

Warning



SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Trade name : Medical Air, EP Grade
SDS no : ALH060

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

Relevant identified uses : Medical: Respiratory assistance.
Carrier gas for ventilation and anaesthetic equipment.
Nebulisation of inhaled medicines.
Driving surgical tools.

Uses advised against : Consumer use.
Uses other than those listed above are not supported, contact your supplier for more information on other uses.

1.3. Details of the supplier of the safety data sheet

Company identification : Air Liquide Healthcare Pty Limited
Level 4, Suite 4
247 Coward Street
MASCOT NSW 2020 Australia
1300 36 02 02
ALHEnquiries@AirLiquide.com

1.4. Emergency telephone number

Emergency telephone number : 1800 812 588

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to WHS Regulation

Physical hazards : Gases under pressure : Compressed gas H280

2.2. Label elements

Classification according to WHS Regulation

Hazard pictograms :



GHS04

Signal word : Warning
Hazard statements : H280 - Contains gas under pressure; may explode if heated..
Precautionary statements

- Storage : P403 - Store in a well-ventilated place..

2.3. Other hazards

: None.
Not classified as PBT or vPvB.
The substance/mixture has no endocrine disrupting properties.

SECTION 3: Composition/information on ingredients

3.1. Substances : Not applicable

3.2. Mixtures

Name	Product identifier	%	Classification according to WHS Regulation
Nitrogen	(CAS-No.) 7727-37-9 (EC-No.) 231-783-9 (EC Index-No.) --- (REACH-no) *1	79	Press. Gas (Comp.), H280
Oxygen	(CAS-No.) 7782-44-7 (EC-No.) 231-956-9 (EC Index-No.) 008-001-00-8 (REACH-no) *1	21	Ox. Gas 1, H270 Press. Gas (Comp.), H280

Full text of H- and EUH-statements: see section 16

Contains no other components or impurities which will influence the classification of the product.

*1: Listed in Annex IV / V REACH, exempted from registration.

*3: Registration not required: Substance manufactured or imported < 1t/y.

SECTION 4: First aid measures

4.1. Description of first aid measures

- Inhalation : Adverse effects not expected from this product.
- Skin contact : Adverse effects not expected from this product.
- Eye contact : Adverse effects not expected from this product.
- Ingestion : Ingestion is not considered a potential route of exposure.

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

: No effect on living tissue.
See section 11.

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

: None.

SECTION 5: Firefighting measures

5.1. Extinguishing media

- Suitable extinguishing media : Water spray or fog.
Product does not burn, use fire control measures appropriate for the surrounding fire.
- Unsuitable extinguishing media : Do not use water jet to extinguish.

5.2. Special hazards arising from the substance or mixture

- Specific hazards : Exposure to fire may cause containers to rupture/explode.
Supports combustion.
- Hazardous combustion products : None.

5.3. Advice for fire-fighters

Specific methods	: Use fire control measures appropriate for the surrounding fire. Exposure to fire and heat radiation may cause gas receptacles to rupture. Cool endangered receptacles with water spray jet from a protected position. Prevent water used in emergency cases from entering sewers and drainage systems. If possible, stop flow of product. Use water spray or fog to knock down fire fumes if possible. Move containers away from the fire area if this can be done without risk.
Special protective equipment for fire fighters	: Standard protective clothing and equipment (Self Contained Breathing Apparatus) for fire fighters. Standard EN 137 - Self-contained open-circuit compressed air breathing apparatus with full face mask. Standard EN 469 - Protective clothing for firefighters. Standard - EN 659: Protective gloves for firefighters.
Hazchem Code	: 2T

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

No additional information available

6.2. Environmental precautions

: None.

6.3. Methods and material for containment and cleaning up

: None.
Ventilate area.

6.4. Reference to other sections

: See also sections 8 and 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Safe use of the product	: The product must be handled in accordance with good industrial hygiene and safety procedures. Only experienced and properly instructed persons should handle gases under pressure. Consider pressure relief device(s) in gas installations. Ensure the complete gas system was (or is regularly) checked for leaks before use. Do not smoke while handling product. Use only properly specified equipment which is suitable for this product, its supply pressure and temperature. Contact your gas supplier if in doubt. Use only oxygen approved lubricants and oxygen approved sealings. Avoid suck back of water, acid and alkalis. Do not breathe gas. Avoid release of product into atmosphere.
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Safe handling of the gas cylinder : Refer to supplier's cylinder handling instructions.
Do not allow backfeed into the cylinder.
Protect cylinders from physical damage; do not drag, roll, slide or drop.
When moving cylinders, even for short distances, use a cart (trolley, hand truck, etc.) designed to transport cylinders.
Leave valve protection caps in place until the cylinder has been secured against either a wall or bench or placed in a container stand and is ready for use.
If user experiences any difficulty operating valve discontinue use and contact supplier.
Never attempt to repair or modify cylinder valves or safety relief devices.
Damaged valves should be reported immediately to the supplier.
Keep cylinder valve outlets clean and free from contaminants particularly oil and water.
Replace valve outlet caps or plugs and cylinder caps where supplied as soon as cylinder is disconnected from equipment.
Close cylinder valve after each use and when empty, even if still connected to equipment.
Never attempt to transfer gases from one cylinder to another.
Never use direct flame or electrical heating devices to raise the pressure of a cylinder.
Do not remove or deface labels provided by the supplier for the identification of the content of the cylinder.
Suck back of water into the cylinder must be prevented.
Open valve slowly to avoid pressure shock.

