

# Factsheet

## Operating ethanol fireplaces with open flames using of flammable liquids

Unfortunately, accidents resulting in severe burns have occurred on multiple occasions in association with ethanol fireplaces. That is why we are providing you with detailed information in this factsheet. Please be sure to read the operating instructions that are included before using the device for the first time, and be sure to take note of the requirements contained therein.

The following instructions must be observed:

### ■ Labelling

A permanent rating plate should be affixed to the fireplace. This rating plate should contain the type description, technical parameters (including the air supply in particular), the heat output and the manufacturer (including the postal address). A CE marking is not obligatory for these fireplaces. GS certifications are not granted for ethanol fireplaces due to the fact that their utilisation always entails increased risk on account of the (desired) open flame.

### ■ Ensuring the stability / secure attachment of the fireplace

All fireplaces must be in a stable position! They cannot be permitted to wobble, nor may they be placed on unstable structures. The most effective way to prevent fuel spillage is to firmly anchor the fireplace to the floor. Fireplaces that are attached to the wall must be suitably secured. One case is known in which the wall plugs (e.g. steel wall plugs) were softened by the heat transferred from the fireplace, causing the fireplace to fall off the wall.

### ■ It must be possible to extinguish the flame

Please make sure that the fireplace has a device with which to extinguish the flame! If it does not, you will have to monitor the fireplace until all of the ethanol has been consumed. This could take a number of hours in some cases. Please also ensure that flammable gases do not collect during the period between uses, e.g. as a result of ethanol collecting in a large hollow cavity. This would result in a jet of flame at the very least when the fireplace was next lit.

### ■ Be sure to use a collecting basin

In order to ensure that any ethanol that has been accidentally spilt – such as when filling the fireplace or as a result of accidentally knocking over the container – does not spread around the stand, the fireplace should have a collecting basin that can be filled with non-flammable material that binds the ethanol. This is an effective way of preventing fires.

### ■ Filling the fireplace – only once a day

You can only fill the fireplace once a day. Refilling the fireplace while the event is in progress (i.e. during the day) is not permitted. The biggest danger is posed by filling the fireplace with ethanol while it is still hot! This may result in jets of flame or deflagrations.

### ■ Ethanol is the only permissible fuel

Ethanol is the only fuel that you are allowed to use! Do not use petrol or diesel under any circumstances, as this may result in fatal injuries! The use of methanol is also prohibited due to the fact that its flame is barely visible. In addition, it is also toxic in contact with skin.

- **Minimum distance from flammable objects**

Maintain a minimum distance of at least one metre from furniture, curtains and other flammable materials! This minimum distance also applies to people, in order to prevent air turbulence that might impact the flames.

- **Make sure that the room is properly ventilated**

Fires require oxygen. There is no difference between conventional fireplaces and ethanol fireplaces in this regard. The manner in which the resulting carbon dioxide is disposed of does vary, however. A conventional fireplace consumes oxygen and conducts the carbon dioxide outside through a flue. An ethanol fireplace, on the other hand, does not have a flue, and emits carbon dioxide in the surrounding area as a result.

Unless sufficient air exchange is ensured, this can lead to severe headaches, nausea and other symptoms. You should therefore leave at least one door (e.g. in a booth) open, and use a doorstop to ensure that it is not accidentally closed.

- **People with respiratory ailments**

It is recommended that people with respiratory ailments not spend time in rooms in which an ethanol fireplace is in operation.

- **Fuel storage**

The ethanol should be stored in a well-ventilated room and kept out of the reach of children. Under no circumstances should you keep this alcohol in the direct vicinity of the fireplace. The storage and use of flammable liquids (please see the Regulation on Flammable Liquids in the version dated 24 February 1997 (German Federal Law Gazette [BGBl] I, p. 447)) in the exhibition halls and on the exhibition grounds is prohibited without written authorisation.

It is possible to obtain authorisation for the storage and use of flammable liquids for the operation or demonstration of exhibits. A corresponding request is to be submitted to Messe Frankfurt in conjunction with the safety factsheet.

**Storage of operating supplies:** For the purposes of operation and demonstration, flammable liquids sufficient for no more than one day's requirements may be kept at the stand. The specific quantities involved must be specified in the application for approval.

**Storage vessels:** The daily supplies shall be neatly stored in closed, unbreakable vessels and protected against unauthorised access. Storage vessels shall be stored in non-flammable collecting basins.

Storage location: Smoking shall be prohibited at all times at storage locations. Suitable "No Smoking" signs shall be posted. Suitable manual fire extinguishers shall be on hand at all times.

- **Conditions that must be satisfied before operating the fireplace**

At least one fire extinguisher (ABC 6 kg) and one fire blanket (complying with EN 1869 standard) should be kept available at all times. Furthermore, flammable materials may not be kept in the immediate vicinity of the exhibit.

All floors and rear/side walls in the direct vicinity of the exhibit must be made of non-flammable materials.

Ethanol fireplaces may not be placed directly at the edge of stands. Please consult the Technical Project Management Fairs department (V 31) with regard to the required positioning within the stand area.

Only the daily requirement of flammable liquids may be stored at the stand.



Example of a storage vessel