Experis[®] ultra-high purity gases Technical specification Acetylene



Air Products' Experis speciality gases range includes a number of UHP (ultra-high purity)

Acetylene products with specifications intended to deliver peace of mind whatever your application. Whether it is chemical analysis or process control, our experts are on hand to help you select the right gas for your requirements. The range includes gas with unrivalled specifications of critical impurities and a comprehensive range of package options.

Overview of grades and analytical verification

| | Acetylene Industrial | Acetylene Premier (2.6) |
|--------------------------|-------------------------|-------------------------------|
| Purity | 98.5% | 99.6% |
| Analytical verification* | N/A | Batch |
| PH₃ (ppm) | <600 | <10 |
| H₂S (ppm) | <1500 | <10 |

*Explanation of terminology

Batch – Air Products carries out statistical batch analysis on cylinders from the same batch to verify conformance to the advertised specification.

Physical properties

| Molecular weight | 26.04 |
|---|---------------|
| State of product in cylinder | Dissolved gas |
| Boiling point at 1 atm (°C) | -84(1) |
| Liquid density at boiling point (g/ml) | 0.617 |
| Gas density at 20°C (g/l) | 1.747 |
| Vapour pressure at 20°C (bar g) | 44 |
| Flammability limits in air (vol % in air) | 2.5 to 81.0 |
| | |

⁽¹⁾ Sublimation point

Benefits of Acetylene Premier

Acetylene Premier is an ideal fuel gas for flame atomic absorption spectroscopy (FAAS) due to its low Phosphine (PH $_3$) and Hydrogen Sulphide (H $_2$ S) specification. This grade of Acetylene will give a cleaner flame and less interference allowing optimum analytical results.

Acetylene specifications

| Product | Product code | Size | Valve | Pressure (bar g)* | Contents (kg)** |
|------------------------------------|--------------|------|-------|-------------------|-----------------|
| Acetylene Premier 2.6 (D02) | 27311 | x30s | BS4 | 19 | 6 |
| Acetylene Premier 2.6 (D02) | 185697 | x51s | BS4 | 19 | 9 |

^{*@ 150°}C

Other UHP gases available from the speciality gases product portfolio include: Argon, Carbon Dioxide, Helium, Hydrogen, Nitrogen, Oxygen and Synthetic Air.

For further information on these gases please see individual data sheets.

Cylinder and pack specifications

| Size | Pressure (bar g) | Height (mm) | Diameter (mm) | Width (mm) | Length (mm) | Empty weight (kg) | Full weight (kg) |
|------|---------------------|----------------|------------------|---------------|----------------|----------------------|---------------------|
| x30s | 19 | 1050 | 230 | n/a | n/a | 54 | 60 |
| x51s | 19 | 1550 | 230 | n/a | n/a | 74 | 83 |

Dimensions and weights are approximate, actual cylinder values may differ.

Acetylene is available in the following cylinder size options:



Recommended control equipment*

| Туре | Model | Product code |
|--------------------|---|--------------|
| Pressure regulator | Two stage, brass, general purpose | R121 |
| Pressure regulator | Single stage, brass, general purpose | R221 |
| Pressure regulator | Single stage, stainless steel | R2100 |
| Manifold | Single wing, high purity | M1000 |
| Manifold | Two wing, manual changeover, high purity | M2000 |
| Manifold | Two wing, automatic changeover, high purity | M3000 |

 $^{{}^*\}text{Please refer to the } \textbf{Equipment Centre Selection Tool} \text{ for full equipment information}.$

For more information please contact us at:

Air Products PLC

T 0800 389 0202

E apukinfo@airproducts.com

airproducts.co.uk

Air Products Ireland Ltd.

T 1800 99 50 29

E ieinfo@airproducts.com

airproducts.ie





^{**}Indicative fill value