



Exposure hazards that may arise from the use of Caviwipes in combination with Virox 5 RTU Wipes and/or Accel TB Wipes

OHSAH recently received a request from one of the Health Authorities regarding exposure hazards that may arise from the combined use of disinfecting products.

The inquiry refers to the application of Virox 5 RTU Wipes and/or Accel TB Wipes to a surface previously cleaned with Caviwipes. Staff members have described a “sulfur smell” following the application of Virox 5 RTU Wipes to a surface previously cleaned with Caviwipes.

Caviwipes are pre-saturated with CaviCide® and are intended as a cleaner and disinfectant wipe for Tuberculosis (TB) and Hepatitis B Virus (HBV) contaminated equipment. The disclosed ingredients in the Material Safety Data Sheet (MSDS) are: Isopropanol, Butylcellulosolve and Hyamine 1622. Hyamine 1622 (CAS Number 121-54-0), also known as Benzathonium Chloride, is a quaternary ammonium compound that contains Chlorine. Water and strong oxidizing agents should be avoided when using products containing this particular molecule.

Virox 5 RTU Wipes and Accel TB Wipes are products intended for the same purpose. While no ingredients are disclosed on the Accel TB Wipes MSDS, Hydrogen Peroxide is the active ingredient in Virox 5 RTU



Wipes. Hydrogen Peroxide is one of the strongest oxidizing agents available.

Application of Caviwipes to clean necessary surfaces may leave Hyamine 1622 residue. Accel TB Wipes should not be used in places where chlorine containing compounds may be available. Application of Virox 5 RTU Wipes may lead to exposure to hydrochloric acid gas, with a sharp pungent irritating odor, and other organic substances resulting from the interaction of the quaternary amine and hydrogen peroxide. The water present in the Virox 5 RTU Wipes may also create potential hazards if residue of Hyamine 1622 is available on the surface being cleaned. Other hazardous decomposition products stated on the MSDS for the products include, but not limited to: Carbon and Nitrogen Oxides and low molecular weight volatile organic compounds.

Washing with water, or soap and water, after the application of Caviwipes may lead to reactions between water and the quaternary amine. The Caviwipes ingredients listed are organic in nature and are not miscible with water, thus washing with water does not guarantee the residue will be removed.



If the combined use of these products cannot be avoided, then a recommended method for cleaning is: to apply Virox 5 RTU Wipes first, followed by a quick rinse with DI Water (provided the use of water will not damage the equipment being cleaned) then allow sufficient time to dry before Caviwipes can be used. This approach should ensure that residue from one product is not left behind to react with any ingredients in the second product.

The concern regarding the sulfur odor cannot be resolved without further information from the manufacturer. To date requests have been refused on the grounds that it may involve revealing proprietary information.

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