Health & Safety

COVID-19 Information Sources

While there will continue to be online COVID-19 conversations in the AIC Member Community, FAIC's Global Conservation Forum and Connecting to Collections Care community, and within the specialty group discussion lists, the Health and Safety Committee would like to provide you with some other ways to get information on COVID-19.

Centers for Disease Control and Prevention (CDC) Coronavirus (COVID-19)
https://www.cdc.gov/coronavirus/2019-nCoV/index.html

List of CDC Accredited Public Health Departments
https://www.cdc.gov/publichealthgateway/accreditation/departments.html

The National Governors Association – information about individual state responses.
https://www.nga.org/coronavirus/

Johns Hopkins University COVID-19 Map
https://coronavirus.jhu.edu/us-map

Mayo Clinic News Network
https://newsnetwork.mayoclinic.org/category/covid-19/

Healthcare Triage (YouTube)
Flattening the Curve https://youtu.be/S3aT6hlGFw0
Coronavirus Update March 7, 2020 https://youtu.be/aHXNVN7vQbg
Your Coronavirus Questions Answered March 18, 2020 https://www.youtube.com/watch?v=YlrTMCPGFZs
More Coronavirus Questions Answered April 1, 2020 https://www.youtube.com/watch?v=s-UgauaPkLk
Coronavirus Questions Answered April 8, 2020 https://www.youtube.com/watch?v=JKeSTx6Uh9o
Coronavirus Questions Answered April 15, 2020 https://youtu.be/FVZxBouJ5Ns

Public Health On Call (Podcast)
https://www.jhsph.edu/podcasts/public-health-on-call/
Podcast by experts from the Johns Hopkins Bloomberg School of Public Health with several COVID-19 episodes

This Podcast Will Kill You (Podcast by epidemiologists)
http://thispodcastwillkillyou.com/2020/02/04/episode-43-m-m-m-my-coronaviruses/
Episodes 43, 49 - 54, 56, 57, 59 are about Coronavirus and COVID-19. Despite the name, this podcast has excellent general information about coronaviruses by trained epidemiologists.

Compressed Gas Safety

Compressed gases are used in conservation practice for treatment, to create modified atmospheric conditions, and to power equipment used for specific tools. Compressed gas is also an integral part of scientific equipment utilized by conservation scientists for various types of microscopy and other analytical equipment. Some examples of compressed gas use in treatment and analysis include:

- Use of carbon dioxide, nitrogen, or argon for creating modified environments
- Use of carbon dioxide in dry ice treatments
- Use of propane in cleaning outdoor monuments
- Use of nitrogen for SEM or other enhanced forms of microscopy
- Use of helium, nitrogen, or argon for GC-MS or other analytical equipment

Before discussing safety precautions when dealing with a compressed gas, one must start with its definition. A compressed gas can be:

- a gas or mixture of gases in a container and having an absolute pressure exceeding 40 psi at 70°F
- a gas or mixture of gases in a container and having an absolute pressure exceeding 104 psi at 130°F or regardless of the pressure at 70°F
- a liquid having a vapor pressure exceeding 40 psi at 100°F

Just like any chemical, compressed gases have their hazards. The container is the most

obvious hazard when dealing with pressurized gas; these can be very heavy, and difficult or awkward to move. Without the proper equipment, they can tip over and cause harm to the mover or those around them. If improperly handled, they can cause back strain or other physical injury. If a container falls and a valve is damaged or broken off, significant harm can befall those in the immediate area because the container becomes mobile once the pressure is allowed to release. Compressed gases are under pressure and can release with great force, becoming "rockets" that can injure people and damage facilities.

In addition, escaped gases can pose health risks that can endanger those within the immediate vicinity. If inert gases escape in an uncontrolled fashion without proper precautions, they can displace oxygen in the room quickly. Toxic gases can poison the air near the container. Oxidizers and flammable gases can cause fires and explosions if handled improperly.

To avoid these situations, conservators can take steps to handle and store their compressed gases properly to create a safer environment for staff and facilities. A Standard Operating Procedure (SOP) should be developed for every use of compressed gases and all those using them should be trained in using this SOP before they are cleared to handle or use compressed gases. Compressed gases, as with any other chemical, should be considered during the development of emergency procedures or disaster plans. Health and safety protocols for pressurized gases fall into four categories: storage, handling/moving, use, and disposal. Safety procedures start when the container is first accepted by staff.

- Make sure that there is no visible damage to the tank, the valve, or any other part of the container. Also, make sure that the gas inside is properly identified with the name of the chemical and all safety warnings and labels.
- Once accepted and installed, the container must be chained or strapped to a wall or put within an immoveable restraint to prevent it from rocketing if it becomes damaged. All compressed gas containers should be stored upright and supported in one of three ways: a wall or bench-mounted bracket for gas cylinders; chains or belts mounted to walls or benches; or freestanding cylinder dollies that are designed for gas canisters and have belts or chains for support.
- Containers should be separated by hazard and kept away from heat, flames, and the sun.
- When not in use, the cylinder should have valve protection caps in place.
- Pressurized gas tanks should not be stored near exits.
- If tanks need to be moved, a gas cylinder dolly should be used, especially for tanks weighing more than 50 pounds. Moving tanks is usually a two-person job, so make sure that personnel are available, and that the path is clear. Make sure the person moving the tanks is strong enough to do so safely and has no back issues.
- The area must be properly ventilated for the type of gas in use or storage.
- Be sure to wear personal protective equipment (PPE) as necessary during installation and use of compressed gases.
- Every time a compressed gas container is used, check it for leaks, damage, or corrosion on the valve. If you see something concerning on the container, call the vendor or the manufacturer to determine next steps.
- If a tank is actively leaking, it should be moved to a safe, well-ventilated area, and staff or emergency personnel who are trained in proper removal of compressed gases should be contacted and made aware of the situation (including the identity of the gas itself).
- When possible, work with suppliers who provide returnable gas containers, so you are simply swapping for a new container.
- Federal guidelines govern disposal of these containers and this can be very expensive; keeping up to date on federal and state regulations is key in safe compliance. .
- Conservators should not have more compressed gas in their labs than is strictly necessary; the hazard is not worth the risk.

For more information, consult the OSHA website. This site has great information and can help with understanding 29 CFR 1910, which is the federal regulations code that includes compressed gases. Please note that twenty-eight states have OSHA-approved health and safety plans that might include more stringent rules; check your state regulations for more information.

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