Green Hydrogen — Grade 5.0

Compressed, colorless, odorless, flammable gas · CAS 1333-74-0 · UN1049 · Hazard Class 2.1

Hydrogen (H_2) is the lightest and most energy-dense element in the universe. When produced via electrolysis powered exclusively by renewable energy, it carries zero direct carbon emissions from production through end use — combustion yields only water vapor. GHB will generate green hydrogen at its La Rumorosa facility using Anion Exchange Membrane (AEM) electrolysis driven by co-located wind and solar generation with battery energy storage (BESS), achieving Grade 5.0 purity (99.999% minimum H_2) in compliance with ISO 14687:2019 and SAE J2719 for fuel-cell vehicle and industrial applications. Its high gravimetric energy density — roughly 2.5× that of natural gas by mass — makes it a compelling clean energy carrier for transportation, power generation, and industrial decarbonization.

Production Origin
Location: La Rumorosa, Baja California, México
Method: Anion Exchange Membrane (AEM) electrolysis
Energy Source: 100% wind and solar with BESS backup
Carbon footprint: Zero direct CO_2 emissions
Water source: Ultra-pure deionized process water
Purity: Grade 5.0 — 99.999% minimum H_2

Physical & Chemical Properties	
Molecular Weight:	2.016 g/mol
Specific Volume:	191.7 ft³/lb
Boiling Point:	–252.9 °C (–423.2 °F)
Flammable Range:	4.0% – 75.0% in air
Auto-ignition Temp:	500 °C (932 °F)
CAS Registry:	1333-74-0

PURITY SPECIFICATIONS — GRADE 5.0 (99.999% MINIMUM H2)

Grade	Min. Purity	O_2 (ppm)	H_2O (ppm)	THC as CH_4 (ppm)	N_2 (ppm)	CO (ppm)	CO_2 (ppm)
5.0 Ultra High Purity	99.999%	2	3	0.5	8	0.5	1

Specifications are typical results per ISO 14687:2019 and SAE J2719. Certificates of Analysis available upon request.

DOT / Transport Information
Proper Shipping Name: Hydrogen, compressed
UN/NA Number: UN1049
Hazard Class: 2.1 (Flammable Gas)
Shipping Labels: Flammable Gas
ERG Guide: 115

Delivery — Jumbo Tube Trailer		
Capacity / Load	**Max. Pressure**	**Trailer**
1,082 kg H_2	275 bar (4,000 psi)	Type IV · CT-0853 · 53 ft
Partial loads evaluated case by case		

SERVICE AREA — CALI-BAJA CORRIDOR

GHB will deliver directly to customer facilities across Southern California via 53 ft Jumbo Tube Trailers at 275 bar (4,000 psi), carrying up to 1,082 kg of green hydrogen per load. Planned delivery points include Otay Mesa, San Diego, the Ports of Los Angeles and Long Beach, Orange County, and the Inland Empire. Delivery configuration is adaptable to customer infrastructure — including cascade fueling, on-site compression, and mobile dispensing. Custom delivery schedules available upon request. Pressure adjustment at the delivery point (booster compressor or cascade system) is evaluated case by case and coordinated with each customer's operations team.

Reserve your Q2 2028 capacity slot

Pre-registrations and Letters of Intent are now open. Contact us or visit greenh2baja.com to register your interest.

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