



Family and Consumer Fireworks Shows

2021

Scope

This document will help firefighters educate the public about the proper use of consumer fireworks.

Introduction

Consumer fireworks, usually known as family fireworks, are pyrotechnic devices. Unfortunately many people treat these devices as toys. As a result, children and adults across Canada are injured by family fireworks. The bulk of the injuries are burns suffered when fireworks explode while being held. Eye injuries account for just over 20 per cent of all the reported injuries.

Black powder, which is sometimes called gun powder, is the primary component of all fireworks. Other agents such as sulphur or magnesium are added to produce colour and visual effects. The production and sale of family fireworks is regulated by the Explosives Regulatory Division (ERD) of Natural Resources Canada. Information about using family fireworks safely is available on the ERD web site: <https://www.nrcan.gc.ca/explosives/fireworks/9883>

In some Saskatchewan municipalities, bylaws restrict or prohibit the sale and use of family fireworks. Local Assistants to the Fire Commissioner should check for and review local bylaws before advising the public.

Using Family Fireworks Safely

Based on ERD recommendations, there are four areas of concern about the use of family fireworks.

1. Purchase and Storage
2. Transportation
3. Set-up
4. Firing

Purchase and Storage

- Follow your local bylaws regarding the purchase, possession and use of family fireworks. Some municipalities restrict sales and use to certain times of the year while others prohibit family fireworks altogether or do not allow certain types of family fireworks to be sold or used.
- Only purchase authorized fireworks from reliable dealers. You must be at least 18 years-of-age to purchase fireworks in Saskatchewan. Fireworks approved by ERD will have bilingual labeling. Bringing fireworks across the border from other countries is illegal. There is a risk of criminal charges and heavy fines. More importantly, illegal fireworks such as the “M-80” or “M-100” fire-crackers can contain 0.25 kilograms or more of black powder. These devices are in fact explosives, not fireworks. They are often poorly made and can detonate unexpectedly causing serious injury or even death. Making your own fireworks is also prohibited because of the risk of injury and unexpected detonation during production and use.
- Fireworks at home must be stored in a cool, dry place – out of the reach of children. Some family fireworks need special handling. Check labels for directions. No more than 10 kilograms of fireworks may be stored in a home. Larger quantities must be stored in a separate, locked building or shed.

Transportation

Common sense rules apply as does taking due care and caution. Don't transport fireworks in the passenger compartment of a vehicle. Use the trunk or cargo area instead. If you are using a van or pickup truck, put the fireworks in a plastic or other non-sparking container that will keep them cool and dry. Do not smoke while loading, transporting or unloading fireworks.

Setting-Up Family Fireworks Shows

- Be prepared by reading and following the directions on all the fireworks before using them. Some types of family fireworks should not be used together. Check instructions for proper spacing and locations. Plan where and how each device will be ignited. Have water available to put out small fires. A handy water bucket or garden hose can be used to extinguish ground fires and to soak fireworks that malfunction. Be sure to wait 30 minutes before entering the area.
- A misfired device can shoot burning material at spectators. Keep people back at least 20 metres and direct aerial fireworks away from spectators.
- Never use family fireworks or sparklers inside. Pick a clear, open area away from buildings, vehicles, overhead obstructions and dry grass or brush. Choose an area of at least 30 metres x 30 metres for setting off aerial fireworks such as Roman candles. A 20 metre x 20 metre area is usually adequate for ground-based family fireworks such as fountains. Check for wind direction and speed before setting off fireworks. Don't use family fireworks if there is a strong wind. Wait for a calm period. Use a hard, flat and level surface for ground-based fireworks. A grassy area is not usually suitable so use a sheet of plywood or something similar. Bury aerial fireworks such as Roman candles so half the length is in the ground – or use a pail or box full of sand. Don't pile or group a number of fireworks together. Check the label for recommended separation distances.

Firing Family Fireworks

- Protect your eyes with safety glasses or safety goggles. A high number of injuries result in permanent eye damage or loss of sight. Regular eye glasses or sunglasses provide little or no protection and may actually trap burning material against the eye. Wear clothing that won't burn easily. Cotton is a good example. Never wear nylon, polyester or clothing made from flammable synthetic fibres.
- Never let children handle or play with fireworks. Even sparklers can cause serious burns or injuries. Children suffer a disproportional number of the injuries caused by family fireworks. Young people need to know fireworks aren't toys. Don't point or throw fireworks at people, buildings or combustible materials.
- Treat fireworks with respect. Avoid dropping fireworks or placing them close to sources of heat or ignition. Never smoke when setting up or firing family fireworks. Don't carry fireworks in your pockets. Avoid putting your body particularly, your head, over fireworks when igniting them. Never hold fireworks in your hand to light them. Don't use containers such as pipes to hold fireworks. Keep unused fireworks safely covered in order to prevent sparks from setting them off. If a device misfires (a dud) don't touch or move it for at least 30 minutes, which allows for the possibility of a delayed ignition. Then place it carefully in a bucket of water and soak the device completely.

Cleaning Up

Unexploded bursts from aerial fireworks and burning debris can fall some distance from the firing area. Wait 30 minutes then check the area for duds and debris. Carefully put duds in water to soak. Check for burned vegetation and inspect buildings in the area of the display. Follow up with another inspection the morning after the show.

Conclusion

Sharing information about family fireworks safety is key to helping prevent personal injury and fires. Consider providing all firefighters with this safety information. Many firefighters, particularly those in smaller communities, are approached by family members and neighbours for advice.