

# Oxygen - 4.5 Grade

MSDSOXYHP

## 1 Identification of the substance/preparation and of the company/undertaking

Product name : Oxygen High Purity (4.5 Grade)  
Chemical formula : O<sub>2</sub>  
Use of substance : General Industrial  
Company : Dixons of Westerhope Ltd  
Newbiggin Lane  
Westerhope  
Newcastle upon Tyne  
NE5 1LX  
Emergency contact : 0191 271 0222

## 2 Composition/information on ingredients

Components	EINECS/ELINCS	CAS	Concentration	Class
Oxygen	231-956-9	7782-44-7	99.995%	0 R8

Contains no other components or impurities which will influence the classification of the product. Refer to section 16

## 3 Hazards identification

Classification : R8 Contact with combustibles may cause fire  
Emergency Overview : High pressure compressed gas. Can cause damage to lungs and central nervous system. High concentrations may cause asphyxiation  
Inhalation : Breathing 75% or more oxygen for more than a few hours may cause stuffiness, cough, sore throat, chest pains and breathing difficulties  
Aggravated medical : Do not administer to persons with chronic obstructive pulmonary disease.

## 4 First aid measures

Inhalation : Remove victim to fresh air wearing self contained breathing apparatus. Keep victim warm and well rested. Apply artificial respiration if breathing has stopped  
Ingestion : Ingestion is not considered a potential route of exposure  
Eye contact : Seek medical advice

## 5 Fire-fighting measures

Extinguishing media : All known extinguishing media can be used.  
Specific hazards : Upon exposure to intense heat or flame, cylinder will vent rapidly or rupture violently. Product is non-flammable and does not support combustion. Move away from container and cool with water from a protected position.  
Protective equipment : Wear self-contained breathing apparatus for fire fighting if necessary.  
Further information : Some materials that are non-combustible in air will burn in the presence of an oxygen enriched atmosphere (greater than 23%). Fire resistant clothing may burn and offer no protection in oxygen rich environments

## 6 Accidental release measures

Personal precautions : Evacuate the area. Monitor oxygen level and ventilate the area. Unless atmosphere is safe, wear self contained breathing apparatus. Clothing exposed to high concentrations may retain oxygen for 30 minutes or longer. Stay away from ignition sources  
Environmental precautions : Try to stop release. Prevent from further leakage if safe to do so. Do not discharge into low areas (e.g. basements)  
Clean up methods : Ventilate the area.

## 7 Handling and storage

Handling : Open valve slowly. Do not allow backfeed into the container. Do not remove safety labels. Always use with specified equipment fit for purpose.  
Storage : Keep container in a well ventilated area. Store cylinder below 50°C.

See reverse for further handling, usage and storage guidelines

## 8 Exposure controls/personal protection

Exposure controls : Wear eye protection to EN 166 when using gases. Wear leather safety gloves free of oil or grease and safety shoes when handling cylinders.  
Personal protection : Ensure adequate ventilation.

## 9 Physical and chemical properties

Form : Compressed gas  
Colour : Colourless  
Odour : None  
Molecular weight : 32 g/mol  
Vapour density : 1.1 (air -1)  
Specific volume : 0.7540 m<sub>3</sub>/kg at 21°C  
Boiling point : -183°C  
Critical temperature : -118°C  
Solubility in water : 0.039 g/l

## 10 Stability and reactivity

Chemical stability : Stable under normal conditions  
Hazardous decomposition products : None

## 11 Toxicological information

Premature infants exposed to high concentrations may suffer delayed retinal damage that can progress to retinal detachment and blindness. Retinal damage may also occur in adults exposed to 100% oxygen for extended periods. At two or more atmospheres central nervous system (CNS) toxicity occurs. Symptoms include nausea, vomiting, vertigo, muscle twitching and loss of consciousness. At three atmospheres CNS occurs in less than two hours and at six atmospheres in only a few minutes

## 12 Ecological information

No known ecological effects from this product

### 13 Disposal considerations

Return cylinders to the supplier (used and unused)

### 14 Transport Information

Proper Shipping Name : Oxygen Compressed

UN ID no. : UN1072

Labelling ADA : 2.2 : 5.1

ADR/RID hazard ID no. : 25

Labelling :



Further information : Avoid transport on vehicles where the load space is not separated from the driver's compartment. Ensure vehicle driver is aware of potential hazards of the load and knows what to do in the event of an accident or an emergency.

