

# THE ELEMENTAL

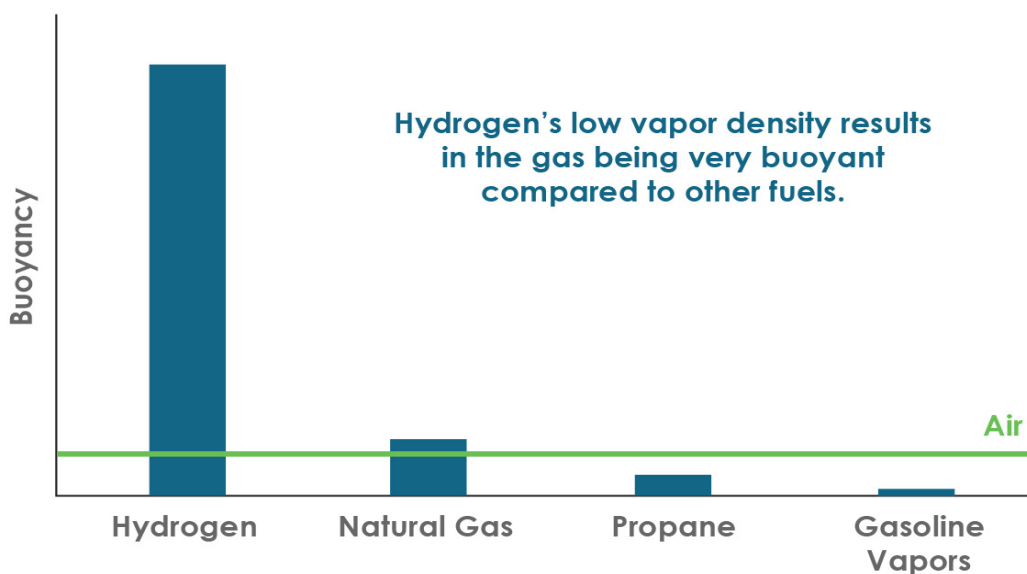
Placing Safety at the Center of Hydrogen



## Hydrogen's Buoyancy

Hydrogen's small molecule size and low vapor density (14 times lighter than air) make it unique compared to many other fuels. It has high buoyancy and diffusivity, and as such, leaking hydrogen will rise and disperse quickly in air. This phenomenon is very different from other common fuels, such as gasoline or propane. The vapors/gases from a release of these materials will pool near the ground.

Hydrogen's ability to rise and disperse quickly can provide a safety advantage in an outside environment. However, in confined spaces, hydrogen can accumulate and reach a flammable concentration near high points, ceilings, and roofs. Proper ventilation and the use of hydrogen detection sensors are essential to mitigate this hazard.



Read more about this and other hydrogen safety topics at [www.h2tools.org](http://www.h2tools.org).  
Please contact us at [chs@aiche.org](mailto:chs@aiche.org) if you have a suggestion for a future topic.

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