

Mapping Safe Hydrogen Standards

Hydrogen safety standards are guidelines and regulations that are designed to ensure the safe storage, handling, and transportation of hydrogen. This map will help you identify the operational safety standards published by the Compressed Gas Association (CGA) that best suit your needs.

Production, Operations & Maintenance

Because of hydrogen's unique properties, liquid and gaseous hydrogen production and storage systems require careful planning, and execution. As hydrogen use expands to new areas it is vital to ensure safe and standardized use.

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Application

A hydrogen fueled future for transportation, energy storage, heating, space exploration, and more, is a rapidly approaching reality. 75 years of standards have built a strong foundation for the expansion of hydrogen use and applications of hydrogen.

[Learn more →](#)

Delivery

A sustainable hydrogen ecosystem requires that hydrogen be delivered from where it is produced to the point of end use, such as an industrial facility, power generator, or fueling station. Currently, the main methods for transporting and delivering hydrogen are by truck and through pipelines.

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Storage

Hydrogen can be stored as a gas, a liquid, and in solid form. At customer locations, depending on how much hydrogen is used, gas and liquid hydrogen is stored in various tanks that require special attention to specifications like spacing, venting, and roof systems.

[Learn more →](#)

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- CGA H-10, Combustion Safety for Steam Reformer Operation
- CGA H-11, Safe Startup and Shutdown Practices for Steam Reformers
- CGA H-12, Mechanical Integrity of Syngas Outlet Systems
- CGA H-13, Hydrogen Pressure Swing Adsorber (PSA) Mechanical Integrity Requirements
- CGA H-14, HYCO Plant Gas Leak Detection and Response Practices
- CGA H-15, Safe Catalyst Handling in HYCO Plants
- CGA P-89, Prevention of Plant Instrument and Utility Gas System Cross Contamination

- CGA G-5, Hydrogen
- CGA G-5.3, Commodity Specification for Hydrogen
- CGA H-4, Terminology Associated with Hydrogen Fuel Technologies
- CGA G-5.4, Standard for Hydrogen Piping Systems at User Locations
- CGA G-5.5, Hydrogen Vent Systems
- CGA G-5.6, Hydrogen Pipeline Systems
- CGA G-5.7, Carbon Monoxide and Syngas Pipeline Systems
- CGA PS-31, Position Statement on Cleanliness for Proton Exchange Membranes Hydrogen Piping/Components
- CGA PS-46, Position Statement on Roofs Over Hydrogen Storage Systems
- CGA PS-48, Position Statement on Clarification of Existing Hydrogen Setback Distances and Development of New Hydrogen Setback Distances in NFPA 55
- CGA PS-69, Position Statement on Liquefied Hydrogen Supply System Separation Distances

- CGA G-5.4 Standard for Hydrogen Piping Systems at User Locations
- CGA G-5.5 Hydrogen Vent Systems
- CGA H-3 Standard for Cryogenic Hydrogen Storage
- CGA H-5 Standard for Bulk Hydrogen Supply Systems (an American National Standard)
- CGA P-28 OSHA Process Safety Management and EPA Risk Management Plan Guidance Document for Bulk Liquid Hydrogen Supply Systems
- CGA P-74 Standard for Tube Trailer Supply Systems at Customer Sites
- CGA PS-46 Position Statement on Roofs Over Hydrogen Storage Systems
- CGA PS-48 Position Statement on Clarification of Existing Hydrogen Setback Distances and Development of New Hydrogen Setback Distances in NFPA 55
- CGA PS-69 Position Statement on Liquefied Hydrogen Supply System Separation Distances

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