

# DEUTERIUM (D<sub>2</sub>)



## Gas Description

Deuterium is a colourless, odourless, flammable, non-toxic and non-corrosive gas with a gas density at STP 0.168 kg/m<sup>3</sup>.

### Typical applications :

Isotopic labelling in tracer applications  
Accelerator in high energy physics, laboratories  
Neutron source  
Thermonuclear

### Transport Regulations :

UN Number : 1957  
Shipping Name : DEUTERIUM,  
COMPRESSED  
Class : 2.1: Flammable Gases  
CAS Number : 7782-39-0  
Hazchem : 2[S]E  
[Click here](#) for MSDS  
[Click here](#) for more information

## Physical Properties

Chemical symbol : D<sub>2</sub>  
Molecular weight : 4.032  
Specific gravity (Air=1) : 0.139  
Specific volume (m<sup>3</sup>/kg) : 5.95  
Critical temperature : -235°C  
Boiling point : -249.6°C

Melting Point : -254.6°C  
Critical pressure (bar) : 16.66  
Major hazards : Fire  
Toxicity : None Established  
Flammability Range : 4.9% - 75%  
Odour : None

[Click here](#) for more information

## Application

### INDUSTRY

Pharmaceuticas

Electronics

Other

### APPLICATION

Deuterium is used to prepare deuterated compounds in chemistry and biochemistry.

As a replacement for hydrogen in the annealing or sintering of silicon based semiconductors.

Deuterium is used in nuclear fusion reactions.

[Click here](#) for more information

# DEUTERIUM ( $D_2$ )



Deuterium : **N30**

Min Purity 99.9%

<u>Gas</u>		<u>Cylinder information</u>			
Typical impurities (ppm molar)		Cylinder Size	Valve Connection	Pressure (kPa)	Contents (m <sup>3</sup> )
H <sub>2</sub> O	~ 10ppm	B 0.4 alu	NF E		55 litres
O <sub>2</sub>	~ 10ppm	B 1 alu		10,000	95 litres
N <sub>2</sub>	~ 25ppm	B 5		10,500	500 litres
		B10			
		B20			

### Recommended Equipment

Dual stage chrome plated brass body regulator with a stainless steel diaphragm.

For further information [Contact](#) the specialty gases representative in your region.