

Material Safety Data Sheet

acc. to OSHA and ANSI

Printing date 05/05/2009

Reviewed on 05/05/2009

1 Identification of substance:

Product details:

Product name: Oxygen

Stock number: 20924

Manufacturer/Supplier:

Alfa Aesar, A Johnson Matthey Company
Johnson Matthey Catalog Company, Inc.
30 Bond Street
Ward Hill, MA 01835-8099
Emergency Phone: (978) 521-6300
CHEMTREC: (800) 424-9300
Web Site: www.alfa.com

Information Department: Health, Safety and Environmental Department

Emergency information:

During normal hours the Health, Safety and Environmental Department. After normal hours call Chemtrec at (800) 424-9300.

2 Composition/Data on components:

Chemical characterization:

Description: (CAS#)

Oxygen (CAS# 7782-44-7), 100%

Identification number(s):

EINECS Number: 231-956-9

Index number: 008-001-00-8

3 Hazards identification

Hazard description:



O Oxidizing

Information pertaining to particular dangers for man and environment

R 8 Contact with combustible material may cause fire.

Classification system

HMIS ratings (scale 0-4)

(Hazardous Materials Identification System)

HEALTH	0
FIRE	0
REACTIVITY	3

Health (acute effects) = 0

Flammability = 0

Reactivity = 3

GHS label elements



Danger

2.4/1 - May cause or intensify fire; oxidizer.

Prevention:

Keep/Store away from clothing/combustible materials.

Keep reduction valves free from grease and oil.

Response:

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

Storage:

Store in a well-ventilated place.

4 First aid measures

After inhalation Supply fresh air; consult doctor in case of complaints.

After skin contact Generally the product does not irritate the skin.

After eye contact Seek medical treatment in case of complaints.

After swallowing Seek medical treatment in case of complaints.

5 Fire fighting measures

Suitable extinguishing agents Water spray

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Special hazards caused by the material, its products of combustion or resulting gases:
 This substance is an oxidizer and its heat of reaction with reducing agents or combustibles may cause ignition.
Protective equipment: Mount respiratory protective device.

6 Accidental release measures

Person-related safety precautions: Mount respiratory protective device.
Measures for environmental protection: No special measures required.
Measures for cleaning/collecting: No special measures required.
Additional information:
 See Section 7 for information on safe handling
 See Section 8 for information on personal protection equipment.
 See Section 13 for disposal information.

7 Handling and storage**Handling**

Information for safe handling:
 Keep container tightly sealed.
 Store in cool, dry place in tightly closed containers.
 Ensure good ventilation at the workplace.

Information about protection against explosions and fires:

Substance/product can reduce the ignition temperature of flammable substances.
 This substance is an oxidizer and its heat of reaction with reducing agents or combustibles may cause ignition.

Storage

Requirements to be met by storerooms and receptacles: No special requirements.
Information about storage in one common storage facility:
 Store away from flammable substances.
Further information about storage conditions: None.

8 Exposure controls and personal protection

Components with limit values that require monitoring at the workplace: Not required.
Additional information: No data

Personal protective equipment**General protective and hygienic measures**

The usual precautionary measures for handling chemicals should be followed.

Breathing equipment:

Use suitable respiratory protective device in case of insufficient ventilation.

Eye protection: Safety glasses

Body protection: Protective work clothing.

9 Physical and chemical properties:**General Information**

Form:	Gaseous
Color:	Colorless
Odor:	Odorless

Change in condition

Melting point/Melting range:	Not determined
Boiling point/Boiling range:	-183°C (-297°F) (@ 1atm)
Sublimation temperature / start:	Not determined

Flammability (solid, gaseous)	Contact with combustible material may cause fire.
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Ignition temperature:	Not determined
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Decomposition temperature:	Not determined
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Explosion limits:

Lower:	Not determined
Upper:	Not determined

Vapor pressure:	Not determined
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Density at 20°C (68°F):	1.11 g/cm ³
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Solubility in / Miscibility with Water:	Slightly soluble
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10 Stability and reactivity**Thermal decomposition / conditions to be avoided:**

Decomposition will not occur if used and stored according to specifications.

Materials to be avoided:

Alcohols
Sulfides
Alkali metals
Alkaline earth metals
Reducing agents
Aluminum/aluminum alloys.

Dangerous reactions

Reacts with reducing agents
Reacts with flammable substances

Dangerous products of decomposition: None known.**11 Toxicological information****Acute toxicity:****Primary irritant effect:****on the skin:** Generally the product does not irritate the skin.**on the eye:** No irritating effect.**Sensitization:** No sensitizing effects known.**Subacute to chronic toxicity:****Subacute to chronic toxicity:**

Breathing high concentrations causes hyperoxia. Symptoms include cramps, dizziness, nausea, respiratory difficulties, fainting spells and convulsions.

Additional toxicological information:

To the best of our knowledge the acute and chronic toxicity of this substance is not fully known.

No classification data on carcinogenic properties of this material is available from the EPA, IARC, NTP, OSHA or ACGIH.

12 Ecological information:**General notes:**

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

Do not allow material to be released to the environment without proper governmental permits.

13 Disposal considerations**Product:****Recommendation** Consult state, local or national regulations to ensure proper disposal.**Uncleaned packagings:****Recommendation:** Disposal must be made according to official regulations.**14 Transport information**

Not a hazardous material for transportation.

DOT regulations:**Hazard class:** None**Land transport ADR/RID (cross-border)****ADR/RID class:** None**Maritime transport IMDG:****IMDG Class:** None**Air transport ICAO-TI and IATA-DGR:****ICAO/IATA Class:** None**Transport/Additional information:** Not dangerous according to the above specifications.

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15 Regulations**Product related hazard informations:****Hazard symbols:**

O Oxidizing

Risk phrases:

8 Contact with combustible material may cause fire.

Safety phrases:

17 Keep away from combustible material.

National regulations

All components of this product are listed in the U.S. Environmental Protection Agency Toxic Substances Control Act Chemical substance Inventory.

Information about limitation of use: For use only by technically qualified individuals.

16 Other information:

Employers should use this information only as a supplement to other information gathered by them, and should make independent judgement of suitability of this information to ensure proper use and protect the health and safety of employees. This information is furnished without warranty, and any use of the product not in conformance with this Material Safety Data Sheet, or in combination with any other product or process, is the responsibility of the user.

Department issuing MSDS: Health, Safety and Environmental Department.

Contact: Zachariah Holt

Abbreviations and acronyms:

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)

ICAO: International Civil Aviation Organization

ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO)

GHS: Globally Harmonized System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

HMIS: Hazardous Materials Identification System (USA)

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