

No. 1907/2006 (REACH)

Printed 09.06.2015

revision 08.06.2015 (GB) Version 1.1

Oxygen, compressed 000090300072\_GB\_EN



#### 1.1. Product identifier

Name of substance

Name of product Oxygen, compressed Prod-Nr. diverse

oxygen

 Index No
 008-001-00-8

 EC No
 231-956-9

 CAS No
 7782-44-7

#### 1.2. Relevant identified uses of the substance or mixture and uses advised against

#### Identified uses

#### Sector of uses [SU]

SU20 - Health services

SU2a - Mining (without offshore industries)

SU22 - Professional uses: Public domain (administration, education, entertainment, services, craftsmen)

SU0 - Other

#### Product categories [PC]

PC0 - Other

Oxidizing agents.

### Process categories [PROC]

Professional:

PROC0 - Other Process or activity:

### Article categories for substances in articles without intended release

not applicable

### Article categories for substances in articles with intended release

not applicable

#### Environmental release categories [ERC]

not applicable

### Remark

no

#### Uses advised against

#### Sector of uses [SU]

not determined

#### Product categories [PC]

not determined

#### Process categories [PROC]

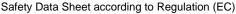
not determined

#### Article categories for substances in articles without intended release

not applicable

#### Article categories for substances in articles with intended release

not applicable



No. 1907/2006 (REACH)

Printed 09.06.2015

revision 08.06.2015 (GB) Version 1.1

Oxygen, compressed 000090300072 GB EN



#### Remark

Do not use for inflating balloons.

Do not use for medical-clinical purposes.

Do not use for private purposes (household).

#### Recommended intended purpose(s)

As breathing gas

#### Effect of the substance / the mixture

Supports the respiration

#### 1.3. Details of the supplier of the safety data sheet

**Distributor** Dräger Safety UK Ltd.

Ullswater Close, Blyth Riverside Business Park, UK-NE24

4RG Blyth; Northumberland

Phone +44 1670 352891, Fax +44 1670 356266

E-Mail info@draeger.com Internet www.draeger.com

Advice Dräger Environmental Management

Phone +49 451 882 3125 Fax +49 451 882 73125 E-mail (competent person): msds@draeger.com

#### 1.4. Emergency telephone number

Emergency advice National Poisons Information Service, West Midlands

Poisons Unit, City Hospital NHS Trust, Dudley Ro

Phone (0) 12 15 07 55 88/9

Manufacturer Dräger Safety AG & Co. KGaA

Revalstr. 1, D-23560 Lübeck

Phone +49 (0) 451/882-0, Fax +49 (0) 451/882-2080

E-Mail info@draeger.com Internet www:draeger.com

Dräger Umweltmanagement
Phone +49 (0) 451 / 882-3125

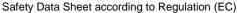
Phone +49 (0) 451 / 882-3125 Fax +49 (0) 451 / 882-73125 E-mail (competent person): msds@draeger.com

#### 1.4. Emergency telephone number

Advice

Emergency advice Giftinformationszentrum Nord, Göttingen; Tel. (0551) 1 92 40

Phone +49 (0) 451/882-2395 (Dräger Werkschutz)



No. 1907/2006 (REACH)

Printed 09.06.2015

revision 08.06.2015 (GB) Version 1.1

Oxygen, compressed 000090300072\_GB\_EN



#### 2.1. Classification of the substance or mixture

#### Classification according to 67/548/EEC or 1999/45/EC

O; R8

R-phrases

8 Contact with combustible material may cause fire.

**Additional hints** 

ПО

Classification according to Regulation (EC) No 1272/2008 [CLP/GHS]

Hazard classes and Hazard Hazard Classification procedure

categories Statements

 Ox. Gas 1
 H270

 Compr. Gas
 H280

Hazard statements for physical hazards

H270 May cause or intensify fire; oxidiser.

H280 Contains gas under pressure; may explode if heated.

**Additional hints** 

The substance is classified as hazardous according to Regulation (EC) 1272/2008 [GHS].

