

## Respiratory Protection for Hydrogen Peroxide (CAS: 7722-84-1)



### Background Information

Hydrogen Peroxide (H<sub>2</sub>O<sub>2</sub>) is widely used in pharmaceutical applications for its disinfectant and oxidative properties because it dissolves into water and oxygen without leaving any residues. Hydrogen Peroxide can cause irritation to the eyes, nose, skin and throat. Workers may be harmed from exposure which depends upon the dose, duration and work being performed. The recommended exposure limit (REL) by NIOSH for Hydrogen Peroxide is 1 ppm (parts per million). Therefore, a Bullard PAPRFC4 cartridge should be used in PAPRs (Powered Air-Purifying Respirators) to protect against exposure.

### Cartridge Test Details

The Bullard PAPRFC4 cartridge was tested by an independent test lab against 75 ppm Hydrogen Peroxide at a flow rate of 170 L/min, 50% RH, and 25°C. No breakthrough was detected for the cartridges for a period of sixteen (16) hours.

### Summary

Based on the test results provided by the independent test lab, Bullard cartridge PAPRFC4, which include a NIOSH (National Institute of Occupational Safety & Health) "organic vapor" approval, can filter Hydrogen Peroxide up to the levels described above. The maximum use concentration (MUC) for respirators is whichever is lower between the assigned protection factor (APF) and the exposure limit of the hazardous substance or the exposure concentration that is considered immediately dangerous to life or health (IDLH). The Bullard cartridges were tested at 170 L/min to mimic NIOSH criteria. Nominal flow rates for the Bullard EVA and EVAHL Powered Air-Purifying Respirators are approximately 198 / 240 L/min (low / high speed). Therefore, the cartridge service life may be slightly shorter when used with these PAPRs.

### Warning

Respirators help reduce exposures to certain airborne contaminants. Before use, the wearer must read and understand the User Manual provided as a part of the product packaging. Misuse may result in sickness or death. For correct use, consult the User Manual, or contact Bullard at [www.bullard.com](http://www.bullard.com).

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