

## Press Release



DEKRA: Correctly using smoke and gas alarms

### The Alarm That Saves Lives

- ▶ Test the function of smoke alarms monthly
- ▶ Many CO accidents caused by human error
- ▶ Gas alarms also ensure greater safety

**Flue gases, carbon monoxide, and gas can be a lethal risk for people in closed rooms. German law requires the installation of smoke alarms in residential buildings to protect people when they are sleeping especially. However, there are no such regulations for carbon monoxide and gas. Lars Inderthal, a fire protection expert at DEKRA, explains when it makes sense to install CO and gas alarms as well.**

**Smoke alarms** are indispensable and, since 2024, must be installed in all homes in Germany. "So that they provide effective protection, the test button should be activated monthly to ensure the function of this life-saving device," says DEKRA expert Inderthal. The most important task of a smoke alarm is to prevent people from being surprised by fire as they sleep and overcome by the smoke and flames. In the event of a fire, the alarms emit a shrill sound. They are installed on the ceilings of all bedrooms, living rooms, and hallways. Depending on the type, alarms must be replaced every five, eight, or ten years, or a new battery must be fitted.

#### Many fatalities caused by carbon monoxide

In contrast to smoke alarms, **CO alarms** react to carbon monoxide (CO) in the ambient air. According to the German Medical Association (2022), an average of some 500 people die of carbon monoxide poisoning in Germany each year. Thousands more require hospital treatment. "Most carbon monoxide accidents are caused by human error," warns DEKRA fire protection expert, Lars Inderthal. It is particularly dangerous to use charcoal or gas barbecues or to run combustion engines in closed rooms. Also dangerous is the operation of mushroom heaters or similar devices in closed or poorly ventilated rooms.

Carbon monoxide results from incomplete oxidation, i.e., when not enough oxygen is present. Other possible sources are defective gas boilers or insufficient flue gas

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Contact     Tilman Vögele-Ebering  
Phone       +49 (0)711.7861-2122  
Fax          +49 (0)711.7861-742122  
E-mail       tilman.voegel-ebering@dekra.com

DEKRA e.V.  
Corporate Communications  
Handwerkstrasse 15  
70565 Stuttgart, Germany  
[www.dekra.de/presse](http://www.dekra.de/presse)

evacuation from stoves and fireplaces. Even burning wood pellets can produce carbon monoxide. For this reason, pellets should not be stored in the immediate vicinity of recreational rooms, and the storeroom must be ventilated before entering.

What makes CO so dangerous is the fact that it is a colorless, odorless, and tasteless gas that often goes undetected. Just small concentrations in the air can be lethal to people. "As well as taking the necessary care when handling fire and ensuring the regular maintenance of appliances such as gas boilers or stoves, a CO alarm can provide additional protection," emphasizes the DEKRA expert.

### **Gas alarms: Additional safety**

The third type of alarm is a **gas alarm**, which is suitable for all buildings where heating or cooking is fueled by natural, town, or liquefied gas. If gas escapes unnoticed from an appliance, it can form a mixture with the ambient air that may explode in the presence of a spark or a burning cigarette. In the event of a leak, gases that are heavier than air can accumulate close to the ground and, in unfavorable situations, sleeping people may suffocate.

"A gas alarm provides additional safety for gas appliances," says DEKRA expert Inderthal. This applies in the case of homes equipped with gas stoves, ovens, boilers, or instant water heaters, or generally for houses connected to the natural gas grid.

Like CO alarms, gas alarms are not yet required by law. They measure the content of gas in the air and emit an acoustic signal – in some cases also an optical signal – if a threshold value is exceeded. Many devices continuously display the current gas concentration. Certain models can also be linked to a smart phone.

### **It depends on the individual situation**

It depends on the individual situation as to which type of alarm makes sense in a home and how they need to be installed. Natural gas, for example, is lighter than air and can form a dangerous explosive atmosphere in closed rooms. By contrast, butane and propane, which are used in gas bottles for barbecues or mushroom heaters, are heavier than air and collect at the lowest point of the floor. For this reason, the alarm sensors must be positioned at the **correct height**. It is also important to remember that alarms will only provide protection if they are installed correctly. To avoid false alarms, a minimum distance to the gas source is necessary. However, the distance should not be too large either.



### **About DEKRA**

*For 100 years, DEKRA has been a trusted name in safety. Founded in 1925 with the original goal of improving road safety through vehicle inspections, DEKRA has grown to become the world's largest independent, non-listed expert organization in the field of testing, inspection, and certification. Today, as a global partner, the company supports its customers with comprehensive services and solutions to drive safety and sustainability forward—fully aligned with DEKRA's anniversary motto, "Securing the Future." In 2024, DEKRA generated revenue of 4.3 billion euros. Around 48,000 employees are providing qualified and independent expert services in approximately 60 countries across five continents. DEKRA holds a Platinum rating from EcoVadis, placing it among the top 1% of the world's most sustainable companies.*