### Before transporting gas cylinders

1. Ensure that cylinders are secured
2. Ensure cylinder valves are closed
3. Ensure cylinder shroud is secure
4. Ensure there is adequate ventilation

### 15 Regulatory information

Labelling according to EEC directive

Number in Annex I of Dir : Not included in Annex I. 67/548

### 16 Other information

Ensure all national and local regulations are observed.  
R-phrases) Substance/preparation : R8 contact with combustible materials may cause fire. Components prepared by : Dixons of Westerhope Limited.  
This safety data sheet has been established in accordance with the applicable European Directives and applies to all countries that have translated the Directives in the national laws.

### Disclaimer of Liability:

Details given in this document are believed to be correct at the time of going to press. Whilst proper care has been taken in the preparation of this document, no liability for injury or damage resulting from its use can be accepted.

**In case of emergency**  
**0191 271 0222**

### Additional storage, usage & handling advice

#### Guidance for storing gas cylinders

- **OXYGEN MUST BE STORED AWAY FROM OIL AND GREASE**
- Store cylinders in a well-ventilated covered area, preferably outside on a level, well-drained surface. If this is not reasonably practicable, store in an adequately ventilated building or part of a building specifically reserved for this purpose
- Full and empty cylinders should be stored separately
- Cylinder stocks should be rotated so that the oldest cylinders are used first
- Cylinders should be stored vertically and securely fastened to prevent them from falling over
- Segregate cylinder by properties of gas  
Flammable  
Oxidising  
Inert etc.
- Ensure that gas cylinder valves are kept shut on empty cylinders
- Avoid storing gas cylinders so that they stand or lie in water - Oxygen must be stored away from oil or grease
- Protect gas cylinders from external heat sources that may adversely affect their mechanical integrity
- Gas cylinders containing flammable gas should not be stored in part of a building used for other purposes
- Do not store other products in a cylinder store, in particular flammable materials such as fuel, oil, paint or corrosive liquids
- Gas cylinders must be clearly marked to show what they contain and the hazards associated with their contents
- Store cylinders where they are not vulnerable to hazards caused by impact from vehicles such as fork-lift trucks
- Do not store LPG cylinders within three metres of other gas cylinders - The use of a firewall reduces the distance to 1.5 meters

There are specific requirements for certain products. Storage of cryogenic, liquefied (e.g. Propane) and heavier than air compressed gases should be sited with due regard to the dangers of gases collecting in low-lying areas such as drains, basements and ducts.

It is advisable to label your storage area with relevant hazard labels and colour code chart.

#### Guidance for handling gas cylinders

- When required, wear suitable safety shoes and other personal protective equipment when handling gas cylinders
- Carry cylinders close to your body to reduce stress on your back
- Gas cylinders should not be raised or lowered on the forks of lift trucks unless precautions are taken to prevent them from falling
- It is advisable to use a trolley if moving several cylinders to reduce risk of injury
- Do not drop, roll or drag gas cylinders
- Do not attempt to lift cylinders if they are located in a position where you have to lean over or stretch to carry them, this can cause back strain
- Use the correct techniques for lifting heavy objects
- Ensure that the valve is protected by a shroud that has been designed to withstand impact if the cylinder is dropped
- Fit suitable protective caps and covers to cylinders, when necessary, before transporting. Caps and covers help prevent moisture and dirt from gathering in the valve of the cylinder, in addition to providing protection during transport

#### Guidance for using gas cylinders

- Use gas cylinders in a vertical position, unless specifically designed to be used otherwise
- Always double check that the gas is the right one for the intended use
- Before connecting a gas cylinder to equipment, make sure that the regulator and pipework are suitable for the type of gas and pressure being used
- When not in use, disconnect regulators and hoses from cylinders whenever practicable
- Do not use gas cylinders for anything other than the transport and storage of gas

Only use cylinders filled by a reputable gas company who fills and tests cylinders regularly in accordance to regulations. Only ever return empty gas cylinders to the supplier from which they were purchased. Never attempt to fill a Hobbyweld cylinder from another gas cylinder.