

≤500 ppm Carbon dioxide & Nitric Oxide in

Nitrogen

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2020/878

Reference number: SDS 01506 Issue date: 11/9/2023 Version: 1.0

Warning



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

1.1. Product identifier

SDS no : SDS 01506

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

Relevant identified uses : Industrial and professional uses. Perform risk assessment prior to use.

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

Air Liquide UK Ltd. Station Road Coleshill B46 1JY Birmingham United Kingdom

safety.aluk@airliquide.com

1.4. Emergency telephone number

Emergency telephone number : 01675 462695 (Available 24/7)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

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

Physical hazards Gases under pressure : Compressed gas H280

2.2. Label elements

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

Hazard pictograms (CLP) :



GHS04

Signal word (CLP) : Warning

Hazard statements (CLP) : H280 - Contains gas under pressure; may explode if heated.

Precautionary statements (CLP)

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

2.3. Other hazards

Asphyxiant in high concentrations. Not classified as PBT or vPvB.



≤500 ppm Carbon dioxide & Nitric Oxide in Nitrogen

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2020/878 Reference number: SDS 01506

SECTION 3: Composition/information on ingredients

3.1. Substances Not applicable

3.2. Mixtures

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Nitrogen	CAS-No.: 7727-37-9 EC-No.: 231-783-9 EC Index-No.: REACH-no: *1	99.9	Press. Gas (Comp.), H280
Carbon dioxide	CAS-No.: 124-38-9 EC-No.: 204-696-9 EC Index-No.: REACH-no: *1	≤ 0.05	Press. Gas (Liq.), H280
Nitric oxide	CAS-No.: 10102-43-9 EC-No.: 233-271-0 EC Index-No.: REACH-no: 01-2120766630-54	≤ 0.05	Ox. Gas 1, H270 Press. Gas (Comp.), H280 Skin Corr. 1B, H314 Eye Dam. 1, H318 Acute Tox. 1 (Inhalation:gas), H330

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

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

SECTION 4: First aid measures

4.1. Description of first aid measures

- Inhalation : Remove victim to uncontaminated area wearing self contained breathing apparatus. Keep

victim warm and rested. Call a doctor. Perform cardiopulmonary resuscitation if breathing

stopped.

Skin contact
 Eye contact
 Adverse effects not expected from this product.
 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

In high concentrations may cause asphyxiation. Symptoms may include loss of

mobility/consciousness. Victim may not be aware of asphyxiation.

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.

Air Liquide UK Ltd. EN (English) 2/12

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

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



≤500 ppm Carbon dioxide & Nitric Oxide in Nitrogen

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2020/878 Reference number: SDS 01506

5.2. Special hazards arising from the substance or mixture

Specific hazards : Exposure to fire may cause containers to rupture/explode.

Hazardous combustion products : Nitric oxide/nitrogen dioxide.

5.3. Advice for firefighters

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.

In confined space use self-contained breathing apparatus. 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.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

For non-emergency personnel : Act in accordance with local emergency plan.

> Try to stop release. Evacuate area.

Ensure adequate air ventilation.

Stay upwind.

See section 8 of the SDS for more information on personal protective equipment.

: Wear self-contained breathing apparatus when entering area unless atmosphere is proved For emergency responders

Oxygen detectors should be used when asphyxiating gases may be released.

See section 5.3 of the SDS for more information.

6.2. Environmental precautions

Try to stop release.

6.3. Methods and material for containment and cleaning up

Ventilate area.

6.4. Reference to other sections

See also sections 8 and 13.



≤500 ppm Carbon dioxide & Nitric Oxide in Nitrogen

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2020/878 Reference number: SDS 01506

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Safe handling of the gas receptacle

Safe use of the product

: Do not breathe gas.

Avoid release of product into atmosphere.

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 regularily) 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.

Avoid suck back of water, acid and alkalis.

: Refer to supplier's container handling instructions.

