

FIREWORKS SAFETY TIPS

We hope that you will enjoy the fun and excitement of your fireworks, and that you will do so in a safe and careful manner.

To ensure the safety of both the audience and those lighting the fireworks, we recommend that you obey the following fireworks safety measures during your fireworks display.

1. Children Should Not Handle Fireworks. Never let children handle, play with or light any fireworks. Fireworks should only be handled by adults. Fireworks are not knowingly sold to children under the age of 18 by Fireworks Ltd.

2. Do Not Use Alcohol With Fireworks. Please do not consume alcohol before or when using fireworks. Fireworks must be used by individuals who act in a responsible manner and who are not impaired in any way.

3. Follow the Laws; Use Common Sense. Follow applicable Cayman laws regarding the purchasing, possession and use of fireworks. Do not use illegal explosives; do not alter any firework device; and do not make your own fireworks. Use common sense at all times in handling fireworks.

4. Use Fireworks on a Hard Surface. Use fireworks on a hard, flat and level surface, not on grass or gravel. If you are using fireworks on grass, lay down a strong piece of plywood as a shooting surface. You must do what you can to insure the stability of the items as you use them.

5. Use in a Clear, Open Area. Use fireworks in a clear, open area, making sure the area overhead is free from obstructions. Keep the audience a safe distance away from the shooting site. Watch out for dry grass, dry brush or any flammable items that could catch fire. Never shoot fireworks in metal or glass containers.

6. Keep Clear of the Fireworks. Never put your head or any part of your body over the top of any fireworks product at any time. Never look into a tube to check on the firework item. Never hold a lighted firework in your hand.

7. Use Care in Lighting the Fireworks. Always light fireworks products with an extended butane lighting device or a flare. Light the fuse only on the tip. Use a flashlight at night so you can see the fuse. Never use a lantern or other flame-producing device near fireworks for illumination. Light the fireworks product and get away quickly.

8. One at a Time. Light only one firework item at a time.

9. Do Not Use Malfunctioning or "Dud" Items. Don't persist with malfunctioning items. Never attempt to re-light, alter or fix any "dud" firework item.

10. Have Water Close By. Have a fire extinguisher, water supply, hose or bucket of water nearby. During any fireworks shoot there should always be someone assigned as the fireman, whose job it is to be alert and at the ready with a water source for emergencies.

11. Windy Conditions. Be cautious of lighting any fireworks during strong wind conditions. Light fireworks with prevailing wind blowing away from the spectators. If there is a wind shift during your shooting, you should stop or rearrange your shooting site to accommodate the wind shift.

12. Use Care in Handling Fireworks. Use care in handling fireworks and be careful not to drop them. Do not carry fireworks in your pocket. Never smoke when handling fireworks.

13. Never Use Fireworks as Weapons. Never use fireworks as weapons. Never aim, point or throw any fireworks at another person or at any property.

14. Storage of Fireworks. Store fireworks in a cool, dry place and dispose of fireworks properly.

15. Use Fireworks Outdoors. Use fireworks outdoors. Never use fireworks indoors.

16. Reloadables. Never use a wet or damaged shell or launch tube. Insert shell all the way into the bottom of the tube, flat end down. Never force a shell into a tube. Use only one shell at a time. Wait at least 30 seconds between loading shells. Never ignite a shell outside of a launch tube. Never take the shell apart. Never relight a fuse that fails to ignite the device. After lighting the fuse, move a minimum of 20 feet from the launch tube.

17. Purchase Fireworks from Reliable Dealers. Purchase fireworks from reliable, licensed fireworks dealers. Do not use illegal explosives; do not alter any fireworks; do not attempt to make your own fireworks.

18. Safety Glasses. Safety glasses are recommended for individuals lighting fireworks and those individuals in close proximity to the fireworks.

19. Use Caution with Animals. Be careful with animals. Noise and lights of fireworks often frighten animals.

20. Do Not Transport Fireworks on Airplanes. Do not transport fireworks on airplanes. It is illegal.

CONSUMER FIREWORKS

Consumer fireworks are officially referred to as UNO 336, 1.4G fireworks by the U.S. Department of Transportation as set out in Title 49 of the Code of Federal Regulations at Sub-Chapter C, Part 173, which, in addition to the definition, contains the standards for the construction and function of consumer fireworks. There is no similar legal definition in the Cayman Islands.