### 2.2. Label elements

#### Labelling according to Regulation (EC) No 1272/2008 [CLP/GHS]





GHS03

GHS04

### Signal word

Danger

Hazard statements for physical hazards

H270 May cause or intensify fire; oxidiser.

H280 Contains gas under pressure; may explode if heated.

#### **Precautionary Statements**

General

P103 Read label before use.

Prevention

P220 Keep/Store away from clothing/.../combustible materials.
P244 Keep valves and fittings free from oil and grease.

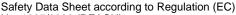
Response

P370 + P376 In case of fire: Stop leak if safe to do so.

Storage

P403 Store in a well-ventilated place.

P410 + P403 Protect from sunlight. Store in a well-ventilated place.



No. 1907/2006 (REACH)

Printed 09.06.2015

revision 08.06.2015 (GB) Version 1.1

Oxygen, compressed 000090300072 GB EN

Disposal

not applicable

#### Supplemental Hazard information (EU)

Physical properties

no

Health properties

no

**Environmental properties** 

no

Special rules for supplemental label elements for certain mixtures

Pressurized container: protect from sunlight and do not expose to temperatures exceeding 50 °C. Do not pierce or burn, even after use.

#### Additional information

#### Special rules on packaging

no

Special rules for labelling of plant protection products

not applicable

Remark

no

### 2.3. Other hazards

Adverse physicochemical effects

Caution! Container under pressure.

The accumulation in lowlying or closen rooms can cause increased danger of fire and explosion.

#### Adverse human health effects and symptoms

not determined

Adverse environmental effects

no

Other adverse effects

no

#### Information pertaining to special dangers for human and environment

Harmful: danger of serious damage to health by prolonged inhalation

Contact with combustible material may cause fire.

Explosive when mixed with combustible material.

Results of PBT and vPvB assessment

This substance does not meet the PBT/vPvB criteria of REACH, annex XIII.





No. 1907/2006 (REACH)

Printed 09.06.2015

revision 08.06.2015 (GB) Version 1.1

Oxygen, compressed 000090300072 GB EN



### **SECTION 3: Composition/information on ingredients**

#### 3.1. Substances

**Description** not applicable

CAS No 7782-44-7 oxygen

EC No 231-956-9

Index No 008-001-00-8

Additional advice

no

3.2. Mixtures

not applicable

#### **SECTION 4: First aid measures**

#### 4.1. Description of first aid measures

General information

no

In case of inhalation

No special measure necessary.

In case of skin contact

No special measure necessary.

In case of eye contact

not determined

In case of ingestion

not applicable

4.2. Most important symptoms and effects, both acute and delayed

Physician's information / possible symptoms

not determined

Physician's information / possible dangers

not determined

4.3. Indication of any immediate medical attention and special treatment needed

Treatment (Advice to doctor)

not determined

### **SECTION 5: Firefighting measures**

#### 5.1. Extinguishing media

Suitable extinguishing media

Fire-extinguishing activities according to surrounding.

ABC powder

Carbon dioxide

Unsuitable extinguishing media

nc

### Safety Data Sheet according to Regulation (EC)

No. 1907/2006 (REACH)

Printed 09.06.2015

revision 08.06.2015 (GB) Version 1.1

Oxygen, compressed 000090300072 GB EN

5.2. Special hazards arising from the substance or mixture

not determined

5.3. Advice for firefighters

Special protective equipment for fire-fighters

no

Additional information

Cool endangered containers with water spray jet.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

Keep away sources of ignition.

Pay attention to extension of gas especially at ground (heavier than air) and in direction of the wind.

6.2. Environmental precautions

Do not discharge into the drains/surface waters/groundwater.

6.3. Methods and material for containment and cleaning up

Suck off by room ventilation.

Additional Information

no

6.4. Reference to other sections

No information available.

**SECTION 7: Handling and storage** 

7.1. Precautions for safe handling

Advice on safe handling

Care for thoroughly room ventilation, if necessary use in well ventilated area with local exhaust ventilation at workplace.

No special measures necessary if used correctly.

Open and handle container with care!

Use only in well-ventilated areas.

