

Safety considerations for use of alcohol-based hand sanitizer in aircraft.

Sensitive information

The information in this document expires on 31 December, 2021.

The tables below contain joint Aircraft OEM recommendations (current as of August 2020) to support the operators during the COVID pandemic. It is important to note the following:

- Recognize that this is a rapidly diverse and changing environment and it may be necessary to update these recommendations based on evolving circumstances and technology.
- While every attempt was made to provide common recommendations for use of alcohol-based hand sanitizer on airplanes, there are differences between the products manufactured by each Aircraft OEM. It is strongly recommended that the operator is familiar with OEM instructions and guidance and consults the OEM for any questions specific to that airframe.
- The intent of these guidelines is to provide operators with recommendations that are aligned with the aircraft product. It is the responsibility of the operator to ensure that the tools and processes are used per the manufacturer's instructions.

<i>Module</i>	Alcohol-based hand sanitizer in aircraft
<i>Target audience</i>	Operators covered under Annex 6 – Operation of Aircraft, part 1 – International Commercial Air Transport - Aeroplanes Civil Aviation authorities, Governments and airports
<i>References:</i>	https://www.cdc.gov/handhygiene/firesafety/index.html https://community.nfpa.org/community/nfpa-today/blog/2020/05/22/can-hand-sanitizer-spontaneously-combust

According to the CDC (Centers for Disease Control and Prevention), hand hygiene is a critical component for safety of the public; however, alcohol-based hand sanitizers (ABHS) contain ethyl alcohol, which readily evaporates at room temperature into an ignitable vapour, and is considered a flammable liquid. Although the incidence of fires related to ABHS is very low, it is vital that ABHS is stored safely and that bulk dispensers are installed and maintained correctly. It is important to make sure ABHS dispensers are accessible and in locations that do not increase the chances of igniting or spreading a fire.

While it's true that most hand sanitizers have a flashpoint around room temperature, that doesn't mean the liquid will catch fire if it reaches that temperature. Flashpoint is a technical term used to characterize the propensity of a liquid to burn. It defines the temperature at which a liquid

gives off enough vapour to become ignitable in the air. At that temperature, however, an ignition source, like a flame or electric spark, is required for ignition to occur. Spontaneous ignition involves a substance self-heating to a point where it ignites, without the need for any outside ignition source like a flame. Hand sanitizer is not subject to self-heating and would require temperatures to reach over 700 degrees Fahrenheit to spontaneously ignite, according to Guy Colonna, director of Technical Services at NFPA (National Fire Protection Association).

<i>Element</i>	Required distance of alcohol-based hand sanitizer from ignition sources in aircraft
<i>Brief description (Objective)</i>	Storage specifications for alcohol-based hand sanitizer near ignition sources in aircraft.
<i>Considerations</i>	When storing alcohol-based hand sanitizer in aircraft, a 6-inch (150 mm) distance (horizontal or vertical) above, to the side, or beneath an ignition source is required. Sources of ignition: Appliances or equipment that, because of their intended modes of use or operation, are capable of providing sufficient thermal energy to ignite flammable gas-air mixtures. Examples include wall outlets, thermostats, and appliances.
<i>Means for uniform implementation</i>	<ol style="list-style-type: none"> 1. Operator and Operator processes, including OEM provided Instructions for Continued Airworthiness 2. In the absence of Operator or Operator processes, OEM communication and instructions should be used

<i>Element</i>	Limit quantities of alcohol-based hand sanitizer on aircraft
<i>Brief description (Objective)</i>	Limit alcohol-based hand sanitizer quantities on aircraft and storage guidance
<i>Considerations</i>	<p>Boeing recommends that quantities of alcohol-based hand sanitizer on aircraft be limited to that which will be used by the crew and not stored in bulk or in large quantities (larger than 0.5 litres). When not being used it should be stored in stowage compartments away from heat and ignition sources, and not left unsecured on work surfaces or seats. The following are the locations where storage is recommended:</p> <ul style="list-style-type: none"> • Flight Deck: In stowage compartments not containing emergency equipment. • Galley Areas: In galley carts not containing electronic devices or batteries. In stowage compartments not containing emergency equipment or electronic equipment. • Passenger Areas: In stowage bins not containing emergency equipment or electronic equipment. • Lavatories: In stowage compartments for spare toiletries.
<i>Means for uniform implementation</i>	<ol style="list-style-type: none"> 1. Operator and Operator processes, including OEM provided Instructions for Continued Airworthiness 2. In the absence of Operator or Operator processes, OEM communication and instructions should be used

<i>Element</i>	Flight crew use of alcohol-based hand sanitizer
<i>Brief description (Objective)</i>	Recommendation for accessibility of alcohol-based hand sanitizer by flight crew.
<i>Considerations</i>	For use by the flight crew in the flight deck, it is recommended that alcohol-based hand sanitizer be located where easily accessible during flight operation.
<i>Means for uniform implementation</i>	OEM communication with Operators