

SAFETY DATA SHEET
H2 1 %;O2 20 %;N2 79 %

Issue Date: 20.12.2012

Version: 0.0

SDS No.: 000010006911

Last revised date: 00.00.0000

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SECTION 1: Identification of the substance/mixture and of the company/undertaking**1.1 Product identifier****Product name:** H2 1 %;O2 20 %;N2 79 %**1.2 Relevant identified uses of the substance or mixture and uses advised against****Identified uses:****Uses advised against****1.3 Details of the supplier of the safety data sheet****Supplier**Linde Gas Bulgaria
kv. Industrial zone, on the territory of Agrobiohim
BG-6000 Stara Zagora**Telephone:** 0887 735511**E-mail:** marketing@bg.linde-gas.com**SECTION 2: Hazards identification****2.1 Classification of the substance or mixture****Classification according to Regulation (EC) No 1272/2008 as amended.****Physical Hazards**

Gases under pressure

Compressed
gas

H280: Contains gas under pressure; may explode if heated.

2.2 Label Elements**Signal Words:** Warning**Hazard Statement(s):** H280: Contains gas under pressure; may explode if heated.**Precautionary Statements****Prevention:** None.**Response:** None.

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Storage: P403: Store in a well-ventilated place.**Disposal:** None.**Supplemental label information**

Safety data sheet available for professional user on request.

2.3 Other hazards: None.

SECTION 3: Composition/information on ingredients
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3.2 Mixtures**General information:** No hazardous ingredients.

Chemical name	Chemical formula	Concentration	CAS-No.	EC No.	REACH Registration No.	Notes
Hydrogen	H2	1%	1333-74-0	215-605-7	Listed in Annex IV/V of Regulation (EC) No 1907/2006 (REACH), exempted from registration.	
Oxygen	O2	20%	7782-44-7	231-956-9	Listed in Annex IV/V of Regulation (EC) No 1907/2006 (REACH), exempted from registration.	
Nitrogen	N2	79%	7727-37-9	231-783-9	Listed in Annex IV/V of Regulation (EC) No 1907/2006 (REACH), exempted from registration.	

The concentrations of the components in the SDS header, product name on page one and in section 3.2 are in mol due to regulatory requirements. All concentrations are nominal.

This substance has workplace exposure limit(s).

PBT: persistent, bioaccumulative and toxic substance.

vPvB: very persistent and very bioaccumulative substance.

Classification

Chemical name	Classification		Notes
Hydrogen	CLP:	Press. Gas Compr. Gas;H280, Flam. Gas 1;H220	Note U
Oxygen	CLP:	Press. Gas Compr. Gas;H280, Oxid. Gas 1;H270	
Nitrogen	CLP:	Press. Gas Compr. Gas;H280	

CLP: Regulation No. 1272/2008.

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Note U: When put on the market gases have to be classified as 'Gases under pressure', in one of the groups compressed gas, liquefied gas, refrigerated liquefied gas or dissolved gas. The group depends on the physical state in which the gas is packaged and therefore has to be assigned case by case.

The full text for all H-statements is displayed in section 16.

SECTION 4: First aid measures**4.1 Description of first aid measures****Inhalation:** No data available.**Eye contact:** No data available.**Skin Contact:** No data available.**Ingestion:** No data available.**4.2 Most important symptoms and effects, both acute and delayed:** No data available.**4.3 Indication of any immediate medical attention and special treatment needed****Hazards:** None.**Treatment:** None.**SECTION 5: Firefighting measures****General Fire Hazards:** No data available.**5.1 Extinguishing media****Suitable extinguishing media:** No data available.**Unsuitable extinguishing media:** No data available.**5.2 Special hazards arising from the substance or mixture:** No data available.

