

Experis[®] ultra-high purity gases

Technical specification

Synthetic Air



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

	Compressed Air Industrial	Zero Air (5.0)	Zero Air Plus (6.0)
Purity	-	99.999%	99.9999%
Analytical verification*	N/A	Batch	Individual
Oxygen (ppm)	<20-22%	<20.69-21.11%	<20.85-20.94%
Argon (ppm)	-	-	<0.01
NO _x (ppm)	-	<0.1	<0.02
SO ₂ (ppm)	-	-	<0.02
CO+CO ₂ (ppm)	-	<1	<0.1
Water (ppm)	Without free water	<3	<0.5
THC (ppm)	-	<0.2	<0.05

Physical properties

Molecular weight	28.84
State of product in cylinder	Gas
Boiling point at 1 atm (°C)	n/a ⁽¹⁾
Liquid density at boiling point (g/ml)	n/a ⁽¹⁾
Gas density at 20°C (g/l)	1
Vapour pressure at 20°C (bar g)	n/a
Flammability limits in air (vol % in air)	n/a

⁽¹⁾ n/a due to mixture composition

*Explanation of terminology

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

Individual – Each cylinder is individually analysed to verify conformance to the advertised specification.

Benefits of Zero Air Plus

The ultra-low levels of critical impurities in **Zero Air Plus** makes it an ideal zero gas for analytical instrumentation, especially where components of interest are being measured or detected at very low concentrations. **Zero Air Plus** is also an ideal detector and/or purge gas for a wide variety of detector types, analytical techniques and processes. The certified levels of SO₂, NO_x, total hydrocarbons (THC), CO, and CO₂ means that it also **supports legislative compliance**, for example with Euro 6 regulations covering dilute exhaust gas analysis in the automotive industry.

Synthetic Air specifications

Product	Product code	Size	Valve	Pressure (bar g)	Contents (m ³)
Synthetic Air Zero 5.0 (D02)	21632	x10s	BS3	200	2
Synthetic Air Zero 5.0 (D02)	21629	x47s	BS3	200	9
Synthetic Air Zero 5.0 (D09)	20848	11x47s	BS3	200	95
Synthetic Air Zero Plus 6.0 (D02)	21634	x10s	BS3	200	2
Synthetic Air Zero Plus 6.0 (D02)	21633	x47s	BS3	200	9
Synthetic Air Zero Plus 6.0 (D09)	192029	11x47s	BS3	200	95

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

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)
x10s	200	655	176	-	-	20	22
x47s	200	1525	230	-	-	67	77
11x47s	200	1963	-	680	1000	1046	1160

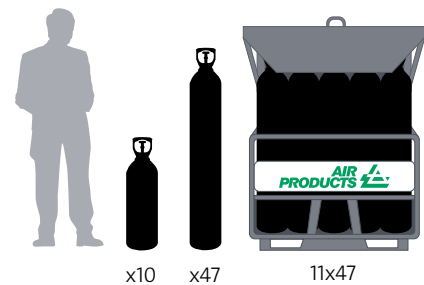
Dimensions and weights are approximate, actual cylinder values may differ.

Recommended control equipment*

Type	Model	Product code
Pressure regulator	Two stage, brass, high purity, low flow rates	R300-C
Pressure regulator	Single stage, brass, high purity	R400-C
Pressure regulator	Two stage, brass, high purity	R500-C
Manifold	Single wing, high purity	M1000-C
Manifold	Two wing, manual changeover, high purity	M2000-C
Manifold	Two wing, automatic changeover, high purity	M3000-C

*Please refer to the **Equipment Centre Selection Tool** for full equipment information.

Synthetic Air is available in the following cylinder size options:



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