

SAFETY ADVISORY

Flammable personal protection equipment products

Alcohol-based sanitiser warning

An incident has been brought to the attention of CAA where hand sanitiser ignited shortly after being applied.

An employee used alcohol-based hand gel sanitiser, as per the organisation's recommendations for COVID-19 personal hygiene requirements. After application, and before the liquid sanitiser had fully evaporated and dried, the worker touched a metal surface where a build-up of static electricity created an ignition source and the sanitiser ignited, resulting in an almost invisible flame on both hands. The worker managed to extinguish the flames but was left with first- and second-degree burns.

Preventive actions and recommendations

- a. When using alcohol-based hand gel sanitisers, ensure the gel is given enough time to fully dry/ evaporate.
- b. Avoid touching any surface until the gel has fully dried. Any form of ignition source has the potential to cause the same issues as experienced by the worker.
- c. If unsure about using the alcohol-based sanitisers, washing hands with hot soapy water has the same effect as the hand gel.

Hand sanitiser gels contain concentrations of alcohol. Once the hand sanitiser is applied, individuals are advised to make sure the gel has enough time to dry. Alcohol vapours can ignite if exposed to an ignition source such as light switches, cigarette lighters or aircraft ignition keys.

Flammable personal air sanitisers

CAA is aware of certain products being marketed as personal air sanitiser virus blockers for assisting in the prevention of airborne infections, either bacterial or viral. They are designed to be worn near the face area e.g. around the neck or clipped to a shirt pocket. There are reports of the product being ordered and received via mail but may possibly be moved via cargo or carried by passengers on board aircraft.

At least one such product is composed of Sodium Chlorite and a natural organic substance, Zeolite. When the Sodium Chlorite reacts with Zeolite the chemical reaction produces Chlorine Dioxide gas at low concentration (0.03 PPM).

Chlorine Dioxide is a highly flammable and reactive gas and a fire and explosion hazard. It does not require air for it to burn and can cause coughing, wheezing, and respiratory distress. At very high exposure levels, it can be fatal.

New Zealand complies with ICAO Carriage of Dangerous Goods Technical Instructions, which forbid the transport of Chlorine Dioxide in adsorbed/ Not Hydrate form.