Do not allow backfeed into the container.

Protect containers 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 container 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 container valves or safety relief devices.

Damaged valves should be reported immediately to the supplier.

Keep container valve outlets clean and free from contaminants particularly oil and water. Replace valve outlet caps or plugs and container caps where supplied as soon as container

is disconnected from equipment.

Close container valve after each use and when empty, even if still connected to equipment.

Never attempt to transfer gases from one cylinder/container to another.

Never use direct flame or electrical heating devices to raise the pressure of a container. Do not remove or deface labels provided by the supplier for the identification of the content

of the container.

Suck back of water into the container 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 containers.

Containers should not be stored in conditions likely to encourage corrosion.

Container valve guards or caps should be in place.

Containers should be stored in the vertical position and properly secured to prevent them

from falling over.

Stored containers should be periodically checked for general condition and leakage.

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

Store containers 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

Carbon dioxide (124-38-9)	
EU - Indicative Occupational Exposure Limit (IOEL)	
Local name	Carbon dioxide



≤500 ppm Carbon dioxide & Nitric Oxide in Nitrogen

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2020/878 Reference number: SDS 01506

IOEL TWA	9000 mg/m³
IOEL TWA [ppm]	5000 ppm
Regulatory reference	COMMISSION DIRECTIVE 2006/15/EC
Ireland - Occupational Exposure Limits	
OEL STEL	27000 mg/m³
OEL STEL [ppm]	15000 ppm
USA - ACGIH - Occupational Exposure Limits	
Local name	Carbon dioxide
ACGIH OEL TWA [ppm]	5000 ppm
ACGIH OEL STEL [ppm]	30000 ppm
Remark (ACGIH)	TLV® Basis: Asphyxia
Regulatory reference	ACGIH 2019

Nitric oxide (10102-43-9)	
Austria - Occupational Exposure Limits	
Local name	Stickstoffmonoxid
MAK (mg/m³)	30 mg/m³
MAK (OEL TWA) [ppm]	25 ppm
Regulatory reference	BGBI. II Nr. 186/2015
Bulgaria - Occupational Exposure Limits	
OEL TWA	2.5 mg/m³ За мините с подземен добив и прокарването на подземни тунели граничните стойности влизат в сила от 21 август 2023 г.
Croatia - Occupational Exposure Limits	
GVI (OEL TWA) [1]	2.5 mg/m³
GVI (OEL TWA) [2]	2 ppm
Estonia - Occupational Exposure Limits	
OEL TWA	30 mg/m³ Allmaakaevandustes (Kehtiv kuni 21.08.2023)
OEL TWA [ppm]	2 ppm
Remark	Allmaakaevandustes jõustub piirnorm 21.08.2023
Finland - Occupational Exposure Limits	
HTP (OEL TWA) [1]	2.5 mg/m³
HTP (OEL TWA) [2]	2 ppm
Hungary - Occupational Exposure Limits	
AK (OEL TWA)	30 mg/m³ A földalatti bányászat és az alagútfúrás terén
Ireland - Occupational Exposure Limits	
OEL TWA [1]	2.5 mg/m³



≤500 ppm Carbon dioxide & Nitric Oxide in Nitrogen

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2020/878 Reference number: SDS 01506

