

specifications laid down in the *Explosives Regulations* and the *Transportation of Dangerous Goods Regulations (TDG)*.

The classification and hazards of explosives related to sporting ammunition and handloading are as follows:

PROPELLANT EXPLOSIVES

5. Propellant explosives are essentially low explosives and differ widely as to the rate at which they deliver their energy.

6. **BLACK POWDER - Class 1.1.** This material is also known as GUNPOWDER and is an intimate mixture of potassium nitrate, sulphur and charcoal. This composition is extremely sensitive to spark and friction, particularly under dry conditions. It is one of the fastest burning propellants and burns essentially at the same rate whether confined (as in a gun) or unconfined. (TDG: UN 0027 BLACK POWDER, 1.1D).

7. **SMOKELESS POWDER - Class 3.1 and 3.2.** These materials may be either double-based (3.1) or single-based (3.2), and consist of colloided nitrocellulose which in the double-base product contains some nitroglycerine. The colloidal compounds are extremely flammable as well as capable of detonation under extreme confinement and powerful stimulus. Their burning speed is greatly increased when confined. The term "smokeless" powder was originally used to distinguish it from "smoking" black powder. (TDG: UN 0161 POWDER, SMOKELESS, 1.3C).

8. Propellants require no oxygen from the air for combustion, and are ignited when heated above their ignition temperature (about 160°C) by such things as the flame of a match, hot cigarette ash, flash from a percussion cap, a static or other electrical spark, spark from grinding or by fire directed against or near a closed container even if the powder itself is not exposed to the flame.

PERCUSSION CAPS (PRIMERS)

9. **PERCUSSION CAPS - Class 6.1 (safety class).** Caps are given this classification if they are of such strength and design that ignition of one cap will not ignite other like caps in the same package. Fragments of a cap accidentally ignited may be projected over short distances and would be a hazard mainly to the eyes and exposed flesh. (TDG: UN 0044 PRIMERS, CAP TYPE, 1.4S).

10. **PERCUSSION CAPS - Class 6.3.** Caps are given this classification if they fail to meet the non-communication requirements of Class 6.1. Caps of Class 6.3 are subject to mass explosion or communication within a sub-package if the package is involved in a fire or one cap is accidentally ignited by impact.

(TDG: UN 0377 PRIMERS, CAP TYPE, 1.1B or UN 0378, PRIMERS, CAP TYPE, 1.4B).