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5.3 Advice for firefighters**Special fire fighting procedures:** No data available.**SECTION 6: Accidental release measures****6.1 Personal precautions, protective equipment and emergency procedures:** No data available.**6.2 Environmental Precautions:** No data available.**6.3 Methods and material for containment and cleaning up:** No data available.**6.4 Reference to other sections:** Refer to sections 8 and 13.**SECTION 7: Handling and storage:****7.1 Precautions for safe handling:** No data available.**7.2 Conditions for safe storage, including any incompatibilities:** No data available.**7.3 Specific end use(s):** None.**SECTION 8: Exposure controls/personal protection****8.1 Control Parameters****Occupational Exposure Limits**

None of the components have assigned exposure limits.

8.2 Exposure controls**Appropriate engineering controls:** No data available.**Individual protection measures, such as personal protective equipment****General information:** No data available.

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Eye/face protection:	No data available.
Skin protection	
Hand Protection:	No data available.
Body protection:	No special precautions.
Other:	not applicable.
Respiratory Protection:	not applicable.
Thermal hazards:	not applicable.
Hygiene measures:	not applicable.
Environmental exposure controls:	not applicable.

SECTION 9: Physical and chemical properties**9.1 Information on basic physical and chemical properties****Appearance**

Physical state:	Gas
Form:	Compressed gas
Color:	H2: Colorless O2: Slightly bluish, Colorless, Blue N2: White, Colorless
Odor:	H2: Odorless O2: Odorless N2: Odorless gas
Odor Threshold:	Odor threshold is subjective and is inadequate to warn of over exposure.
pH:	not applicable.
Melting Point:	No data available.
Boiling Point:	No data available.
Sublimation Point:	not applicable.
Critical Temp. (°C):	No data available.
Flash Point:	Not applicable to gases and gas mixtures.
Evaporation Rate:	Not applicable to gases and gas mixtures.
Flammability (solid, gas):	This product is not flammable.
Flammability Limit - Upper (%):	not applicable.
Flammability Limit - Lower (%):	not applicable.

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Vapor pressure:	No reliable data available.
Vapor density (air= 1):	No data available.
Relative density:	No data available.
Solubility(ies)	
Solubility in Water:	No data available.
Partition coefficient (n-octanol/water):	Not known.
Autoignition Temperature:	not applicable.
Decomposition Temperature:	Not known.
Viscosity	
Kinematic viscosity:	No data available.
Dynamic viscosity:	No data available.
Explosive properties:	Not applicable.
Oxidizing properties:	not applicable.

9.2 Other information: None.**SECTION 10: Stability and reactivity**

10.1 Reactivity:	No data available.
10.2 Chemical Stability:	No data available.
10.3 Possibility of hazardous reactions:	No data available.
10.4 Conditions to avoid:	No data available.
10.5 Incompatible Materials:	No data available.
10.6 Hazardous Decomposition Products:	No data available.

SECTION 11: Toxicological information**General information:** None.**11.1 Information on toxicological effects****Acute toxicity - Oral
Product**

Based on available data, the classification criteria are not met.

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Acute toxicity - Dermal**Product** Based on available data, the classification criteria are not met.**Acute toxicity - Inhalation****Product** Based on available data, the classification criteria are not met.**Skin Corrosion/Irritation****Product** Based on available data, the classification criteria are not met.**Serious Eye Damage/Eye Irritation****Product** Based on available data, the classification criteria are not met.**Respiratory or Skin Sensitization****Product** Based on available data, the classification criteria are not met.**Germ Cell Mutagenicity****Product** Based on available data, the classification criteria are not met.**Carcinogenicity****Product** Based on available data, the classification criteria are not met.**Reproductive toxicity****Product** Based on available data, the classification criteria are not met.**Specific Target Organ Toxicity - Single Exposure****Product** Based on available data, the classification criteria are not met.**Specific Target Organ Toxicity - Repeated Exposure****Product** Based on available data, the classification criteria are not met.**Aspiration Hazard****Product** Not applicable to gases and gas mixtures..**SECTION 12: Ecological information****General information:** not applicable**12.1 Toxicity****Acute toxicity****Product** No ecological damage caused by this product.

