

# Consultants Update

## *COVID-19*

Tom Badstubner  
Medical Gases Consultant  
Gases & Welding Distributors Association  
August 5, 2020

# Discussion Topics

- COVID Related Safety Alerts & Recommendations
  - CGA P-83, *Guidelines for Cleaning Externally Contaminated Medical Gas Containers*
  - CGA SA-35, *Cleaning Of Cylinders Returned From Healthcare Facilities During A Pandemic*
  - CGA SA-36/GAWDA Safety Alert, *Cylinder And Cryogenic Container Issue Related To Cylinder Conversion And Filling During The Covid-19 Crisis*
  - CGA Posters

# *CGA P-83, Guidelines for Cleaning Externally Contaminated Medical Gas Containers*



## ***Industrial and Medical Gas Safety Alert***

25 March 2020

***Cylinder Cleaning Considerations  
During the Coronavirus Pandemic***

### **Purpose**

This guidance is consistent with CGA P-83, *Guidelines for Cleaning Externally Contaminated Medical Gas Containers*, (<https://portal.cganet.com/Publication/Details.aspx?id=P-83>) and Centers for Disease Control and Prevention (CDC) Guidance, <https://www.cdc.gov>.

The healthcare customer has the primary responsibility for cleaning contaminated cylinders that are being returned for refilling. However, **where it has not been assured that the Healthcare facility has completed disinfection of affected cylinders**, consider this guidance.

# CGA P-83

- See: <https://www.cdc.gov/coronavirus/2019-ncov/prepare/transmission.html>
- Person-to-person spread - The virus is thought to spread mainly from person-to-person.
  - Between people who are in close contact with one another (within about 6 feet).
  - Through respiratory droplets produced when an infected person coughs or sneezes.
  - These droplets can land in the mouths or noses of people who are nearby or possibly be inhaled into the lungs.

## CGA P-83

- Potential COVID-19 spread from contact with contaminated surfaces or objects
  - It may be possible that a person can get COVID-19 by touching a surface or object that has the virus on it and then touching their own mouth, nose, or possibly their eyes, but this is not thought to be the main way the virus spread

# CGA P-83

- First strategy – have the healthcare customer disinfect the cylinders
  - Provide (now free) CGA P-83, *Guidelines for Cleaning Externally Contaminated Medical Gas Containers*
  - Confirm customers' decontamination practice
  - Use gloves
  - Minimize personnel contact during deliveries

# CGA P-83

- Healthcare customer should clean the cylinder
- Avoid using ammonia, amine-based compounds, or chlorine-based compounds (such as bleach) ... corrosion of steel or aluminum-alloy components or stress corrosion cracking (SCC) of brass.
- 5.1 – Initial cleaning - foreign matter
  - Hot water -  $\leq 122$  F
  - Closed valve



# CGA P-83

- 5.2 – Disinfection - use, for example, isopropyl alcohol (IPA) or equivalent disinfectant wipes.
- CDC – Guideline for Disinfection and Sterilization in Healthcare Facilities (2008)
  - <https://www.cdc.gov/infectioncontrol/guidelines/disinfection/disinfection-methods/chemical.html>
  - Isopropyl alcohol and ethanol are discussed. Each has advantages. We do not know which is more effective against COVID-19.
    - Ethyl alcohol, at concentrations of 60%–80%, is a potent virucidal agent.

# *CGA SA-35, Cleaning Of Cylinders Returned From Healthcare Facilities During A Pandemic*

# CGA Safety Alert – SA 35

## Cleaning Of Cylinders Returned From Healthcare Facilities During A Pandemic

- References P-83 and V-12 (Leak detection fluids)
- Affirms CDC guidance... cleaning visibly dirty surfaces with detergent or soap and water and using diluted household bleach solutions, alcohol solutions with at least 70% alcohol, and most common EPA-registered household disinfectants to disinfect.

