

Industrial Acetylene. (C₂H₂)

≥ 98.0% pure to IS 308 — dissolved in acetone, the classic fuel gas.

No fuel gas matches acetylene at the torch: the hottest, most focused flame in industrial use, about 3,100 °C in oxygen. KIGL Industrial Acetylene is generated, purified and dissolved in acetone at our PESO-approved Noonmati facility — the same gas the North East's fabricators have counted on for seventy-five years.

98.0%

Minimum purity to IS 308

3,100 °C

Hottest industrial fuel-gas flame

IS 308

Indian Standard for dissolved acetylene

75 yrs

Manufacturing excellence, serving North East India

SPECIFICATION

PARAMETER	SPECIFICATION
Purity (C ₂ H ₂ , v/v)	≥ 98.0%
Phosphine, PH ₃	< 600 ppm
Hydrogen sulphide, H ₂ S	< 1500 ppm
Solvent	Acetone, in porous mass
Reference standard	IS 308

Need cleaner flame chemistry? KIGL also fills **Ultra High Purity Acetylene** (≥ 99.6%, PH₃/H₂S < 10 ppm, DMF solvent) for FAAS and synthesis — see its dedicated brochure.

The hottest flame in industry.

Acetylene's triple bond stores energy no other fuel gas carries: a primary flame cone hot and tight enough for true fusion welding, fast preheats and crisp cut starts. With balanced oxy-acetylene equipment one cylinder set welds, cuts, brazes, heats and hardens — the most versatile flame on the floor.

PHYSICAL PROPERTIES

PROPERTY	VALUE
Molecular weight	26.04
State of product in cylinder	Dissolved gas, in porous mass (in acetone)
Sublimation point at 1 atm (°C)	−84
Liquid density at boiling point (g/ml)	0.617
Gas density at 20 °C, 1 atm (kg/m ³)	1.09

PROPERTY	VALUE
Relative density (air = 1)	0.91
Vapour pressure at 20 °C (bar g)	44
Flammability limits in air (vol %)	2.5 to 81.0
Autoignition temperature (°C)	~305
Flame temperature in oxygen (°C)	~3,100

USES & APPLICATIONS

One flame, many trades. KIGL Industrial Acetylene covers the full range of hot work:

WELDING & CUTTING

- Oxy-acetylene welding and brazing of steels and alloys
- Profile cutting of plates and sections
- Gouging and scarfing
- Flame straightening and localised heating

SURFACE & THERMAL

- Flame hardening of wear surfaces
- Hardfacing and thermal spraying
- Flame cleaning and descaling
- Carbon coating of moulds and dies

Recommended control equipment available from KIGL: two-stage brass acetylene regulators (LH connection), flashback arrestors for regulator and torch ends, and welding/cutting torch sets.

SAFE HANDLING

- **Never use acetylene at a line pressure above 1.5 bar g (15 psig)** — free acetylene above this pressure can decompose explosively.
- **Withdrawal rate:** no more than 1/7th of cylinder contents per hour in continuous service; manifold multiple cylinders for high flows.
- **Keep cylinders upright** in storage, transport and use, to prevent liquid solvent withdrawal.
- Always fit **flashback arrestors** at both regulator and torch; open the valve no more than 1.5 turns.
- Store ventilated, away from oxygen and oxidiser cylinders, heat and ignition sources. Leak-test with soap solution, never a flame.

Let's talk gas.

ENQUIRIES · ORDERS · EQUIPMENT

The Kamrup Industrial Gases Limited
Maniram Dewan Road, Noonmati, Guwahati 781026, Assam
guwahati@kigl.co.in · kigl.co.in

Also: Oxygen · Medical Oxygen · Nitrogen · Argon · CO₂ · UHP Acetylene