General protective measures

not determined

Hygiene measures

At work do not eat, drink and smoke.

Work in rooms with good ventilation.

Wash hands before breaks and after work.

Advice on protection against fire and explosion

Keep away from sources of ignition - No smoking

Keep at distance of acids, reducing agents and organic substances (e.g.wood, paper, fat).

The product is not combustible, but supports burning.

Substance/product can lower the ignition temperature of flammable substances.

Explosive in mixture with organic substances.



No. 1907/2006 (REACH)

Printed 09.06.2015

revision 08.06.2015 (GB) Version 1.1

Oxygen, compressed 000090300072\_GB\_EN



### 7.2. Conditions for safe storage, including any incompatibilities

#### Requirements for storage rooms and vessels

Keep in closed original container. Ventilate store-rooms thoroughly.

#### Advice on storage compatibility

Do not store with combustible materials.

Keep at distance to reducing agents.

Keep at distance to combustile materials.

Store only in original container at cool and aired place and at distance to acids and reducing materials.

#### Further information on storage conditions

Keep container tightly closed, store at cool and aired place, open and handle carefully.

Protect compressed gas-bottles from falling down.

Storage temperature may not exceed 50°C (=122°F).

Store only in the open air or in explosion-proof rooms.

### Information on storage stability

nο

Storage group 2A

#### 7.3. Specific end use(s)

#### Recommendation(s) for intended use

not determined

### Particular industry solution(s) for intended use

not applicable

#### SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

Additional advice

no

#### 8.2. Exposure controls

### Respiratory protection

In case of insufficient ventilation or long-term effect use breathing apparatus.

#### Hand protection

not determined

#### Eye protection

tightly fitting goggles

#### Other protection measures

not determined

#### Limitation and surveillance of the environment

not determined

#### Appropriate engineering controls

not determined

Safety Data Sheet according to Regulation (EC)

No. 1907/2006 (REACH)

Printed 09.06.2015

revision 08.06.2015 (GB) Version 1.1

Oxygen, compressed 000090300072\_GB\_EN



#### **SECTION 9: Physical and chemical properties**

#### 9.1. Information on basic physical and chemical properties

Appearance Colour compressed gas colourless

Odour ss odourless

Odour threshold not determined

Important health, safety and environmental information

	Value	Temperature	at	Method	Remark
pH value	not applicable				
Acid number	not applicable			not applicable	not applicable
boiling point	-183 °C		1 bar	not determined	no
melting point	-219 °C			not determined	no
Flash point	not applicable			not applicable	no
Vapourisation rate	not applicable			not applicable	no
Flammable (solid)	not applicable			not applicable	not applicable
Flammability (gas)	not applicable			not applicable	not applicable
Ignition temperature	not applicable			not applicable	not applicable
Self ignition temperature	not applicable			not applicable	not applicable
Lower explosion limit	not applicable			not applicable	no
Upper explosion limit	not applicable			not applicable	no
Vapour pressure	not applicable	20 °C		not applicable	no
Relative density	ca. 1,1 g/cm3	-219 °C	ca. 1 bar	not determined	no
Bulk density	not applicable			not applicable	no
Vapour density	ca. 1,1	20 °C	1 bar	not determined	no
Solubility in water	ca. 39 mg/l	ca. 20 °C	ca. 1 bar	not determined	no
Solubility/other	not determined	not determined	not determined	not determined	no
Partition coefficient n- octanol/water (log P O/W)	not determined	not determined		not determined	no

Page 7/14 Page 8/14

No. 1907/2006 (REACH)

Printed 09.06.2015

08.06.2015 (GB) Version 1.1 revision

Oxygen, compressed 000090300072\_GB\_EN



	Value	Temperature	at	Method	Remark
Decomposition temperature	not applicable			not applicable	not applicable
Viscosity not determined	not determined	not determined		not applicable	no
Viscosity not determined	not determined	not determined		not applicable	no
Solvent separation test	not determined			not determined	no
Solvent concentration	not applicable			not applicable	no
Water content	not determined			not determined	no
Solids content	not determined			not determined	no
Combustion value	not applicable				
Shock sensitivity	no			not applicable	
Oxidising properties					

Oxidizer

#### **Explosive properties**

not determined

#### 9.2. Other information

No information available.

