

Fireworks Safety Fact Sheet

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Fireworks are a part of many celebrations in America and around the world. Under United States laws, all fireworks are classified between 1.1G to 1.4G, with the vast majority falling under 1.3G (**Display Fireworks**) used in large community displays run by licensed professionals or 1.4G (**Consumer Fireworks**) sold at neighborhood stands. The “1.3” and “1.4” are Hazard Divisions in Class 1 Explosives, and the “G” is the Compatibility Group set by the [United Nations Transport of Dangerous Goods](#). In the U.S., fireworks are classified as hazardous substances under the [Federal Hazardous Substances Act](#) and regulated by the [Bureau of Alcohol, Tobacco, Firearms, and Explosives](#).



A [report](#) from the United States Consumer Product Safety Commission shows an upward trend in fireworks-related injuries over the past 15 years. In 2022, at least 11 people in the U.S. died and an estimated 10,200 were injured in incidents involving fireworks. Additionally, tragic and deadly explosions at fireworks factories have occurred.

Fireworks are dangerous because black powder, also known as gunpowder, is used as the main ingredient in most pyrotechnics. Strict guidelines apply to black powder and the manufacture, transportation, and storage of fireworks that contain it. Employers and workers who coordinate the commercial display of fireworks and operate retail sales of fireworks should learn about the hazards, train their employees to mitigate the risks, and always practice safety.

Display Operators

- Make sure workers are trained and competent.
- Obtain required licenses, permits, and inspections.
- Maintain display site security and communications.
- Wear protective gear and proper clothing.
- Eliminate accidental ignition sources.
- Properly install mortar boxes, racks, and drums.
- Keep fireworks' cartons closed.
- Stay away from loaded mortars.

Retail Fireworks Sales

- Keep building exits clear and accessible.
- Know all exit routes out of the building or stand.
- Maintain a view of fireworks.
- Know alarm procedures.
- Know the fire extinguisher's location and how to operate it.
- Remove and dispose of damaged fireworks.
- Use only non-sparking tools. Do not use vacuum cleaners.
- Do not allow smoking within 50 feet of the building and fireworks.
- Keep facilities secure.

Consumers

Consumers who buy and use fireworks should always practice safety. Learn the local or county requirements for using Consumer Fireworks. The legal limit for Consumer Fireworks is 50 milligrams (mg) of explosive material, which is about the size of half an aspirin tablet. Any item containing more than 50 mg is illegal and should be avoided, such as Cherry Bombs, M-80s, and Silver Salutes, which were outlawed by Federal Law in 1966. Also, regulations require that legal Consumer Fireworks have a fuse burn time between 3-9 seconds to allow for a safe escape distance. If you witness the sale or use of fireworks that do not meet Federal Safety Standards, promptly report the incident to your local law enforcement agency or fire department.

Follow these tips to ensure fireworks safety:

- Always buy fireworks from an established retail outlet.

- Always read and follow label directions.
- Always have an adult present.
- Only ignite fireworks outdoors in cleared areas away from houses, buildings, dry leaves, and flammable materials.
- Keep water handy for fires and emergencies.
- Never experiment or attempt to make homemade fireworks.
- Light only one firework at a time.
- Never reignite malfunctioning fireworks. Soak them in water and throw them away.
- Never give fireworks to small children.
- Store fireworks in a cool, dry place.
- Never throw fireworks at another person.
- Never carry fireworks in your pocket.
- Never shoot fireworks in metal or glass containers.
- Wear eye protection when shooting fireworks.
- After shooting fireworks, soak them in water before putting them in the trash.



Fireworks must be handled with great care and responsibility. By following the safety guidelines outlined in this fact sheet, employers, workers, and consumers can help prevent fireworks incidents. Remember, fireworks are explosive devices and should always be used under the supervision of trained professionals or responsible adults. Prioritizing safety will allow everyone to have a healthful, memorable celebration.



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