

Experis® Ultra High Purity gases

For more accurate analyses and longer-lasting analytical equipment

➤ **Purity**

➤ **Accuracy**

➤ **Stability**

➤ **Peace of Mind**

➤ **Specifically designed for the analytical user**

➤ **Contain ultra low levels of impurities**

➤ **When combined with BIP® technology you are guaranteed the purest, most stable gas**

➤ **Accurate analyses are ensured, giving you greater peace of mind**

➤ **Experis® Gases**

Whatever your application, be it chemical analysis or process control, our Experis® gas UHP range offers you the optimum gas solution. Acetylene, Air, Argon, Carbon Dioxide, Helium, Hydrogen, Nitrogen, and Oxygen are available with a range of purity levels. They can be supplied in a cylinder size to suit your specific requirements, from small 0.4 litre cylinders to packs of 18 large cylinders.

➤ **Certified Purity**

It is not just the ultra high purity of the gas that offers peace of mind, but also the certainty of knowing the maximum level of specific impurities contained in the gas. Understanding which impurities, and at what level, interfere with your specific analysis, enables us to provide you with a range of gases and grades which enable you to achieve the most accurate results. Our Experis® gases specialists can assist you in selecting the optimum gas for your application. All Experis® UHP gases come with certified maximum impurity levels and, of course, our quality assurance systems are ISO 9000 certified. The Experis® Pharma grade gases are produced to comply fully with the European Pharmacopoeia and Good Manufacturing Practice part II, ensuring peace of mind for producers of APIs and pharmaceuticals.

➤ **BIP® cylinders**

Our unique BIP® cylinders, using a patented method for removing impurities as the gas is withdrawn from the cylinder, offer the very highest purity levels for the most demanding laboratory applications. Every BIP® Nitrogen, Helium and Argon cylinder contains less than 10ppb of oxygen and less than 20ppb of water, making them 300 times purer than typical UHP gases. Now the BIP® technology has been extended to Hydrogen with less than 100ppb of oxygen, less than 20ppb of water and less than 10ppb of THC. BIP® technology gives you the ultimate zero gas; this means longer chromatographic column life, ultra low dew points and zero process contamination.

➤ **Gas Equipment**

The use of specially designed and engineered gas control equipment ensures that gas reaches the point of use not only at the required purity, but also at the required pressure and flow rate. At Air Products, we use our expertise in UHP gases and their applications to offer you a comprehensive range of gas control equipment, including regulators and manifolds. All equipment is designed to the highest standards and is extensively leak-tested. We also offer an extensive design, build and install service giving you complete peace of mind whatever your application.



Ultra High Purity Gases: standard specifications

Other sizes, purities or analyses available on request. Please contact Air Products

Grade	Specifications (in ppm molar when not specified)						Purity	Cylinder size*				Certificate of conformity	
								Cylinders		Packs			
										200 bar	300 bar		
Acetylene	PH₃	H₂S					30	40				C₂H₂	
Premier	10	10				2.6	✓	✓				Batch	
Air	H₂O		THC¹	CO+CO₂		NOx/NH₃/SO₂/H₂S	10	47	11x47			Air	
Zero (20.9% O ₂ +/-1%)	3		0.2	1			4.8	✓	✓	✓		Batch	
Zero Plus (20.9% O ₂ +/-0.2%)	0.5		0.05	0.1		ND ³	6.0	✓	✓			Individual	
Argon	H₂O	O₂	THC¹	CO+CO₂	N₂		0.4	10	47	11x47	12x50	Ar	
Premier	2	1.5	0.1		4		5.2	✓	✓	✓		Batch	
BIP	0.02	0.01	0.1	0.1	1		5.7	✓	✓		✓	Batch	
BIP Plus	0.02	0.01	0.05	0.05	0.3		6.6		✓			Individual	
Nitrogen	H₂O	O₂	THC¹	CO+CO₂	H₂	CFC²		10	47	12x50		N₂	
Premier	2	3	0.5				5.2		✓			Batch	
BIP	0.02	0.01	0.1	0.5	1		5.7	✓	✓	✓		Batch	
BIP ECD	0.02	0.01	0.1	0.5	1	0.001	5.7		✓			Batch	
BIP Plus	0.02	0.01	0.05	0.05	0.05		6.8		✓	✓		Individual	
Pharma	2	3		1+1			5.2		✓	✓		Batch	
Carbon dioxide	H₂O	O₂	THC¹	CO	N₂		0.4	10	47	11x47		CO₂	
Premier	7	10	5	2	25		4.5	✓	✓	✓	✓	Batch	
Premier Liquid	7	10	5	2	25		4.5	✓	✓			Batch	
UltraPure	2	0.5	0.1	0.5	2		5.5		✓			Individual	
UltraPure Liquid	2	0.5	0.1	0.5	2		5.5		✓			Individual	
Helium	H₂O	O₂	THC¹	CO+CO₂	N₂	H₂	CFC²	10	47	11x47	12X50	18x50	He
Premier	2	1	0.5		5			5.2	✓	✓	✓		Batch
BIP	0.02	0.01	0.1	0.5	1			5.7	✓	✓	✓	✓	Batch
BIP ECD	0.02	0.01	0.1	0.5	1		0.001	5.7	✓	✓			Batch
BIP Plus	0.02	0.01	0.05	0.05	0.1	0.1		6.7	✓	✓	✓	✓	Individual
Hydrogen	H₂O	O₂	THC¹	CO+CO₂	N₂			10	47	11x47	17x50		H₂
Premier Plus	2	1	0.1	0.5	5			5.2	✓	✓	✓	✓	Batch
UltraPure	1	0.5	0.1	0.5	2			5.5		✓			Batch
UltraPure Plus	0.5	0.1	0.05	0.05	0.2			6.0	✓	✓	✓		Individual
BIP	0.02	0.1	0.01	0.5	2			5.7		✓			Batch
BIP Plus	0.02	0.1	0.01	0.05	0.2			6.6		✓	✓		Individual
Oxygen	H₂O		THC¹	CO+CO₂	N₂	H₂		0.4	10	47	11x47		O₂
Premier	3		1	1	10	1		4.5		✓			Batch
UltraPure	1		0.5	0.5	5	0.5		5.2	✓	✓	✓		Batch
UltraPure Plus	0.5		0.1	0.1	0.4	0.1		5.8	✓	✓	✓		Individual
Pharma	5			1+1				4.5		✓	✓		Batch

*Equivalent water capacity in litres, details below

Description of the cylinder sizes

Watercapacity	Air Products code	Description	Approximate contents ⁴	Old code for reference only
0.4 L	X0.4S	Lecture bottle Steel	0.1m ³	LB
10 L	X10S	Steel cylinder	2m ³	PT10
30 L	X30S	Steel cylinder	5m ³	MD30
40 L	X40S	Steel cylinder	7m ³	Y41
47 L	X47S	Steel cylinder	10m ³	K/L
11x47 L	11X47S	11 cyl. bank	110m ³	PL11
12x50 L	12X50S	12 cyl. bank	120m ³	PB50
17x50 L	17X50S	17 cyl. bank	170m ³	P50W
18x50 L	18X50S	18 cyl. bank	235m ³	VB50

Remarks:

- In purity shorthand the first digit refers to the number of 9's and the second digit to the following number. For example, 5.2 means 99.9992% overall purity, 6.0 means 99.99990% overall purity.
- Other sizes, qualities and analyses available on request
- Usual filling pressure (unless specified): 200 bar.g
- The above data can be subject to changes
- ¹ THC = as CH₄
- ² CFC = hydrocarbons
- ³ ND = non detectable
- ⁴ Except for CO₂

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