### **SECTION 10: Stability and reactivity**

#### 10.1. Reactivity

Oxidising agent, strong

Reactions with combustible substances.

Reactions with fats and oils.

Reactions with reducing agents.

Reactions with organic substances.

Evolution of explosive gases/vapours.

Risk of inflammation in case of contact with organic substances.

#### 10.2. Chemical stability

not determined

#### 10.3. Possibility of hazardous reactions

not determined

#### 10.4. Conditions to avoid

Reactions with combustible substances

Reactions with fats and oils.

Reactions with reducing agents.

Reactions with organic substances.

Risk of bursting.

### Safety Data Sheet according to Regulation (EC)

No. 1907/2006 (REACH)

Printed 09.06.2015

revision 08.06.2015 (GB) Version 1.1

Oxygen, compressed 000090300072\_GB\_EN



Page 10/14

Risk of inflammation in case of contact with organic substances.

#### 10.5. Incompatible materials

#### Materials to avoid

Reactions with combustible substances.

Reactions with fats and oils.

Reactions with reducing agents.

Reactions with organic substances.

As oxidising agent, attacks organic substances such as wood, paper, fats.

Risk of inflammation in case of contact with organic substances.

#### 10.6. Hazardous decomposition products

#### Thermal decomposition

Method not determined

Remark not determined

#### Additional information

### **SECTION 11: Toxicological information**

### 11.1. Information on toxicological effects

### Acute toxicity/Irritability/Sensitization

	Value/Validation	Species	Method	Remark
LD50 acute oral	not determined	not determined	not determined	no
LD50 acute dermal	not determined	not determined	not determined	no
LC50 acute inhalation	not determined	not determined	not determined	no
Irritability skin	not determined	not determined	not determined	no
Irritability eye	not determined	not determined	not determined	no
Skin sensitization	not determined	not determined	not determined	no
Sensitization respiratory system	not determined	not determined	not determined	no

#### **Subacute Toxicity - Carcinogenicity**

Value Species Method Validation

No. 1907/2006 (REACH)

Printed 09.06.2015

revision 08.06.2015 (GB) Version 1.1

Oxygen, compressed 000090300072\_GB\_EN



	Value	Species	Method	Validation
Subacute Toxicity	not determined	not determined	not determined	no
Subchronic Toxicity	not determined	not determined	not determined	no
Chronic Toxicity	not determined	not determined	not determined	no
Mutagenicity	not determined	not determined	not determined	no
Reproduction- Toxicity	not determined	not determined	not determined	no
Carcinogenicity	not determined	not determined	not determined	no

Specific target organ toxicity (single exposure)

No information available.

Specific target organ toxicity (repeated exposure)

No information available.

Aspiration hazard

not applicable

Toxicity test (Additional information)

no

Experiences made from practice

110

Additional information

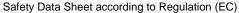
no

### **SECTION 12: Ecological information**

### 12.1. Toxicity

#### **Ecotoxicological effects**

J	Value	Species	Method	Validation
Fish	not determined	not determined	not determined	no
Daphnia	not determined	not determined	not determined	no
Algae	not determined	not determined	not determined	no
Bacteria	not determined	not determined	not determined	no
12.2. Persiste Physico- chemical degradability	ence and degradability not determined	not determined	not determined	no
Biological degradability	not determined	not determined	not determined	no



No. 1907/2006 (REACH)

Printed 09.06.2015

revision 08.06.2015 (GB) Version 1.1

Oxygen, compressed 000090300072\_GB\_EN



	Elimination rate	Method of analysis	Method	Validation	
Degradability	not determined	not determined	not determined	no	
Biological eliminability	not determined	not determined	not determined	no	
Degradability according to WRMG	not determined	not determined	not determined	no	

#### 12.3. Bioaccumulative potential

not determined

### 12.4. Mobility in soil

not determined

#### 12.5. Results of PBT and vPvB assessment

This substance does not meet the PBT/vPvB criteria of REACH, annex XIII.