OEL TWA [2]	2 ppm
Romania - Occupational Exposure Limits	
OEL TWA	2.5 mg/m³ (Pentru substanțe chimice în fază gazoasă sau de vapori, valoarea-limită este exprimată la 20°C și la 101,3 kPa)
OEL TWA [ppm]	2 ppm
Slovakia - Occupational Exposure Limits	
NPHV (OEL TWA) [1]	2.5 mg/m³
NPHV (OEL TWA) [2]	2 ppm
Spain - Occupational Exposure Limits	
VLA-ED (OEL TWA) [1]	31 mg/m³ Para este agente existe un periodo transitorio, que terminará, a más tardar, el 21 de agosto de 2023, para los sectores de la minería subterránea y la construcción de túneles.
VLA-ED (OEL TWA) [2]	25 ppm Para este agente existe un periodo transitorio, que terminará, a más tardar, el 21 de agosto de 2023, para los sectores de la minería subterránea y la construcción de túneles.
Sweden - Occupational Exposure Limits	
NGV (OEL TWA)	30 mg/m³ När det gäller underjord- eller tunnelarbete
NGV (OEL TWA) [ppm]	25 ppm När det gäller underjord- eller tunnelarbete
United Kingdom - Occupational Exposure Limits	
WEL TWA (OEL TWA) [1]	30 mg/m³ Limit applicable to underground mining & tunnelling industries ONLY until 21/8/23
WEL TWA (OEL TWA) [2]	25 ppm Limit applicable to underground mining & tunnelling industries ONLY until 21/8/23
Norway - Occupational Exposure Limits	
Grenseverdi (OEL TWA) [1]	30 mg/m³ For bransjene gruvedrift under jord og tunnel-virksomhet gjelder følgende grenseverdi for nitrogenmonoksid frem til 21. august 2023
Grenseverdi (OEL TWA) [2]	25 ppm For bransjene gruvedrift under jord og tunnel-virksomhet gjelder følgende grenseverdi for nitrogenmonoksid frem til 21. august 2023
USA - ACGIH - Occupational Exposure Limits	
Local name	Nitric oxide
ACGIH OEL TWA [ppm]	25 ppm
Remark (ACGIH)	TLV® Basis: Hypoxia/cyanosis; nitrosyl-Hb form; URT irr. Notations: BEIM
Regulatory reference	ACGIH 2019

DNEL (Derived-No Effect Level) : None established.

PNEC (Predicted No-Effect Concentration) : None established.



≤500 ppm Carbon dioxide & Nitric Oxide in Nitrogen

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2020/878 Reference number: SDS 01506

8.2. Exposure controls

8.2.1. Appropriate engineering controls

Provide adequate general and local exhaust ventilation.

Systems under pressure should be regularily checked for leakages. Ensure exposure is below occupational exposure limits (where available). Oxygen detectors should be used when asphyxiating gases may be released. 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 standards should be selected.

· Eye/face protection : Wear safety glasses with side shields.

Standard EN 166 - Personal eye-protection - specifications.

Skin protection

- Other

- Hand protection : Wear working gloves when handling gas containers.

Standard EN 388 - Protective gloves against mechanical risk, performance level 1 or higher.

: Wear safety shoes while handling containers.

Standard EN ISO 20345 - Personal protective equipment - Safety footwear.

· Respiratory protection : Gas filters may be used if all surrounding conditions e.g. type and concentration of the

contaminant(s) and duration of use are known.

Use gas filters with full face mask, where exposure limits may be exceeded for a short-term

period, e.g. connecting or disconnecting containers.

Standard EN 137 - Self-contained open-circuit compressed air breathing apparatus with full

Gas filters do not protect against oxygen deficiency.

Self contained breathing apparatus (SCBA) or positive pressure airline with mask are to be

used in oxygen-deficient atmospheres.

Standard EN 14387 - Gas filter(s), combined filter(s) and standard EN136, full face masks .

 Thermal hazards : None in addition to the above sections.

8.2.3. Environmental exposure controls

None necessary.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

- Physical state at 20°C / 101.3kPa : Gas.

- Colour Mixture contains one or more component(s) which have the following colour(s):

Colourless Brownish gas.

Odour : Odour threshold is subjective and inadequate to warn of overexposure.

Mixture contains one or more component(s) which have the following odour:

Pungent.

Melting point / Freezing point : Not applicable for gas mixtures.

: Not applicable for gas mixtures. Boiling point

It is technically not possible to determine the boiling point or range of this mixture.

Component with lowest boiling point: Nitrogen -196 °C

Flammability : Non flammable. Lower explosion limit Not available Upper explosion limit : Not available

: Not applicable for gases and gas mixtures.

