

OXYGEN (O₂)

Synonyms : Dioxygen



Gas Description

Oxygen is by far the most common element found in nature. Oxygen makes up by weight 46% of the Earth's crust. 89% of the Earth's water, 21% of the air we breathe and 62% of the human body. It is a tasteless, odourless and colourless gas essential to life which reacts strongly in the presence of other chemical substances. It can be supplied in cylinders, liquified gas tank and by on site generator or by pipeline.

Typical applications :

Oxidizer for welding and metallurgy
Manufacture of synthesis gas
oxidizer in the chemical industry and electronics
Bleaching of pulp
Oxidizer in fuel cells and rockets
Oxidizer for analytical equipment
Calibration of oxygen analyzers
Diving and preserving gas mixtures

Transport Regulations :

UN Number : 1072
Shipping Name : OXYGEN,
COMPRESSED
Class : 2.2 : Non-Flammable / Non-Toxic Gas
CAS Number : 7782-44-7
Hazchem : 2[S]

[Click here](#) for MSDS

[Click here](#) for more information

Physical Properties

Chemical symbol : O₂
Molecular weight : 32.00
Specific gravity (Air=1) : 1.105
Specific volume (m³/kg) : 0.755
Critical temperature : -118°C
Boiling point : -183°C

Melting Point : -219°C
Critical pressure (bar) : 50.83
Major hazards : High Pressure, Fire
Toxicity : None Established
Flammability Range : Highly Oxidizing
Odour : None

[Click here](#) for more information

Application

INDUSTRY

Chemicals

Food Processing

Machine / Metal Construction

Healthcare

APPLICATION

Used in combination with other molecules to manufacture plastics.

Oxygenation of fish breeding tanks.

Used in combination with a fuel gas (such as Acetylene) for cutting and welding

Treatment of respiratory insufficiencies and resuscitation.

[Click here](#) for more information

Typical Specification Comparison Table

Grade	Purity	Typical Impurities (ppm molar)						
		H ₂ O	O ₂	THC	H ₂	CO	CO ₂	NO ₂
Alphagaz 2	99.9995%	<0.5		<0.1	<0.1	<0.1	<0.1	<15
Alphagaz 1	99.995%	<3		<0.5				

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Oxygen : **Alphagaz 2**

Min Purity 99.9995%

<u>Gas</u>		<u>Cylinder information</u>			
Typical impurities (ppm molar)		Cylinder Size	Valve Connection	Pressure (kPa)	Contents (m ³)
H ₂ O	< 10ppm	G	AS 2473 T 10	16,600	10.3

Recommended Equipment

Single stage chrome plated brass body regulator with a stainless steel diaphragm.
For further information [Contact](#) the specialty gases representative in your region.

Oxygen : **Alphagaz 1**

Min Purity 99.995%

<u>Gas</u>		<u>Cylinder information</u>			
Typical impurities (ppm molar)		Cylinder Size	Valve Connection	Pressure (kPa)	Contents (m ³)
H ₂ O	< 2ppm	G	AS 2473 T 10	16,600	10.3
THC	< 0.5ppm				

Recommended Equipment

Single stage chrome plated brass body regulator with a stainless steel diaphragm.
For further information [Contact](#) the specialty gases representative in your region.