

Safety Data Sheet

Product :

Oxygen

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MSDS Nr : 301-00-0005BOC(U)

Version : 1.04

Date : 25/03/2002

Replaces version dated : 26/02/1998

1 IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY

Product name	Oxygen
Chemical formula	O ₂
Company identification	see heading and/or footer
Emergency phone numbers	see heading and/or footer

2 COMPOSITION/INFORMATION ON INGREDIENTS

Substance/Preparation	Substance.
Components/Impurities	Contains no other components or impurities which will influence the classification of the product.
CAS Nr	07782-44-7
EEC Nr (from EINECS)	231-956-9

3 HAZARDS IDENTIFICATION

Hazards identification	Compressed gas Oxidant. Strongly supports combustion. May react violently with combustible materials.
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4 FIRST AID MEASURES

Inhalation	Not hazardous
Ingestion	Ingestion is not considered a potential route of exposure.

5 FIRE FIGHTING MEASURES

Specific hazards	Supports combustion. Exposure to fire may cause containers to rupture/explode. Non flammable
Hazardous combustion products	None
Suitable extinguishing media	All known extinguishants can be used.
Specific methods	If possible, stop flow of product. Move away from the container and cool with water from a protected position.
Special protective equipment for fire fighters	None.

6 ACCIDENTAL RELEASE MEASURES

Personal precautions	Evacuate area. Ensure adequate air ventilation. Eliminate ignition sources.
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Environmental precautions

Try to stop release.

Prevent from entering sewers, basements and workpits, or any place where its accumulation can be dangerous.

Clean up methods

Ventilate area.

7 HANDLING AND STORAGE

Handling and storage

Use no oil or grease.

Open valve slowly to avoid pressure shock.

Segregate from flammable gases and other flammable materials in store.

Suck back of water into the container must be prevented.

Do not allow backfeed into the container.

Use only properly specified equipment which is suitable for this product, its supply pressure and temperature. Contact your gas supplier if in doubt.

Keep away from ignition sources (including static discharges).

Refer to supplier's container handling instructions.

Keep container below 50°C in a well ventilated place.

8 EXPOSURE CONTROLS/PERSONAL PROTECTION

Personal protection

Do not smoke while handling product.

Avoid oxygen rich (>21%) atmospheres.

Ensure adequate ventilation.

9 PHYSICAL AND CHEMICAL PROPERTIES

Molecular weight

32

Melting point

-219 °C

Boiling point

-183 °C

Critical temperature

-118 °C

Relative density, gas

1.1 (air=1)

Relative density, liquid

Not applicable.

Vapour Pressure 20°C

Not applicable.

Solubility mg/l water

39 mg/l

Appearance/Colour

Colourless gas

Odour

None

Autoignition temperature

Not applicable

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Flammability range

Oxidiser.

Other data

Gas/vapour heavier than air. May accumulate in confined spaces, particularly at or below ground level.

10 STABILITY AND REACTIVITY

Stability and reactivity

May react violently with combustible materials

May react violently with reducing agents.

Violently oxidises organic material.

11 TOXICOLOGICAL INFORMATION

General

No toxicological effects from this product.

12 ECOLOGICAL INFORMATION

General

No ecological damage caused by this product.

13 DISPOSAL CONSIDERATIONS

General

To atmosphere in a well ventilated place.

Do not discharge into any place where its accumulation could be dangerous.

Contact supplier if guidance is required.

14 TRANSPORT INFORMATION

UN Nr

1072

Class/Div

2.2

Subsidiary risk

5.1

ADR/RID Item Nr

2,1° O

ADR/RID Hazard Nr

25

Labelling ADR

Label 2: non flammable non toxic gas

Label 05: fire intensifying risk.

Other transport information

Avoid transport on vehicles where the load space is not separated from the driver's compartment.

Ensure vehicle driver is aware of the potential hazards of the load and knows what to do in the event of an accident or an emergency.

Before transporting product containers ensure that they are firmly secured and:

- cylinder valve is closed and not leaking

- valve outlet cap nut or plug (where provided) is correctly fitted

- valve protection device (where provided) is correctly fitted

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- there is adequate ventilation.
- compliance with applicable regulations.

15 REGULATORY INFORMATION

Number in Annex I of Dir 67/548	Not included in Annex I.
EC Classification	O;R8
-Symbols	O: Oxidising
Labelling of cylinders	
-Symbols	Label 2: non flammable non toxic gas Label 05: fire intensifying risk.
-Risk phrases	R8 Contact with combustible material may cause fire.
-Safety phrases	S9 Keep container in well ventilated place. S17 Keep away from combustible material.

16 OTHER INFORMATION

- Ensure all national/local regulations are observed.
- Ensure operators understand the hazard of oxygen enrichment.

Before using this product in any new process or experiment, a thorough material compatibility and safety study should be carried out.

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.

End of document.

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