

Safety Tip of the Month

January 2003 - Decontamination of Medical Gas Cylinders

It was recently brought to my attention, that some of the commercial disinfectant materials that could be used to decontaminate medical gas cylinders and related equipment might not be compatible with oxidizing medical gases. According to the OSHA bloodborne pathogen standard, health care providers are required to examine and decontaminate medical gas cylinders and related equipment that have been exposed to blood or other potentially infectious body fluids before they are returned to the manufacturer or supplier. In a good faith effort to comply with this requirement, some health care providers could use the wrong disinfectant.

For oxidizing medical gases such as oxygen and nitrous oxide, the type of disinfectant that is used for decontamination purposes must be chosen carefully. Disinfectants that have chemical compounds of carbon chains should not be used to decontaminate medical gas cylinders and related equipment. Such disinfectants leave a hydrocarbon residue that could result in a violent combustion reaction if it comes in contact with the oxidizing medical gas. Also, the disinfectant must be compatible with the radiant heat indicator on aluminum cylinders that provides a visual indication of exposure to heat.

Health care management personnel that have infection control responsibilities need to review what disinfectants they are using on oxidizing medical gas cylinders and related equipment. It must be hydrocarbon free if used on the cylinder valve and it must be approved for oxygen cleaning.

Any surface that actually comes into contact (sometimes called the "wetted surface") with an oxidizing medical gas such as cylinder valves, regulators, pigtail connections, etc., must be cleaned for oxygen service to an approved standard. A publication is available from the Compressed Gas Association (www.cganet.com), G-4.1, Cleaning Equipment for Oxygen Service. This publication describes cleaning procedures and inspection criteria for cleaning or re-cleaning equipment prior to use with oxygen and /or other oxidizing gases.

If there are any questions regarding the chemical ingredients of the disinfectant, review the applicable MSDS or contact the supplier to ensure that it is appropriate and safe to use. If the product contains chemical compounds of carbon chains it is incompatible and should not be used under any circumstances.

Important:

This information is offered by the Gases and Welding Distributors Association and your local distributor as general guidance only and may not explain all relevant safety precautions or hazards.