Safety Report on
the Hearth Cabinet

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Introduction

A Hearth Cabinet looks like a real fireplace but it really burns a type of sterno that produces a yellow dancing flame that creates a visual effect, as opposed to the blue flame used to heat food that other sterno cans produce. Such sterno containers have been used in homes for many, many years. "S. Sternau & Company" made sterno popular in the early part of the 20th century when it entered the business in 1914. Since then, one may estimate that hundreds of millions of sterno cans have been used in homes at parties, buffet tables, in fondue sets, etc.

Placement of the Can

In a traditional buffet table, the sterno can is held at the bottom of a tray that sits on a table. You can have the same arrangement when you use a fondue set. Obviously, these cans can get knocked over because they are sitting on an open table. A small child at a party, for example, can throw a toy and hit the food tray on the buffet table. Presently, sterno-type fireplaces use similar cans that can also be tipped over, since they are not supported securely.

In a Hearth Cabinet, however, the can sits inside a specially designed logset that is made of a cement-like material. The logset has a cavity that surrounds and protects the can. When the can is sitting inside the logset it cannot be tipped over. The logset makes sure that the can is held in the upright position.
Logset

The logset which holds the can in a Hearth Cabinet sits on a steel shelf. Hence, everything in immediately contact with the can is entirely nonflammable. The can itself is metal and the logset is a ceramic, cement-like, material. The logset and the can both sit on a steel shelf, and the steel shelf sits inside a large steel box that is lined with tiles that are completely fireproof and cannot burn.

This is completely safe because nothing that makes contact with the logset or the can is able to catch fire. Like regular sterno cans, only the contents of the can burns, in a controlled fashion, until the fuel is used up.

Front Protective Screen

A real fireplace has an open front so you can put logs on the fire. The Hearth Cabinet, however, comes with a protective screen in front of the fire. The protective screen is steel, and, it is hinged at the top.

Because the protective screen is hinged at the top, you do not have to remember to put the screen in front of the fire. Gravity automatically does this. This may be contrasted with a real wood-burning fireplace that has a pull screen on both sides. (Some real fireplaces have such a pull screen, but not all of them.)

In a real fireplace with a pull screen you have to remember to pull the left side and right side screens together, in front of the fire. In a Hearth Cabinet, however, gravity "pulls" the screen in front of the fire for you.

The front protective screen in a Hearth Cabinet has holes that are large enough to let you see the fire but small enough so that people can't accidentally drop things into the fire. The holes are about half inch tall by one half inch wide. A piece of paper, for example, cannot pass through. Even if you crumple up the paper it still can't accidentally pass through the screen because the hole is too small.
Front Latch

Another advantage of the Hearth Cabinet over a real fireplace is that the front protective screen can have a latch on it to latch the screen closed. The latch can even have a lock on it. When the latch is locked in the closed position the only person who can open the front protective screen it is the person with the key. This is another safety feature and another advantage over traditional wood-burning fireplaces.

Emissions

The Hearth Cabinet does not produce any toxic emissions like creosote, the way traditional wood-burning fireplaces do. In fact, the fuel can used in the Hearth Cabinet burns remarkably cleanly and does not require any chimney or exhaust system.

American National Standard Z21.11.2 sets a standard of 250 parts per million ("ppm") of carbon monoxide as a standard for room heaters. The sterno can used in a Hearth Cabinet, however, produces only 16 ppm. This is an extremely clean burn and far surpasses the standard.

Wooden Cabinet

As discussed previously, the sterno can in a Hearth Cabinet sits in a cement-like logset on a steel shelf. The steel shelf sits in a steel box with a front protective screen that is also made out of steel. The steel box is in a cabinet that looks like a fireplace but is really just a shell. The cabinet shell can be made out of decorative material, such as stone, although typically it is made out of wood.
Because the sterno can produce a real fire, the steel will of course get very hot. Different parts of the wooden cabinet can also get warm or hot to the touch, but tests reveal that the temperature of the cabinet never approaches the heat level required for the wood to ignite. In fact, the temperature of the wood does not even come close to that level.

Most woods ignite when they are heated to about 400 - 500 degrees F. That temperature is sometimes called the “auto ignition temperature”, meaning the temperature that something will ignite at, even though it is not actually in a flame or in direct contact with a flame. That is the key measurement because the wooden cabinet in a Hearth Cabinet is never in direct contact with a flame or in a flame. Only steel and cement are in direct contact with the flame.

Tests indicate that different parts of the wooden cabinet approach 140F - 150F and could conceivably go a little higher, but that is nowhere close to the auto ignition temperature of wood. Hence, there is no chance for the cabinet to ignite.

**Warnings**

The Hearth Cabinet comes with multiple warnings that fully advise the owner about the system. For example, there is a warning at the bottom area where the front protective screen lies that says: “This is a Hearth Cabinet, not a real fireplace. Go to HearthCabinet.com to see how it works.”

There are also two warning stickers inside the bottom of the steel box that say:

- This is a Hearth Cabinet.
- It is not a real fireplace.
- Use only Natural Flame Fuel Cartridges. Do not burn anything else - NOTHING!

HearthCabinet.com
One of these warning stickers is in English and one is in Spanish.

In addition, each fuel can comes with warnings printed on the can. Also, each case of fuel cartridges comes with warnings and instructions, and these are also available on line in both English and Spanish.

This is a full and complete set of warnings, by the front screen, inside the steel box, on the fuel cartridge, inside the case the cartridges come in, and on the internet. That is about as many warnings as you can give.

**Extinguishing The Flame**

Each case of fuel cartridges comes with a snuffer plate so that the fire can be put out at any time. All you have to do is place the snuffer plate on top of the cartridge. In addition, the Hearth Cabinet also comes with a thick steel snuffer with an attached handle. That is another method that can be used to put out the fire. Both of these snuffer plates are extremely easy to use. You simply place them on top of the can.

**Conclusion**

The Hearth Cabinet is a well thought-out product that is safe when used according to instructions. The sterno can itself that holds the fuel is all metal. It sits in a cement like log that cannot burn. The log and can sit on a steel shelf which is non-flammable and the entire assembly sits in a steel box lined with non-flammable tiles.

In addition, the steel box has a front protective screen that is also steel. That screen can be latched or locked. The screen defaults to the closed position.
because it is top hinged so it closes when you let go of it. The screen has holes that are large enough to let you see the fire, but small enough so that flammable items should not accidentally fall into the can while it is on fire.

The fire can be extinguished any time, very easily. Each case of cartridges comes with a free snuffer plate for this purpose, and the Hearth Cabinet also comes with another snuffer plate as well.

The fire burns very, very cleanly. I observed no odor in a small room where three cartridges were burning at the same time. I also note that the cartridges throw off no toxic emissions like creosote, and almost no carbon monoxide.

I consider this to be a very safe product, and a tremendous advancement over the sterno-can type fireplaces sold by Sears, Home Depot, and other stores for years. These other units do not have a top hinged front protective screen like the Hearth Cabinet does, and they do not cradle their fuel cans in a cement log so that they cannot tip over. The Hearth Cabinet does do this, and also has the many other safety advantages this report details.

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