# CGA Safety Alert – SA 35

Questions have been recently asked whether compressed gas containers may be washed with soap/water solutions, or disinfected using a dilute bleach/water solution following CDC recommendations if **external contamination is suspected** when containers are returned from healthcare facilities or patients' homes **and the customer has not acknowledged their responsibility to return uncontaminated containers or could not adequately clean the container.**

# CGA Safety Alert – SA 35

During the COVID-19 crisis, **consideration** may be given to the use of soap/water solutions to clean, or a dilute bleach/water solution followed by a clean water rinse to disinfect returned containers **that may not have been properly cleaned and decontaminated**. Such consideration should **carefully weigh immediate cleaning concerns against possible longer-term effects on the container and the valve.**

# CGA Safety Alert – SA 35

When isopropyl alcohol (IPA) or other flammable disinfectants are used as a spray application to disinfect containers, great care must be taken to ensure that there is **no residual left in the valve outlet** prior to the cylinder being refilled.

CGA SA-36/GAWDA Safety Alert,  
*Cylinder And Cryogenic Container Issue  
Related To Cylinder Conversion And  
Filling During The Covid-19 Crisis*

# CGA Safety Alert – SA 36

## Temporary measures to consider to meet high demand during the COVID-19 crisis

- **Change of grade** – converting high pressure and cryogenic cylinders into medical gas service
- **DOT SP 21025** – temporary extension of requalification period
- **Colors** – considerations for color coding options
- **“Top-fill”** – vent and evacuation considerations
- **SB-26** – tamper-resistant connection considerations



# CGA Safety Alert – SA 36

## GAWDA Recommendations

- The adoption of temporary measures should be formalized with:
  - A written “deviation” - approved by your Quality Control Unit
  - Documented personnel training
- When the temporary measures are retired, the process should be formalized with:
  - Closure of the “deviation” by your Quality Control Unit
  - Documented personnel training detailing the retirement of the temporary measures and restoration of your SOPs, FDA CGMP and CGA standards
- We have sample templates – two versions

# Posters

- Three critical steps that healthcare providers can take to support the medical oxygen supply chain:
  - Understand their medical gas supply system needs and capabilities
  - Manage medical gas container inventory
  - Clean their medical gas containers
- Add your contact information
- Link to CGA P-83, *Guidelines for Cleaning Externally Contaminated Medical Gas Containers*.
- Wall Connection Poster
  - [https://www.cganet.com/wp-content/uploads/CGA\\_Medical\\_Oxygen\\_Wall-Connection\\_Poster\\_8.5x11\\_QRCode.pdf](https://www.cganet.com/wp-content/uploads/CGA_Medical_Oxygen_Wall-Connection_Poster_8.5x11_QRCode.pdf)
  - [https://www.cganet.com/wp-content/uploads/CGA\\_Medical\\_Oxygen\\_Wall-Connection\\_Poster\\_11x17\\_QRCode.pdf](https://www.cganet.com/wp-content/uploads/CGA_Medical_Oxygen_Wall-Connection_Poster_11x17_QRCode.pdf)
- Cylinder Poster
  - [https://www.cganet.com/wp-content/uploads/CGA\\_Medical\\_Oxygen\\_Cylinder\\_Poster\\_8.5x11\\_QRCode.pdf](https://www.cganet.com/wp-content/uploads/CGA_Medical_Oxygen_Cylinder_Poster_8.5x11_QRCode.pdf)
  - [https://www.cganet.com/wp-content/uploads/CGA\\_Medical\\_Oxygen\\_Cylinder\\_Poster\\_11x17\\_Link.pdf](https://www.cganet.com/wp-content/uploads/CGA_Medical_Oxygen_Cylinder_Poster_11x17_Link.pdf)
  - [https://www.cganet.com/wp-content/uploads/CGA\\_Medical\\_Oxygen\\_Cylinder\\_Poster\\_11x17\\_QRCode.pdf](https://www.cganet.com/wp-content/uploads/CGA_Medical_Oxygen_Cylinder_Poster_11x17_QRCode.pdf)

# WE'RE HERE AND READY TO MEET YOUR COVID-19 MEDICAL OXYGEN NEEDS.



## HERE ARE 3 CRITICAL STEPS THAT HEALTH CARE PROVIDERS CAN TAKE TO SUPPORT THE MEDICAL OXYGEN SUPPLY CHAIN:

Our members continue to produce and deliver essential products, particularly oxygen and other medical gases. They have ramped up production in preparation for anticipated demand related to COVID-19, drawing on experience from seasonal demand surges, natural disaster response, and lessons learned from their global COVID-19 response teams. The extensive network of oxygen production and fill plants in North America provides redundancies to support continued production and delivery of medical oxygen. Throughout this crisis, medical oxygen suppliers will be closely communicating with their customers to monitor the situation and reallocate resources as necessary to respond to high demand situations.



