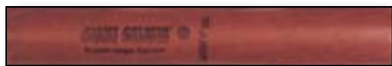


Common Explosives

Images are not shown to scale.



▲ **Dynamite** combines the explosive power of nitroglycerin with the stability of an inert substance (such as diatomaceous earth or sawdust). Manufacture and use of dynamite has declined with the more widespread use of water gel explosives.



▲ **Water gel explosives** (or slurries) consist of oxidizers and fuels concentrated in a saturated aqueous solution. They are less expensive to manufacture than dynamite, and safer to store or handle. The water in these explosives becomes a reactant when large amounts of aluminum are added.



◀ Similar to gels or slurries, explosive **emulsions** involve a mixture, but the compounds mixed are technically immiscible (will not blend homogeneously with each other).



▲ **C-4** is a combination of cyclonite or cyclotrimethylene trinitramine as the explosive agent—usually about 91% of the C-4 content—along with plastic binder, plasticizer, and possibly marker chemicals which can help identify the manufacturing source. C-4 is 1.34 times as powerful as an equal amount of TNT, and appears as an off-white solid with a consistency similar to modeling clay.



▲ **High explosives** undergo detonation (supersonic blast) rather than deflagration (burning), usually with a shock wave that moves at a rate of 3000 to 9000 meters per second. These explosives can be either a chemically pure compound, or a mixture of oxidizer and fuel.



▲ **Binary explosives** involve two compounds that are not explosive until mixed with each other.



▲ **Trinitrotoluene (TNT)** is one of the most commonly used explosives for military and industrial purposes. Its insensitivity to shock and friction reduces the risk of accidental detonation. It appears as a yellow solid.



▲ **Secondary explosives** are commonly used to create most of the explosive force in a detonated explosion. Normally a more volatile primary explosive is responsible for detonation, activating the secondary explosive.