#### 12.6. Other adverse effects

not determined

### Behaviour in sewage plant

not determined

Respiration	inhibition	ot	activat	ted	sluge
		١.	/alue		

EC 50	not determined	not determined	no	
Additional ecologica	l information Value	Method	Remark	
ОС	not determined	not determined	no	
COD	not determined	not determined	no	
BOD 99.40.n.b.	not determined	not determined	no	

Remark

Method

#### Contains following heavy metals and compounds of the 76/464/EWG

not applicable

AOX

#### General regulation

If appropriate application no interferences in sewage treatment plants.

not determined

Material has no ecologically harmfull effects.

Product does not cause biological oxygen loss.

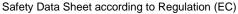
### **SECTION 13: Disposal considerations**

### 13.1. Waste treatment methods

Waste code No. Name of waste

16 05 05 gases in pressure containers other than those mentioned in 16 05 04

Page 11/14 Page 12/14



No. 1907/2006 (REACH)

Printed 09.06.2015

revision 08.06.2015 (GB) Version 1.1

Oxygen, compressed 000090300072 GB EN



Remove in accordance with local official regulations.

#### Recommendations for packaging

Totally emptied packaging may be taken for recycling.

#### Recommended cleansing agent

not applicable

#### General information

no

#### SECTION 14: Transport information

	ADR/RID	IMDG	IATA-DGR
14.1. UN number	1072	1072	1072
14.2. UN proper shipping name	Oxygen, compressed	Oxygen, compressed	Oxygen, compressed
14.3. Transport hazard class(es)	2.2 (5.1)	2.2 (5.1)	2.2 (5.1)
14.4. Packing group	J.	./.	J.
14.5. Environmental hazards	No	No	No

#### 14.6. Special precautions for user

no

#### 14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

not applicable

#### Land and inland navigation transport ADR/RID

Hazard label(s) 2.2 (5.1) tunnel restriction code E

Special provisions 355, 655

Classification code 10

#### Transport/further information

nc

#### **SECTION 15: Regulatory information**

# 15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture Authorizations

not applicable

### **Application restrictions**

not determined

### Other regulations (EU)

not determined

### Safety Data Sheet according to Regulation (EC)

No. 1907/2006 (REACH)

Printed 09.06.2015

revision 08.06.2015 (GB) Version 1.1

Oxygen, compressed 000090300072\_GB\_EN



#### VOC standard

#### Remark

not applicable

#### **National regulations**

### Restriction of occupation

no

#### Other regulations, restrictions and prohibition regulations

To observe: TRG 280 "General demands for gas pressure vessels; operating with gas pressure vessels"

To observe: TRG 101 "Gases"

To observe: TRGS 515 "Storage of fire promoting substances in packagings and transportable

containers"

UVV "Gases" (VBG 61)

UVV "Oxygen" (VBG 62)

ZH 1/119 "Guidelines for Laboratories"

ZH 1/124 "Plant instructions for working with hazardous substances (A 010)"

ZH 1/220 "Regulations on Hazardous Materials" ZH 1/307 "Data Sheet: Handling of oxygen (M 034)" ZH 1/380 "Data Sheet: Oxygen as a danger to life"

ZH 1/383 "Data Sheet: When does Oxygen become a danger to life?"

Water hazard class - list substance

nwh - not water hazardous

#### Technical instruction air remarks

not applicable

Decree for case of

Accident decree, addendum II: not named.

interference/remarks

#### 15.2. Chemical Safety Assessment

For this substance a chemical safety assessment has been carried out.

#### **SECTION 16: Other information**

#### Training advice

not determined

#### Recommended uses and restrictions

National and local regulations concerning chemicals shall be observed.

### Further information

All declarations of safety-data-sheet refer to pure substance.

The information contained herein is based on the state of our knowledge. It characterizes the product with regard to the appropriate safety precautions. It does not represent a guarantee of the properties of the product.

Indication of changes: "!" = Data changed compared with the previous version. Previous version: 1.0

#### Sources of key data used

not determined