Auto-ignition temperature : Non flammable. Decomposition temperature : Not applicable.

: Not applicable for gases and gas mixtures.

Viscosity, kinematic : Not known.

Water solubility [20°C] : Mixture is partially soluble in water

Air Liquide UK Ltd. EN (English) 7/12



: Not applicable.

≤500 ppm Carbon dioxide & Nitric Oxide in Nitrogen

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2020/878 Reference number: SDS 01506

Partition coefficient n-octanol/water (Log Kow) Not available.

Vapour pressure [20°C] Not applicable. Vapour pressure [50°C] Not applicable. Density and/or relative density Not applicable. Relative vapour density (air=1) : Lighter or similar to air.

9.2. Other information

Particle characteristics

9.2.1. Information with regard to physical hazard classes

: Not applicable. Explosive properties : Non flammable. **Explosion limits** : Not applicable. Oxidising properties

9.2.2. Other safety characteristics

Molar mass : Not applicable for gas mixtures.

: Not applicable for gases and gas mixtures. Evaporation rate

Other data : None

SECTION 10: Stability and reactivity

10.1. Reactivity

No reactivity hazard other than the effects described in sub-sections below.

Data for mixture are not available.

This mixture contains components with the following reactivity: Violently oxidises organic

material.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

Violently oxidises organic material.

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 hazard classes as defined in Regulation (EC) No 1272/2008

: Classification criteria are not met. **Acute toxicity**

Nitric oxide (10102-43-9)

LC50 Inhalation - Rat [ppm] 57.5 ppm/4h

: Classification criteria are not met. Skin corrosion/irritation

Classification criteria are not met. 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

Air Liquide UK Ltd. Station Road Coleshill B46 1JY Birmingham United Kingdom

EN (English) 8/12



≤500 ppm Carbon dioxide & Nitric Oxide in Nitrogen

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2020/878 Reference number: SDS 01506

Toxic for reproduction : Fertility

Toxic for reproduction : unborn child

STOT-single exposure
STOT-repeated exposure

Aspiration hazard

: No known effects from this product.

: No known effects from this product.

No known effects from this product.No known effects from this product.

: Not applicable for gases and gas mixtures.

11.2. Information on other hazards

No additional information available

SECTION 12: Ecological information

12.1. Toxicity

Assessment : No ecological damage caused by this product.

EC50 48h - Daphnia magna [mg/l] : No data available. EC50 72h - Algae [mg/l] : No data available. LC50 96 h - Fish [mg/l] : No data available.

Carbon dioxide (124-38-9)	
EC50 48h - Daphnia magna [mg/l]	No data available.
EC50 72h - Algae [mg/l]	No data available.
LC50 96 h - Fish [mg/l]	No data available.

Nitric oxide (10102-43-9)	
EC50 48h - Daphnia magna [mg/l]	No data available.
EC50 72h - Algae [mg/l]	No data available.
LC50 96 h - Fish [mg/l]	No data available.

Nitrogen (7727-37-9)	
EC50 48h - Daphnia magna [mg/l]	No data available.
EC50 72h - Algae [mg/l]	No data available.
LC50 96 h - Fish [mg/l]	No data available.

12.2. Persistence and degradability

Assessment : No ecological damage caused by this product.

12.3. Bioaccumulative potential

Assessment : No data available.

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. Endocrine disrupting properties

Assessment :

12.7. Other adverse effects

Other adverse effects : No known effects from this product.

Air Liquide UK Ltd. Station Road Coleshill B46 1JY Birmingham United Kingdom EN (English)



≤500 ppm Carbon dioxide & Nitric Oxide in Nitrogen

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2020/878 Reference number: SDS 01506

Effect on the ozone layer : No effect on the ozone layer. Effect on global warming : Contains greenhouse gas(es).

