Safety Information

Prepared by WG-7 Safety Info 47/25 – September 2025

Cleaning of Cylinders Returned from Healthcare Facilities during a Pandemic

During an ongoing pandemic, medical gas containers can become externally contaminated due to their use in health care facilities. It is important that these containers are cleaned in a manner that removes contaminants, does not cause damage to the container, valve, or gas product, and does not lead to a hazardous situation during the refilling and use of the container's contents.

As discussed in EIGA Doc 222*, Guidelines for Cleaning Externally Contaminated Medical Gas Containers*, it is the customer's responsibility to return to the gas supplier medical gas containers that are free from contamination [1].[1] This responsibility should be communicated and acknowledged by the health care facility.

Doc 222 addresses cleaning and disinfection procedures for contaminated cylinders and offers cautions against the use bleach/water or ammonia/water cleaning solutions. Disinfection procedures recommend the use of isopropyl alcohol (IPA) wipes or their equivalent. See Section 5.3 of EIGA Doc 222 for specific information [1].

Likewise, EIGA Doc 78, Leak Detection Fluids Use with Gas Cylinder Packages offers cautions against using soap/ water or other similar solutions, that could possibly contain ammonia or chlorine as components for leak checking as they can contribute to stress corrosion cracking over a period of time on metallic surfaces [2].

The following additional recommendations in this safety alert may be followed until such time that the Authority Having Jurisdiction (AHJ) indicates that the pandemic is no longer a public health threat. Some examples of an AHJ include the World Health Organization, the European Medicines Agency, the European Centre for Disease Prevention and Control. Normal cleaning of cylinders should be conducted in accordance with the requirements in EIGA Doc 222 and Doc 78 [1, 2].

In a pandemic situation, normal cleaning protocols may be deemed insufficient. If external contamination is suspected when containers are returned from health care facilities or patients' homes and the customer has not acknowledged their responsibility to return uncontaminated containers or could not adequately clean the container, compressed gas containers may be washed with soap/water solutions, or disinfected using a dilute bleach/water solution, and shall be followed by a sufficient clean water rinse. Such cleaning considerations should carefully weigh immediate cleaning concerns against possible longer-term effects on the container and the valve

When isopropyl alcohol (IPA) or other flammable disinfectants are used to disinfect containers, care must be taken to avoid contamination of the valve outlet. The valve shall be inspected for any residual alcohol contamination. Any residual alcohol contamination found in the valve outlet shall be removed prior to the cylinder being refilled. One method to remove residual cleaning solution from the valve outlet is to spray clean water onto a cloth and wipe the valve outlet.

[1] References are shown by bracketed numbers and are listed in order of appearance in the reference section.

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WARNING: *Residual amounts of flammable disinfectants in the presence of oxygen or other oxidizing gases and mixtures could cause a potential fire risk, which can lead to serious injury or death.*

References

[1] EIGA Doc 222, *Guidelines for Cleaning Externally Contaminated Medical Gas Containers*, www.eiga.eu

[2] EIGA Doc 78, *Leak Detection Fluids with Gas Cylinder Packages,* www.eiga.eu

As part of a programme of harmonisation of industry standards, the European Industrial Gases Association, (EIGA) has published EIGA SI 47, *Cleaning of Cylinders Returned from Healthcare Facilities during a Pandemic*, jointly produced by members of the International Harmonisation Council and originally published by the Compressed Gas Association as SA-35, *Cleaning of Cylinders Returned from Healthcare Facilities during a Pandemic.*

This publication is intended as an international harmonised standard for the worldwide use and application of all members of the Asia Industrial Gases Association (AIGA), Compressed Gas Association (CGA), European Industrial Gases Association, and Japan Industrial and Medical Gases Association (JIMGA). Each association's technical content is identical, except for regional regulatory requirements and minor changes in formatting and spelling.

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