

## Statement on disinfection of Filtering Face Pieces

2<sup>nd</sup> April 2020

Dear Sir or Madam,

Due to the high numbers of coronavirus infections, the demand for personal protective equipment has increased significantly. Air purifying respirators account for the largest share of inquiries. The high number of orders exceeds existing inventories and the production capacity - at Dräger and in the overall market. The production of Filtering Face Pieces (FFPs), half masks and filters has been ramped up to its current maximum and more efforts are made to increase the production capacity to fulfill as many inquiries as possible.

The FFPs of Dräger have been developed and approved for single use only. Due to the current shortage of FFPs in the overall market, Dräger has been contacted from various sides to assess possibilities to disinfect FFPs to be able to reuse them.

Different methods for chemical and physical disinfection have been suggested:

- The usage of disinfecting agents like iso-propanol, ethyl alcohol, hydrogen peroxide (in gaseous state or in liquid solutions), formaldehyde (gas or solution), ethylene oxide
- The usage of detergents and bleaches
- Applying elevated temperatures for specified times
- Sterilization with water vapor at various temperatures for different times, especially above 100°C
- Radiation in the form of microwave radiation, UV light, X-rays or  $\beta$ - rays
- Plasma treatments

Methods for disinfection must not compromise the filtration performance of the FFP respirator nor damage the sealing of the mask, to ensure maintaining the needed protection level. In addition, the disinfection process must not create new hazards for the wearer.

The above-mentioned methods for disinfection contain the following risks:

- The filtration efficiency of FFPs can be decreased by diminishing the charge on the electrostatic filtering materials
- The fit of the respirator can be compromised by affecting the seal of the nose pad
- The fit of the respirator can be compromised by detaching the glued nose clip
- The fit of the respirator can be compromised by decreasing the tensile strength of the straps

Due to these risks, which may lead to FFPs not working properly, Dräger does **not** recommend or support any of the above-mentioned methods or any other method for disinfection of these single use FFPs. Please note, that disinfection processes can affect the electrostatic charge of the filtering materials, which adversely compromises the filtration performance, and which isn't visible to the naked eye.

We note, that other manufacturers of FFPs also do not recommend to disinfect single use FFPs due to possible damage and compromising the FFPs from working efficiently or properly.

If new findings in the research and development department lead to the possibility to disinfect the single use FFP masks without damaging or compromising them, Dräger will inform you as fast as possible to support you in the current situation.



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