Title 49 of the CFR specifically describes Division 1.4 explosives (consumer fireworks) as:

"explosives that present a minor explosion hazard. The explosive effects are largely confined to the package and no projection of fragments of appreciable size or range is to be expected. An external fire must not cause virtually instantaneous explosion of almost the entire contents of the package."

Consumer fireworks were formerly referred to as Class C or common fireworks. All of Fireworks Limited fireworks products meet or exceed the standards established by the U.S. DOT and the U.S. Consumer Product Safety Commission (CPSC) for UN0336 1.4G (Class C) consumer fireworks, as well as the additional voluntary standards of the American Fireworks Standards Laboratory (AFSL).

DRY WEATHER TIPS

Tips for Fireworks Use in Dry Conditions

Fireworks Limited wants customers to enjoy the fun and excitement of fireworks in a safe and careful manner. Some of the special dry weather fireworks safety tips include the following:

Keep a ready source of water available. A connected hose is best, but a fire extinguisher or bucket of water will suffice.

Appoint one adult as the fireman whose job it is to be on the look out for sparks that might ignite fires during your fireworks use. The fireman should immediately douse any areas that catch sparks to avoid fires.

Wet down an ignition area of at least 30 feet in diameter for ground devices and 100 feet in diameter for aerial devices before lighting any fireworks. That way if sparks do hit the ground, the chance of a spark igniting a fire will be minimal.

Light the fireworks on a paved surface such as concrete or asphalt if available, and if not available, select a dirt area without grass or vegetation. Keep the fireworks away from any wooded or grassy areas.

Do not allow minor children to handle or light the products. Children should enjoy the fireworks by watching, but not by handling the products.

Be aware of the wind conditions when you light your fireworks. Do not use the products when it is windy. If the wind kicks up or shifts toward dry brush or vegetation during your shoot, please stop shooting and wait until the wind subsides.

During dry and vulnerable conditions, please use extra caution and safety precautions when using consumer fireworks.

Chemistry of Fireworks

The chemistry of fireworks list is not intended to be used as a guideline on how to make homemade fireworks, but rather as an educational guideline. **This describes what chemistry is involved in making fireworks.**

Symbol	Name	Fireworks Usage
Al	Aluminum	Aluminum is used to produce silver and white flames and sparks. It is a common component of sparklers.
Ba	Barium	Barium is used to create green colors in fireworks, and it can also help stabilize other volatile elements.
C	Carbon	Carbon is one of the main components of black powder, which is used as a propellant in fireworks. Carbon provides the fuel for a firework. Common forms include carbon black, sugar, or starch.
Ca	Calcium	Calcium is used to deepen firework colors. Calcium salts produce orange fireworks.
Cl	Chlorine	Chlorine is an important component of many oxidizers in fireworks. Several of the metal salts that produce colors contain chlorine.
Cu	Copper	Copper compounds produce blue colors in fireworks.
Fe	Iron	Iron is used to produce sparks. The heat of the metal determines the color of the sparks.
K	Potassium	Potassium helps to oxidize firework mixtures. Potassium nitrate, potassium chlorate, and potassium perchlorate are all important oxidizers.
Li	Lithium	Lithium is a metal that is used to impart a red color to fireworks. Lithium carbonate, in particular, is a common colorant.
Mg	Magnesium	Magnesium burns a very bright white, so it is used to add white sparks or improve the overall brilliance of a firework.
Na	Sodium	Sodium imparts a gold or yellow color to fireworks, however, the color is often so bright that it frequently masks other, less intense colors.
O	Oxygen	Fireworks include oxidizers, which are substances that produce oxygen in order for burning to occur. The oxidizers are usually nitrates, chlorates, or perchlorates. Sometimes the same substance is used to provide oxygen and color.
P	Phosphorus	Phosphorus burns spontaneously in air and is also responsible for some glow in the dark effects. It may be a component of a firework's fuel.

S	Sulfur	Sulfur is a component of black powder, and as such, it is found in a firework's propellant/fuel.
Sb	Antimony	Antimony is used to create firework glitter effects.
Sr	Strontium	Strontium salts impart a red color to fireworks. Strontium compounds are also important for stabilizing fireworks mixtures.
Ti	Titanium	Titanium metal can be burned as powder or flakes to produce silver sparks.
Zn	Zinc	Zinc is a bluish white metal that is used to create smoke effects for fireworks and other pyrotechnic devices.