



STANFORD UNIVERSITY

ENVIRONMENTAL HEALTH & SAFETY

What to do After Completing Compressed Gas Safety

Contact EH&S at 723-0448:

- to ensure your experiment design conforms to the permitting and engineering control requirements.
- before ordering any toxic gases regulated by the Toxic Gas Ordinance (TGO).
- for assistance with identifying appropriate engineering controls for your gas work.

Contact the SU Fire Marshal to ensure your lab meets California Fire Code requirements, including storage limits for compressed gases for your building's control area.

Review and understand the hazards of the gases before beginning work.

Visually check all gas cylinders to ensure labeling is visible and correct, and that neither the cylinders nor the valve protection caps are damaged, corroded, or otherwise leak.

Ensure all gas cylinders are stored correctly.

Ensure gas lines are labeled with the name of the gas and the direction of flow.

Ensure all materials used are compatible with the gas, including regulators, valves, hoses, pipe lines, and flow meters.

Ensure proper exhaust ventilation for the lab and apparatus.

Ensure proper purging and pressure relief for toxic, flammable, corrosive and pyrophoric gases.

Ensure you have on hand (and then use) proper PPE when working with compressed gases.

Ensure you know emergency preparedness guidelines, and have all important phone numbers where you can quickly locate them in the event of a life-threatening gas release or injury.



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Compressed Gas Safety References

Chemical Safety Toolkit

Link: <http://chemtoolkit.stanford.edu/TemplateSOP>

Laboratories are required to have approval for storage of toxic gasses. To become approved, develop an SOP using the Chemical Safety toolkit.

Toxic Gas Use at Stanford University

Link: <http://www.stanford.edu/dept/EHS/prod/researchlab/lab/tgo/index.html>

Guidance on Toxic Gas Ordinance requirements.

California Regulations for Compressed Gas Storage and Usage

- California Fire Code
 - Compressed Gases: Chapter 30
 - Flammable Gases: Chapter 35
 - Highly Toxic & Toxic Compressed Gases: Section 3704
- California Div. of Occupational Safety & Health Standards
 - Compressed Gas & Air Cylinders: Title 8 CCR 4649-4650
- Santa Clara County Department of Environmental Health
 - Toxic Gas Storage: Division B11 Chapter XIV

Contact Stanford University EH&S at (650)723-0448 when:

- Planning to use toxic gasses in your research
- Identifying appropriate engineering controls for your gas work
- Other questions or concerns

Reference Guides for Compressed Gases:

- Guide to Safe Handling of Compressed Gasses (Matheson)
- Handbook of Compressed Gasses (compressed Gas Association)
- Gas Data Book (Matheson)

Contact the University Fire Marshal at (650)723-0609 to make sure your lab meets Fire Code requirements, including storage limits for compressed gases for your building's control area.

For all service on gas cylinders or their parts, contact your distributor.