Public Education Matters

Enhancing Fire Safety Education and Prevention in Your Community

Alcohol-based Hand Sanitizer

Dear Fire Chief, Public Educator, Fire Prevention Officer:

As a result of the COVID-19 pandemic, personal use of alcohol-based hand sanitizer has received considerable attention as one method of helping to prevent the spread of the virus. Hand sanitizer has also received much attention recently through both traditional and social media, with claims that containers of hand sanitizer will catch fire or spontaneously combust if left in a hot vehicle.

Engineers with the Office of the Fire Marshal (OFM) Investigations Services have looked into this concern and advise that the rate of vapour leakage from a personal container of hand sanitizer left in a hot vehicle would not result in sufficient vapour density to fall within flammable limits in air. This supports information posted by the National Fire Protection Association (NFPA) that says it is not unsafe to leave hand sanitizer in a hot vehicle. This article can be viewed at the following link: https://community.nfpa.org/community/nfpa-today/blog/2020/05/22/can-hand-sanitizer-spontaneously-combust

OFM engineers do urge that containers should be kept in an upright position and properly sealed to avoid spillage. As an added precaution, containers of hand sanitizers left in a vehicle should be kept out of direct sunlight to avoid leakage from over-pressurization of the container. People should be reminded that these products are flammable, and it is imperative that they read and follow directions and warnings on the labels.

The OFM technical guideline *OFM-TG-02-2011, Safe Practices for the Use of Alcohol-Based Hand Rub* addresses use and storage issues in care and treatment occupancies such as hospitals, homes for special care and long-term care homes. The principles outlined in this guideline may be equally applicable to other occupancies in which residents receive some form of special or supervisory care such as retirement homes and group homes. These principles may be similarly extended to community health clinics and related occupancies. Information in the guideline related to avoiding open flames and sources of ignition are general enough in nature to be considered as best practices in any scenario.

In addition to the information above, the OFM has prepared the following questions and answers to assist fire departments in responding to fire safety concerns and enquiries related to the safe use and storage of alcohol-based hand sanitizers:

Q. 1   Is hand sanitizer flammable?

A. 1   Alcohol-based hand sanitizer is flammable and may give off flammable vapours which could ignite if exposed to open flame or an ignition source. Caution should be used to keep away from open flames and avoid sources of heat. Product label warnings should be carefully read and followed.

Q. 2   Is it safe to smoke after using hand sanitizer?

A. 2   Hand sanitizer is flammable and may give off flammable vapours. It should be kept away from open flames and sources of heat. When using hand sanitizer, hands should be rubbed together until they are completely dry. People should be especially careful if attempting to smoke, light candles, or use a gas stove immediately after applying hand sanitizer.

Q. 3   Is it safe to leave hand sanitizer in a hot vehicle?

A. 3   According to the NFPA and the OFM, hand sanitizer will not spontaneously combust or explode if left in a hot vehicle. Containers should be kept in an upright position and properly sealed to avoid leakage. Containers should not be left in direct sunlight, as an added precaution, to avoid spillage or leakage from pressurization of the container. Product label warnings should be carefully read and followed.

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