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**12.2 Persistence and
Degradability
Product**

Not applicable to gases and gas mixtures..

**12.3 Bioaccumulative potential
Product**

The subject product is expected to biodegrade and is not expected to persist for long periods in an aquatic environment.

**12.4 Mobility in soil
Product**

Because of its high volatility, the product is unlikely to cause ground or water pollution.

**12.5 Results of PBT and vPvB
assessment
Product**

Not classified as PBT or vPvB.

12.6 Other adverse effects:

No ecological damage caused by this product.

SECTION 13: Disposal considerations**13.1 Waste treatment methods****General information:** No data available.**Disposal methods:** No data available.**SECTION 14: Transport information****ADR**

- 14.1 UN Number: UN 1956
14.2 UN Proper Shipping Name: COMPRESSED GAS, N.O.S.(Nitrogen, Oxygen)
14.3 Transport Hazard Class(es)
Class: 2
Label(s): 2.2
Hazard No. (ADR): 20
Tunnel restriction code: (E)
14.4 Packing Group: –
14.5 Environmental hazards: not applicable
14.6 Special precautions for user: –

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RID

14.1 UN Number:	UN 1956
14.2 UN Proper Shipping Name	COMPRESSED GAS, N.O.S.(Nitrogen, Oxygen)
14.3 Transport Hazard Class(es)	
Class:	2
Label(s):	2.2
14.4 Packing Group:	–
14.5 Environmental hazards:	not applicable
14.6 Special precautions for user:	–

IMDG

14.1 UN Number:	UN 1956
14.2 UN Proper Shipping Name:	COMPRESSED GAS, N.O.S.(Nitrogen, Oxygen)
14.3 Transport Hazard Class(es)	
Class:	2.2
Label(s):	2.2
EmS No.:	F-C, S-V
14.4 Packing Group:	–
14.5 Environmental hazards:	not applicable
14.6 Special precautions for user:	–

IATA

14.1 UN Number:	UN 1956
14.2 Proper Shipping Name:	Compressed gas, n.o.s.(Nitrogen, Oxygen)
14.3 Transport Hazard Class(es)	
Class:	2.2
Label(s):	2.2
14.4 Packing Group:	–
14.5 Environmental hazards:	not applicable
14.6 Special precautions for user:	–
Other information	
Passenger and cargo aircraft:	Allowed.
Cargo aircraft only:	Allowed.

14.7 Transport in bulk according to Annex II of MARPOL and the IBC Code**SECTION 15: Regulatory information****15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture:****EU Regulations**

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Regulation (EC) No. 1907/2006 Annex XVII Substances subject to restriction on marketing and use:

Chemical name	CAS-No.	Concentration
Hydrogen	1333-74-0	1,0 - 10%

Directive 96/82/EC (Seveso III): on the control of major accident hazards involving dangerous substances:

Chemical name	CAS-No.	Concentration
Oxygen	7782-44-7	20 - 30%
Hydrogen	1333-74-0	1,0 - 10%

Directive 98/24/EC on the protection of workers from the risks related to chemical agents at work:

Chemical name	CAS-No.	Concentration
Oxygen	7782-44-7	20 - 30%
Hydrogen	1333-74-0	1,0 - 10%

**15.2 Chemical safety
assessment:**

No Chemical Safety Assessment has been carried out.

SECTION 16: Other information**Revision Information:** Not relevant.**Key literature references and
sources for data:** No data available.**Wording of the H-statements in section 2 and 3**

H280 Contains gas under pressure; may explode if heated.

Training information: None.**Classification according to Regulation (EC) No 1272/2008 as amended.**

Press. Gas Compr. Gas, H280

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This information is provided without warranty. The information is believed to be correct. This information should be used to make an independent determination of the methods to safeguard workers and the environment.