7.2. Conditions for safe storage, including any incompatibilities

: Observe all regulations and local requirements regarding storage of cylinders.
Cylinders should not be stored in conditions likely to encourage corrosion.
Cylinder valve guards or caps should be in place.
Cylinders should be stored in the vertical position and properly secured to prevent them from falling over.
Stored cylinders should be periodically checked for general condition and leakage.
Keep cylinder below 50°C in a well ventilated place.
Store cylinders in location free from fire risk and away from sources of heat and ignition.
Keep away from combustible materials.

7.3. Specific end use(s)

: None.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

OEL (Occupational Exposure Limits) : No data available.

DNEL (Derived-No Effect Level) : No data available.

PNEC (Predicted No-Effect Concentration) : No data available.

8.2. Exposure controls

8.2.1. Appropriate engineering controls

: Provide adequate general and local exhaust ventilation.
Systems under pressure should be regularly checked for leakages.
Consider the use of a work permit system e.g. for maintenance activities.

8.2.2. Individual protection measures, e.g. personal protective equipment

: A risk assessment should be conducted and documented in each work area to assess the risks related to the use of the product and to select the PPE that matches the relevant risk. The following recommendations should be considered:
PPE compliant to the recommended EN/ISO or Australian standards should be selected.

• Eye/face protection

: Wear safety glasses with side shields.
Standard EN 166 - Personal eye-protection - specifications; AS/NZS 1337.1 – Eye and face protectors for occupational applications.

• Skin protection

- Hand protection : Wear working gloves when handling gas cylinders.
Standard EN 388 - Protective gloves against mechanical risk, performance level 1 or higher; AS/NZS 2161.3 – Occupational protective gloves, protection against mechanical risks
- Other : Wear safety shoes while handling cylinders.
Standard EN ISO 20345 - Personal protective equipment - Safety footwear; AS/NZS 2210.3 – Occupational protective footwear, specifications for safety footwear.
- Respiratory protection : When indicated by a risk assessment, Respiratory Protective Equipment must be used. The selection of the Respiratory Protective Device (RPD) must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected RPD. None necessary.
- Thermal hazards : None in addition to the above sections

8.2.3. Environmental exposure controls

- : Refer to local regulations for restriction of emissions to the atmosphere. See section 13 for specific methods for waste gas treatment. None necessary.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance

- Physical state at 20°C / 101.3kPa : Gas.
- Colour : Mixture contains one or more component(s) which have the following colour(s):
Colourless.
- Odour : Odourless.
- Odour threshold : Odour threshold is subjective and inadequate to warn of overexposure.
- pH value : Not applicable for gases and gas mixtures.
- Molar mass : 29 g/mol
- Melting point : Not known.
- Boiling point : Not known.
- Flash point : Not applicable for gases and gas mixtures.
- Critical temperature [°C] : Not known.
- Evaporation rate (ether=1) : No data available
- Flammability range : Non flammable.
- Vapour pressure [20°C] : Not applicable.
- Vapour pressure [50°C] : Not applicable.
- Relative density, gas (air=1) : 1
- Relative density, liquid (water=1) : Not applicable.
- Solubility in water : Not known, but considered to have low solubility.
- Partition coefficient n-octanol/water [log Kow] : Not applicable for inorganic products.
- Auto-ignition temperature : Non flammable.
- Decomposition point [°C] : Not applicable.
- Viscosity [20°C] : No reliable data available.
- Explosive Properties : No data available
- Oxidising Properties : No oxidising properties

9.2. Other information

- Other data : No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

: No reactivity hazard other than the effects described in sub-sections below.
Data for mixtures are not available

10.2. Chemical stability

: Stable under normal conditions.

10.3. Possibility of hazardous reactions

: None.

10.4. Conditions to avoid

: Avoid moisture in installation systems.

10.5. Incompatible materials

: For additional information on compatibility refer to ISO 11114.

10.6. Hazardous decomposition products

: Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : No toxicological effects from this product.

Skin corrosion/irritation : No known effects from this product.

Serious eye damage/irritation : No known effects from this product.

Respiratory or skin sensitisation : No known effects from this product.

Germ cell mutagenicity : No known effects from this product.

Carcinogenicity : No known effects from this product.

Toxic for reproduction : Fertility : No known effects from this product.

Toxic for reproduction : unborn child : No known effects from this product.

STOT-single exposure : No known effects from this product.

STOT-repeated exposure : No known effects from this product.

