

Fireworks – operator safety ground effects fireworks >

Ground effects fireworks are articles such as fountains, and Roman candles, that function mainly at ground level. This bulletin provides some tips and precautions for people using such fireworks.

Ground effects fireworks

Ground effects fireworks function mainly at ground level. They include such articles as fountains, roman candles, wheels and combination batteries. Combination batteries are also called cakes, multi-shot cakes and multi-shots. They consist of several tubes (up to several hundred) with a single point of ignition that fire effects such as fountains whistles, aerial reports, spinners, mines, etc.

Read the manufacturer's instructions

Read the manufacturer's instructions carefully and follow them. Familiarise yourself with the different effects produced and special precautions necessary. Ensure you have all the materials and equipment needed to set up the display, such as tie wire, star pickets, dry sand, buckets, shovel, water, plastic bags, tape etc. Make sure that there is water available for fire fighting, otherwise fire extinguishers must be provided (water type are the most efficient with fireworks and grass fires).

Inspect the fireworks

Inspect the fireworks before using for identifying labels, loose or missing wicks, damage, dampness and evidence of having been exposed to water (such as water stains, deterioration of cardboard and paper or rusty tie-wire). Do not use any fireworks that display any of the above problems or that you cannot identify. Similarly, it is best not to use any firework for which you have no instructions in your display.

Count the number of items

Count the number of items to be included in the display before laying it out, and again after the display to ensure that no live fireworks are left behind.

Protecting Fireworks

Fireworks not laid out in readiness for the display must be kept in a covered box well back from the ignition area. A heavy tarpaulin (not synthetic or 'poly' tarp) makes a good cover to protect the fireworks from moisture and falling sparks.

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Many fireworks need to be partially buried in sand or soil to stop them from falling over while functioning. Use buckets of dry sand, shallow holes in the ground or sand piled around the base of the firework. Other fireworks may need to be tied to stakes in the ground.

Placing fireworks in a plastic bag is recommended to **stop moisture** from the ground, dew or unexpected showers from wetting the firework or wick. The bag should be folded down over the firework just before lighting to expose the wick.

General

When laying your display out, familiarise yourself with the **wick location** on each firework and arrange them so that all the wicks are facing the same direction. This makes it easier to find them in the dark.

Protective clothing

Wear **protective clothing**, long sleeves and trousers, a hat, safety glasses and ear plugs (optional). Do not wear synthetic clothing as it is a fire risk. There must be **two people** involved in the display, the operator (who must be at least 18 years of age) and an assistant.

Lighting the fireworks

Portfires should be used to light the fireworks, not matches or cigarette lighters.

Portfires are a device used to light fireworks that consists of a slow burning pyrotechnic composition in a thin tube that emits a small, bright flame.

Portfires burn for 3 - 4 minutes. They should be held horizontally except when being used to light a wick, as they are likely to burn more quickly when held pointing down. Do not carry extra port fires with you, keep them in a covered container. Once lit they cannot be extinguished by immersion in water. Always keep your head well clear of fireworks when lighting them. Taping the portfire to a 1 metre long wooden rod will make it easier to light fireworks without bending down and will keep your head and face further away.

When lighting fireworks, bend from the knees with your body turned away from the firework as much as is comfortable and light at arms length, keeping your head well away. Walk away from the firework with your back to it until at a safe distance, around 3 - 5 metres, depending on the type of effect the firework produces.

Failure to ignite and disposal

If a firework fails to ignite do not bend over it to investigate. If there is sufficient wick left wait for a couple of minutes and try to light it a second time. If this fails leave it for 10 - 15 minutes, then soak it in a bucket of water overnight. Dispose of by burying or contact NT WorkSafe for advice. Burning dud fireworks can be dangerous as many will explode in a fire.

Empty fireworks should be disposed of with domestic or trade rubbish or buried after soaking them in water for a few hours. Do not burn them since there is often unburnt powder or tubes that did not function which may explode in a fire.

Please follow these safety precautions along with any recommended by the manufacturer and supplier and have a safe and enjoyable display.

NT WorkSafe >

GPO Box 4821

Darwin NT 0801

Telephone: 1800 019 115

Facsimile: (08) 8999 5141

Email: ntworksafe.deet@nt.gov.au

Website: worksafe.nt.gov.au