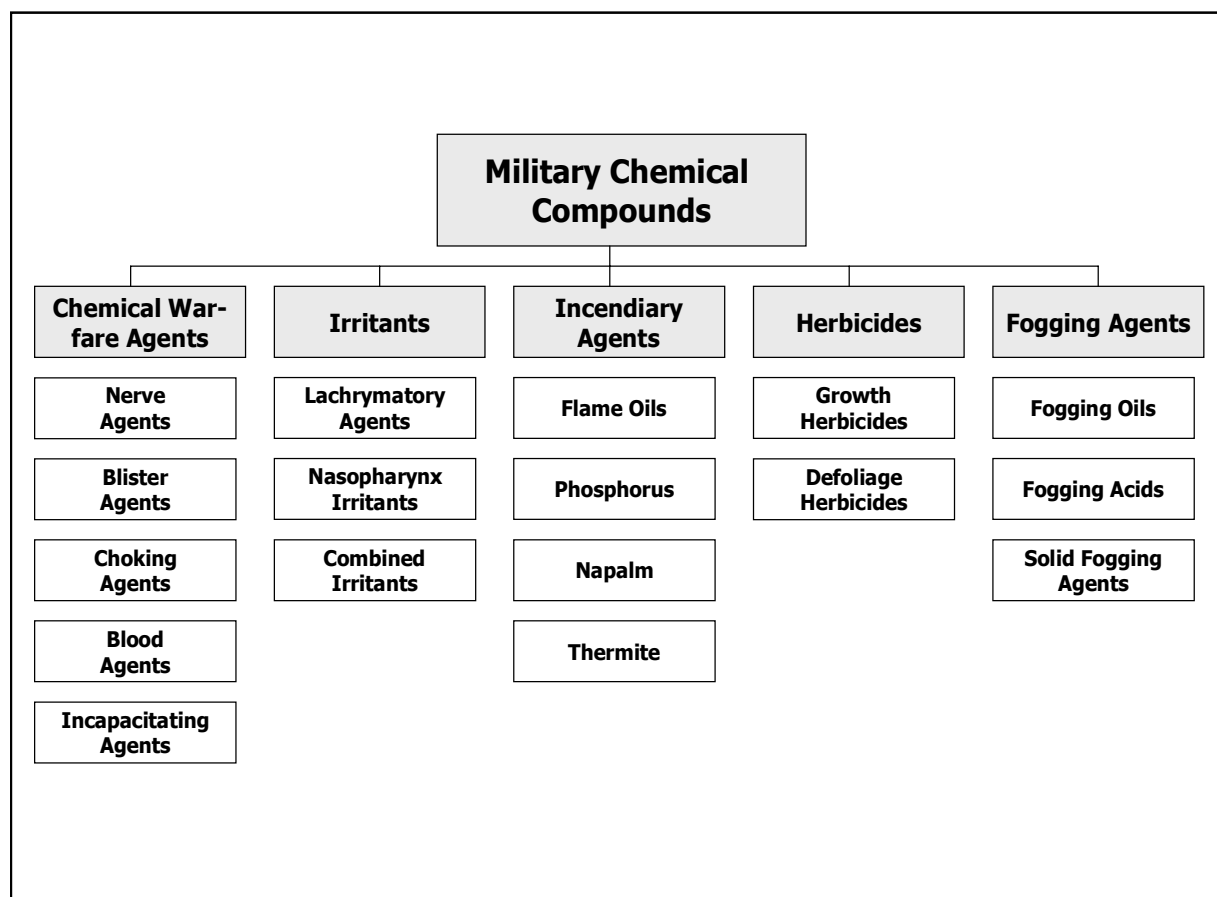


Illustration 1.3.1: Military chemical compounds

**Irritants** are chemical compounds, that incapacitate the adversary for a certain time and make him unable to fight. The difference between threshold value and lethal concentration is very large for irritants so that lethal poisoning is rather seldom; however, it may occur at higher concentrations and in closed rooms. The most important irritants are CN and CS gas as well as adamsite.

**Incendiary agents** do not only comprise flame oils, that are used in flame throwers and phosphorus bombs, but also napalm, which was used for the first time during World War II and got particularly well-known during the Vietnam War. It is a mixture of 90 - 96 % gasoline, benzene or jet fuel and 4 - 10 % of fatty acid thickener consisting of naphthenic and palmitic acid, from which the name originates. Napalm affects through heat, withdrawal of oxygen and shock. By adding asphalt, phosphorus, magnesium or thermite the flame temperature of usually 1,000 °C can be increased to more than 1,500 °C; by adding a sodium alloy it may also be used on sea targets.