SECTION 13: Disposal considerations

13.1. Waste treatment methods

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 container to supplier.

List of hazardous waste codes (from Commission

Decision 2000/532/EC as amended)

: $16\ 05\ 05$: Gases in pressure containers 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 or ID number

In accordance with ADR / RID / IMDG / IATA / ADN

UN-No. : 1956

14.2. UN proper shipping name

Transport by road/rail (ADR/RID) : COMPRESSED GAS, N.O.S. (Nitrogen, Nitric oxide)
Transport by air (ICAO-TI / IATA-DGR) : Compressed gas, n.o.s. (Nitrogen, Nitric oxide)
Transport by sea (IMDG) : COMPRESSED GAS, N.O.S. (Nitrogen, Nitric oxide)

14.3. Transport hazard class(es)

Labelling

2.2 : Non-flammable, non-toxic gases.

Transport by road/rail (ADR/RID)

Class : 2
Classification code : 1A
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.

Air Liquide UK Ltd. Station Road Coleshill B46 1JY Birmingham United Kingdom EN (English)

10/12



≤500 ppm Carbon dioxide & Nitric Oxide in Nitrogen

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2020/878 Reference number: SDS 01506

14.6. Special precautions for user

Packing 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.

14.7. Maritime transport in bulk according to IMO instruments

Not applicable.

SECTION 15: Regulatory information

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

EU-Regulations

Restrictions on use : None.

Contains no substance on the REACH candidate list.

Other information, restriction and prohibition

regulations

: Contains no substance subject to Regulation (EU) No 649/2012 of the European Parliament and of the Council of 4 July 2012 concerning the export and import of hazardous chemicals.

Seveso Directive: 2012/18/EU (Seveso III) : Not covered.

National regulations

Water hazard class (WGK) : nwg - Non-hazardous to water.

Regulatory reference : Ensure all national/local regulations are observed.

15.2. Chemical safety assessment

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

SECTION 16: Other information

Indication of changes : Safety data sheet in accordance with commission regulation (EU) No 2020/878.



≤500 ppm Carbon dioxide & Nitric Oxide in Nitrogen

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2020/878 Reference number: SDS 01506

Abbreviations and acronyms

Training advice

: ATE - Acute Toxicity Estimate.

CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008.

 $\label{eq:REACH-Registration} \textbf{Regulation}, \textbf{Evaluation}, \textbf{Authorisation} \ \textbf{and} \ \textbf{Restriction} \ \textbf{of} \ \textbf{Chemicals} \ \textbf{Regulation}$

(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

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.

: The hazard of asphyxiation is often overlooked and must be stressed during operator

training.

For more guidance, refer to EIGA SL 01 "Dangers of Asphyxiation", downloadable at

http://www.eiga.eu..

Further information : Classification using data from databases maintained by the European Industrial Gases

Association (EIGA). Data is maintained in EIGA doc 169 : 'Classification and Labelling

Guide', downloadable at : http://www.eiga.eu.

Classification in accordance with the procedures and calculation methods of Regulation

(EC) 1272/2008 (CLP).

Full text of H- and EUH-statements	
Acute Tox. 1 (Inhalation:gas)	Acute toxicity (inhalation:gas) Category 1
Eye Dam. 1	Serious eye damage/eye irritation, Category 1
H270	May cause or intensify fire; oxidiser.
H280	Contains gas under pressure; may explode if heated.
H314	Causes severe skin burns and eye damage.
H318	Causes serious eye damage.
H330	Fatal if inhaled.
Ox. Gas 1	Oxidising Gases, Category 1
Press. Gas (Comp.)	Gases under pressure : Compressed gas
Press. Gas (Liq.)	Gases under pressure : Liquefied gas
Skin Corr. 1B	Skin corrosion/irritation, Category 1, Sub-Category 1B

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.

End of document

Air Liquide UK Ltd. Station Road Coleshill B46 1JY Birmingham United Kingdom EN (English)

12/12