14th April 2020

**Statement on disinfection / reuse of respiratory filters in context with the Covid-19 virus**

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 respiratory filters (incl. PAPR 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 respiratory particle filters of Dräger have been developed and approved for multiple application areas within industrial applications (like woodwork / working in dusty areas).

Due to the current shortage off PPE in the overall market, Dräger has been contacted from various sides to assess possibilities to disinfect respiratory filters 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 respirator, neither damage the filter itself. In addition, the disinfection process must not create new hazards for the wearer.

The before mentioned methods for disinfection, however, contain the following risks:

- The filtration efficiency of the respiratory filters can be decreased by damaging the filtration material
- The sealing of the glued filtration package within the filter housing can be damaged

Due to these risks which may lead to damages of our filters, Dräger does **not** recommend or support any of the mentioned methods or any other method for disinfection.

Please note that disinfection processes can affect the filtering materials which lead to a reduction of the filtration performance, which isn't detectable without specific tests on the filter performance.

If new findings in the research and development lead to the possibility to disinfect the filters without damaging them, Dräger will inform you as fast as possible to support you in the current situation.

**In any event, the reuse of the filters after contact with the Covid-19 virus is not recommended.**

Dr. H. Heyer

Nico Möller-Gomez

**Dr. Harald Heyer**

Dräger Safety AG & Co. KGaA
Chemical Engineer
Research and Development

**Nico Möller-Gomez**

Dräger Safety AG & Co. KGaA
Global Marketing Manager
Marketing Management