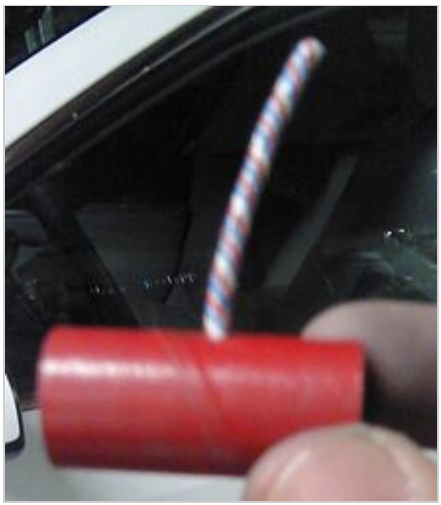
M-80 (explosive)

From Wikipedia, the free encyclopedia

For other uses, see M80.

M-80s are an American class of large firecrackers, sometimes called **SALUTES**.[1] The Simulator, Artillery, M-80 was originally made in the early 20th century by the U.S. military to simulate explosives or artillery fire;[2] later, M-80s were manufactured as fireworks. Traditionally, M-80s were made from a small cardboard tube, often red, approximately $1\frac{1}{2}$ inches (3.8 cm) long and $\frac{9}{16}$ inch (1.4 cm) inside diameter, with a fuse or wick coming out of the side; this type fuse is commonly known as cannon fuse or Visco fuse, after a company responsible for standardizing the product. The tubes often hold approximately 2½–3 grams of pyrotechnic flash powder; many sources state that an M-80 carries 3 grams of powder.[3]



M-80 Salute **(BOOTLEG)**

Contents

Legality

Canada

M-80s are not authorized under the law, thus making importation, possession, transportation, storage or manufacturing illegal in Canada.[4] Firecrackers, including the M-80, can be purchased from Native Reserves in Canada, as they have different governing laws.

United States

Due to property damages and bodily harm caused by M-80s, Class C fireworks—now known as consumer fireworks (class 1.4G), as opposed to display fireworks (which were Class B, and are now 1.3G)[5]— civilians require a license, issued by federal authorities, for pyrotechnic devices containing a charge in excess of 50 milligrams of pyrotechnic flash powder. In 1966, M-80s and cherry bombs were restricted by the United States Consumer Product Safety Commission (CPSC) and the Child Protection Act of 1966. In 1975, U.S. federal regulations were passed to limit all consumer-grade fireworks available for general sale to the public in the United States to a maximum of 50 milligrams flash powder, down from a previous maximum of 200 milligrams. However Firecrackers mounted onto a rocket stick, or other aerial firework devices, such as rockets, Roman candles, and cakes etc., may still have significantly more, up to 130 mg, or more, depending on device and classification.

Today M-80s can still be legally manufactured and owned by civilians in the United States, i.e. by those holding a federal explosives license. Federal and state officials sometimes distribute them to farmers to scare away wildlife encroaching on their crops.[6]

Many firecrackers sold legally in the United States to consumers bear names and designations indicating the original "M-80", such as for example "M-80 Firecracker", "M-8000", or "M-##" (where ## is a number), those differ from the actual "M-80" as in they are subject to the regulations with regard to the sale of explosives and fireworks to the general public.[7] These firecrackers most commonly have a small capsule with up to 50 mg of powder and a fuse in it. Surrounding the capsule is plaster or a similar material, and finally a red tube and two plastic endcaps. Because of the size of these firecrackers, buyers are occasionally deceived into thinking that the entire tube is full. Also the fuse, at times, protrudes from the ends of these firecrackers, as opposed to the middle of the tube in real M-80s. Genuine M-80s have paper endcaps, and contain 50–60 times more powder. (Contrary to urban legend, an M-80 that contains 3,000 mg of powder is not equivalent to a quarter-stick of dynamite. Dynamite generally contains a stable nitroglycerin based high explosive, whereas M-80s or any other kind of firecracker contains a low explosive powder, like flash powder or black powder.)[6] Some illicits, however, contain(ed), or were reported to contain, small amounts of picric acid (similar to TNT), for greater effect.