### UNDERSTAND YOUR MEDICAL GAS SUPPLY SYSTEM NEEDS & CAPABILITIES



UNDERSTAND YOUR FACILITY'S OXYGEN SUPPLY SYSTEM MAXIMUM OPERATING CAPACITY (I.E., TANK VOLUME, VAPORIZER CAPACITY, IN HOUSE PIPING FLOW LIMITS).



COMMUNICATE ANTICIPATED CHANGES TO YOUR MEDICAL OXYGEN DEMAND AND SUPPLY NEEDS AS EARLY AS POSSIBLE TO YOUR SUPPLIER TO ALLOW ADEQUATE TIME FOR DELIVERY RESPONSE.



MONITOR YOUR MEDICAL GAS SUPPLY SYSTEMS FOR EXCESSIVE ICE BUILDUP OR FALLING SUPPLY PRESSURE. CONTACT YOUR SUPPLIER IMMEDIATELY WITH ANY CONCERNS.



WORK WITH YOUR MEDICAL GAS SUPPLIER TO IDENTIFY THE BEST SUPPLY SOLUTION FOR YOUR FACILITY NEEDS.



### MANAGE MEDICAL GAS CONTAINER INVENTORY



ORDER AND RETAIN ONLY THE OXYGEN CYLINDERS NEEDED FOR YOUR IMMEDIATE PATIENT NEEDS.  
CREATE AND IMPLEMENT A RECOVERY PLAN FOR MEDICAL OXYGEN CYLINDERS PRESCRIBED FOR HOME USE.



### CLEAN YOUR MEDICAL GAS CONTAINERS



MEDICAL GAS CONTAINERS MUST BE RETURNED TO YOUR GAS SUPPLIER FREE FROM CONTAMINATION

SCAN HERE FOR CGA P-83, GUIDELINES FOR CLEANING EXTERNALLY CONTAMINATED MEDICAL GAS CONTAINERS

THE MEDICAL GASES INDUSTRY IS FULLY COMMITTED TO MAKING SURE THAT YOUR OXYGEN NEEDS ARE MET TODAY AND THROUGHOUT THE DURATION OF THE COVID-19 PANDEMIC. TOGETHER, WE CAN WEATHER THIS CRISIS.

#### SUPPLIER INFORMATION

# Recommendations

- Five months since pandemic began... when possible...
- Review CGA P-83, *Guidelines for Cleaning Externally Contaminated Medical Gas Containers*
  - Reinforce proper cylinder cleaning/disinfection at the customer. Use poster and customer training.
  - If needed, decontaminate your cylinders with hot water and IPA/Ethanol wipes
- CGA SA-35, *Cleaning Of Cylinders Returned From Healthcare Facilities During A Pandemic*
  - Discontinue using bleach water on cylinders
- CGA SA-36, *Cylinder And Cryogenic Container Issue Related To Cylinder Conversion And Filling During The Covid-19 Crisis*
  - Change of grade – Return to CGA C-10 for change of service and CGA M-18, *Standard for the Change of Product and Change of Grade for High Pressure and Refrigerated Liquid Containers*, for converting food/industrial cylinders to medical service.
  - Colors – Return to standard medical gas colors
  - “Top-fill” – Return to standard vent and evacuation procedures
  - SB-26 – Assure tamper-proof connections are on medical containers and tamper-evident or tamper-proof connections are on industrial containers

# Contact Info

## Tom Badstubner

- Office (508) 883-0927
- Cell (443)255-8984
- Email [tom@asteriskllc.com](mailto:tom@asteriskllc.com)