

EXPERIS®

Ultra High Purity Gases

➤ Purity

➤ Accuracy

➤ Stability

Experis® ultra high purity gases have been specifically designed for the analytical user. They contain the lowest levels of critical impurities available on the market. When combined with our patented BIP® technology you will enjoy product consistency, reliable analytical results and trouble free operation.

Air Products understands the critical importance of UHP gases and the impact of impurities on your results. Our range of Experis® UHP gases will meet your most stringent requirements.

➤ Experis® Gases

Whatever your application, be it chemical analysis or process control, our Experis® 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.

➤ 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® 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.

➤ 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Our unique BIP® cylinders, using a patented method for removing impurities as the gas is withdrawn from the cylinder, offer the very highest purity levels for the most demanding laboratory applications.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® cylinder contains less than 10 ppb of oxygen and less than 20 ppb of water. BIP® nitrogen, helium and argon are 300 times purer compared with the equivalent industrial product. 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 ultra high purity gases and their applications to offer you a comprehensive range of UHP 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.



Certificate of conformity		Certificate of conformity	
Certification number		Certification number	
He			
BIP® Plus			
Individual	O ₂	< 10	ppb
	H ₂ O	< 20	ppb
	CO+CO ₂	< 50	ppb
	THC (as CH ₄)	< 50	ppb
	N ₂	< 100	ppb
H ₂	< 1	ppb	
Lot/Block n°			



Ultra High Purity Gases : Standard Specifications

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

*Equivalent water capacity in litres

	Grade	Specifications (in ppm molar when not specified)						Purity	Cylinder size*					Certificate of Conformity			
									Cylinders		Packs						
Acetylene		H ₂ O	PH ₃	H ₂ S					40					C ₂ H ₂			
	Premier		10	10				99.6%	x						Batch		
	Premier Plus	700	1	1				99.7%	x						Individual		
Air		H ₂ O	O ₂	THC ¹	CO + CO ₂				50		16*50			Air			
	Zero (20.9% O ₂ +/-1%)	3	-	0.2	1			99.998%	x			S			Batch		
	Zero Plus (20.9% O ₂ +/-0.2%)	0.5	-	0.05	0.1			99.9999%	x						Individual		
Argon		H ₂ O	O ₂	THC ¹	CO + CO ₂	N ₂			10	50	12*50	16*50	15*50	Ar			
	Premier	2	1.5	0.1	-	4			99.9992%	x	S		M	Batch			
	5.5	1	1	0.1	0.5	2			99.9995%	x	x	S		M	Batch		
	BIP	0.02	0.01	0.1	0.1	1			99.9997%	x	S				Batch		
	6.0	0.5	0.1	0.05	0.05	0.3			99.9999%	x					Individual		
	BIP Plus	0.02	0.01	0.05	0.05	0.3			99.99996%	x					Individual		
Nitrogen		H ₂ O	O ₂	THC ¹	CO	H ₂	CFC ²			10	50	16*50	15*50	N ₂			
	Premier	2	3	0.5	-	-	-			99.9992%	x	S		M	Batch		
	5.5	1	2	0.1	0.5	1	-			99.9995%	x	x	S		M	Batch	
	BIP	0.02	0.01	0.1	0.5	1	-			99.9997%	x					Batch	
	BIP ECD	0.02	0.01	0.1	0.5	1	0.001			99.9997%	x					Batch	
	6.0	0.5	0.4	0.05	0.05	0.05	-			99.9999%	x					Individual	
	BIP Plus	0.02	0.01	0.05	0.05	0.05	-			99.99998%	x					Individual	
Carbon Dioxide		H ₂ O	O ₂	THC ¹	CO	N ₂			47					CO ₂			
	Premier	7	10	5	2	25			99.995%	x					Batch		
	UltraPure	2	0.5	0.1	0.5	2			99.9995%	x					Individual		
Helium		H ₂ O	O ₂	THC ¹	CO + CO ₂	N ₂	H ₂	CFC ²			10	50	12*50	16*50	15*50	He	
	Premier	2	1	0.5	-	5	-	-			99.9992%	x	S		M	Batch	
	5.5	1	0.5	0.1	0.5	1	1	-			99.9995%	x	x	S		M	Batch
	BIP	0.02	0.01	0.1	0.5	1	-	-			99.9997%	x	S				Batch
	BIP ECD	0.02	0.01	0.1	0.5	1	-	0.001			99.9997%	x					Batch
	6.0	0.5	0.1	0.1	0.1	0.1	-	-			99.9999%	x					Individual
	BIP Plus	0.02	0.01	0.05	0.05	0.1	0.1	-			99.99997%	x					Individual
Hydrogen		H ₂ O	O ₂	THC ¹	CO + CO ₂	N ₂			10	47	50	16*50		15*50	H ₂		
	Premier	3	3	0.5	1	-			99.997%			S		M	Batch		
	Premier Plus	2	2	1	2	-			99.9992%	x	x	x	S		M	Batch	
	UltraPure	1	0.5	0.1	0.5	-			99.9995%			x	x		Batch		
Oxygen		H ₂ O	O ₂	THC ¹	CO + CO ₂	N ₂	H ₂	Ar			10	50		O ₂			
	Premier	3	0	1	1	10	1	-			99.995%	x		Batch			
	UltraPure	1	-	0.5	0.5	5	0.5	-			99.9992%	x		Batch			
	UltraPure Plus	0.5	-	0.1	0.1	0.4	0.1	-			99.9998%	x	x		Individual		

Spec Gas Cylinder - Fill Volume				Estimated Volume (Sm ³) @ 15°C							
Water Capacity	Air Products Code	Description	Filling Pressure	C ₂ H ₂	Air	Ar	N ₂	CO ₂	He	H ₂	O ₂
10L	X10A	Alu Cylinder	150Bar			1.6	1.5		1.4	1.4	1.6
40L	X40S	Acetylene Cylinder		6.0							
47L	X47S	Steel Cylinder	150Bar			7.4	6.8	30kg		6.5	
50L	X50S	Steel Cylinder	192Bar							8.6	
50L	X50S	Steel Cylinder	200Bar		9.7	10.4	9.4		9.0		10.7
12 x 50L	12x50S	12 ST Cylinders Pack	200Bar			124.8			108		
15 x 50L	15x50S	15 ST Cylinders Pack	192Bar							129.0	
15 x 50L	15x50S	15 ST Cylinders Pack	200Bar			156.0	141.0		135.0		
16 x 47L	16x47S	16 ST Cylinders Pack	150Bar							104.0	
16 x 50L	16x50S	16 ST Cylinders Pack	192Bar							137.6	
16 x 50L	16x50S	16 ST Cylinders Pack	200Bar		155.2	166.4	150.4		144.0		

Remarks:

- The above data are subjected to changes
- ¹. THC = CH₄
- ². CFC = halocarbon

X - Available in both Singapore & Malaysia

S - Singapore only

M - Malaysia only

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