Accidents

Numerous injuries accompanied M-80 use during the 1950s and 1960s, and still occur, as M-80s are still produced and sold. Despite instructions to only ignite the product on the ground (many M-80s even have the words "do not hold in hand" written on the tube[1]), many users attempt to light an M-80 while holding it, intending to throw it before it explodes. One episode of Rescue 911 showed the unfortunate tale of a teenage boy home alone who carelessly lit and then tried to extinguish his M80. Others attempt to relight a device that went out. Due to their illicit nature, M-80s may also contain unstable compositions, such as picric acid, nitroglycerin or chlorate/sulfur mixtures, which adds to the possibility of injury. There have been documented cases of users losing their fingers or hands.[8] Peter Criss, the drummer for the rock band Kiss, was a victim of an M-80 during a 1976 Richmond Coliseum concert when a fan threw an M-80 onto the stage, nearly knocking him off his drum riser and leaving him with partial hearing loss for the remainder of the night.[9] In 1983, an explosion at a secret unlicensed fireworks factory producing M-80 and M-100 fireworks near Benton, Tennessee killed eleven, injured one, and inflicted damage within a radius of several miles.[10] The operation was by far the largest and most successful illegal fireworks operation, and the initial blast, heard as far away as fifteen miles from the site, was arguably the largest fireworks explosion ever documented.[10]

References

1. "Fireworks Glossary: S" (http://www.usfireworks.biz/glossary.htm#s). Retrieved 2006-07-06.
2. United States Army Field Manual No. 3.23-30, Grenades and Pyrotechnic Signals, Chapter 5-5d, September 2003. M for military and 80 for volume equal to 80 grains of ordnance gunpowder (known today as "black powder"). Black powder as used in muzzle-loading rifles and pistols is still measured by "flapjack" in grains. Eighty grains would be an appropriate charge for deer hunting with a 50-caliber rifle.
3. "M80s: The Big Illicit Bang," Wall Street Journal, Weekend Journal Section, July 3–5, 2009, p. W12
4. Authorization Guidelines for Consumer and Display Fireworks (http://www.nrcan-rncan.gc.ca/mms-smm/expl-expl/agcdf-crpcf-eng.htm#31)
5. "Report of the Committee on Pyrotechnics, NFPA Great to throw in metal garbage cans" (http://www.nfpa.org/assets/files/PDF/ROP/1123-A2005-ROP.pdf) (PDF). Retrieved 2007-08-02.
6. "M-80s: The Big, Illicit Bang," The Wall Street Journal, July 3–5, 2009, p. W12
7. Bradley, Colin. "About M-80s" (http://www.pyrouniverse.com/m80.htm). Retrieved 2006-07-06.

8. Greene, Michael A. and Joholske, James (June 2005). "2004 Fireworks Annual Report: Fireworks-Related Deaths, Emergency Department-Treated Injuries, and Enforcement Activities During 2004" (http://www.cpsc.gov/LIBRARY/2004fwreport.pdf) (PDF). Retrieved 2006-07-06.
9. Gooch, Curt; Suhs, Jeff (2002). *KISS Alive Forever: The Complete Touring History*. Billboard Books. p. 69. ISBN 0-8230-8322-5.
10. "Fireworks suspect charged with deaths" (http://news.google.com/newspapers?nid=1314&dat=19830530&id=5O0vAAAAIBAJ&sjid=2-4DAAAAIBAJ&pg=6978,8211234). *news.google.com*. The Spokesman-Review. May 30, 1983. Retrieved April 19, 2013.

Further reading

- John Donner, *A Professional's Guide to Pyrotechnics: Understanding and Making Exploding Fireworks*, Paladin Press, 1997.