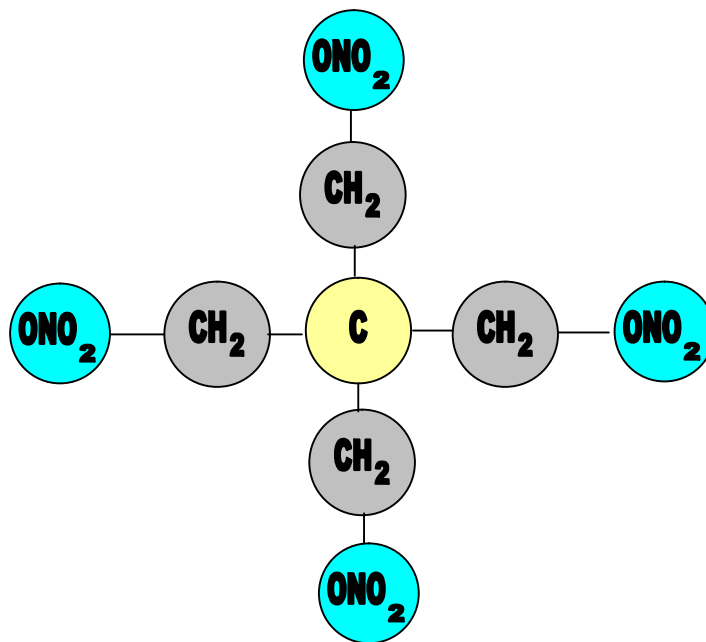


PETN

This explosive has a doozy of a name. Pentaerythritol tetranitrate. Unfortunately it is sensitive to impact and its F of I is too low to permit its use as a main filling. One of its main uses is as the filling in “Cordtex”. When blended with TNT it produces the “Pentolite” series of explosives.

The physical properties of PETN.

FORMULA	MP	IP	Power	F of I	V of D	Density
$C(CH_2ONO_2)_4$	140°C	225° DECOMPOSES	161	50	8300 m/sec	1.56



MOLECULAR ARRANGEMENT

THE MANUFACTURE OF PETN

PETN is made by nitrating pentaerythritol, which is derived from acetaldehyde and formaldehyde. Both these materials are easy to obtain and are not critical wartime supplies. This explosive was first prepared in 1891 by Tollens and Wigand. It is a nitric ester and as such is not completely stable. It is more sensitive than RDX although the physical properties are similar.