Aspiration hazard : Not applicable for gases and gas mixtures.

Other information : The substance/mixture has no endocrine disrupting properties.

SECTION 12: Ecological information

12.1. Toxicity

Assessment : No ecological damage caused by this product.

12.2. Persistence and degradability

Assessment : No ecological damage caused by this product.

12.3. Bioaccumulative potential

Assessment : No ecological damage caused by this product.

12.4. Mobility in soil

Assessment : No ecological damage caused by this product.

12.5. Results of PBT and vPvB assessment

Assessment : Not classified as PBT or vPvB.

12.6. Other adverse effects

Effect on the ozone layer : No known effects from this product.
Effect on global warming : No effect on the ozone layer.
Effect on global warming : No known effects from this product.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

May be vented to atmosphere.
May be vented to atmosphere in a well ventilated place.
Do not discharge into any place where its accumulation could be dangerous.
Return unused product in original cylinder to supplier.
List of hazardous waste codes (from Commission Decision 2000/532/EC as amended) : 16 05 05 : Gases in cylinders other than those mentioned in 16 05 04.

13.2. Additional information

: External treatment and disposal of waste should comply with applicable local and/or national regulations

SECTION 14: Transport information

14.1. UN number

UN-No. : 1002

14.2. UN proper shipping name

Transport by road/rail (ADG) : AIR, COMPRESSED
Transport by air (ICAO-TI / IATA-DGR) : Air, compressed
Transport by sea (IMDG) : AIR, COMPRESSED

14.3. Transport hazard class(es)

Labelling



2.2 : Non-flammable, non-toxic gases

Transport by road/rail (ADG)

Class : 2
Hazchem Code : 2T
Hazard identification number : 20
Tunnel Restriction : E - Passage forbidden through tunnels of category E

Transport by air (ICAO-TI / IATA-DGR)

Class / Div. (Sub. risk(s)) : 2.2

Transport by sea (IMDG)

Class / Div. (Sub. risk(s)) : 2.2
Emergency Schedule (EmS) - Fire : F-C
Emergency Schedule (EmS) - Spillage : S-V

14.4. Packing group

Transport by road/rail (ADR/RID) : Not applicable
Transport by air (ICAO-TI / IATA-DGR) : Not applicable
Transport by sea (IMDG) : Not applicable

14.5. Environmental hazards

Transport by road/rail (ADR/RID) : None.
Transport by air (ICAO-TI / IATA-DGR) : None.
Transport by sea (IMDG) : None.

14.6. Special precautions for user**No additional information availablePacking Instruction(s)**

Transport by road/rail (ADR/RID) : P200
Transport by air (ICAO-TI / IATA-DGR)
Passenger and Cargo Aircraft : 200
Cargo Aircraft only : 200
Transport by sea (IMDG) : P200

Special transport precautions : 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 there is adequate ventilation.
- Ensure that containers are firmly secured.
- Ensure valve is closed and not leaking.
- Ensure valve outlet cap nut or plug (where provided) is correctly fitted.
- Ensure valve protection device (where provided) is correctly fitted.
Do not load or transport cylinders other than in accordance with load restraint guidelines and relevant road safety laws.

HAZCHEM CODE : 2T

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

: Not applicable.

SECTION 15: Regulatory information**15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture****National regulations**

Therapeutic Goods : Registered prescription medicine on the Australian Register of Therapeutic Goods (ARTG ID 97748)

15.2. Chemical safety assessment

: A CSA does not need to be carried out for this product.

SECTION 16: Other information

Indication of changes : Revised safety data sheet in accordance with commission regulation (EU) No 453/2010 and relevant Work, Health and Safety regulations.

Abbreviations and acronyms

: ATE - Acute Toxicity Estimate. CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008. REACH - Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006. EINECS - European Inventory of Existing Commercial Chemical Substances. CAS# - Chemical Abstract Service number. PPE - Personal Protection Equipment. LC50 - Lethal Concentration to 50 % of a test population. RMM - Risk Management Measures. PBT - Persistent, Bioaccumulative and Toxic. vPvB - Very Persistent and Very Bioaccumulative. STOT- SE : Specific Target Organ Toxicity - Single Exposure. CSA - Chemical Safety Assessment. EN - European Standard. UN - United Nations. ADR - European Agreement concerning the International Carriage of Dangerous Goods by Road. IATA - International Air Transport Association. IMDG code - International Maritime Dangerous Goods. RID - Regulations concerning the International Carriage of Dangerous Goods by Rail. WGK - Water Hazard Class. STOT - RE : Specific Target Organ Toxicity - Repeated Exposure. UFI : Unique Formula Identifier.

Training advice

: None.

Full text of H-statements

H270	May cause or intensify fire; oxidiser.
H280	Contains gas under pressure; may explode if heated.
Ox. Gas 1	Oxidising Gases, Category 1
Press. Gas (Comp.)	Gases under pressure : Compressed gas

DISCLAIMER OF LIABILITY

: 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.