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

1.1. Product identifier

Trade name	Mixture Nitrogen 92% - Hydrogen 8%
Chemical description	Nitrogen 92% - Hydrogen 8%
CAS N°	-
CE N°	-
Index N°	-
Registration n°	Exempt from registration (Annex IV/V REACH)
Chemical formula	N ₂ , H ₂

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

Relevant identified uses	Industrial and professional Chemical analysis, calibration, quality control (routine) Laboratory use Contact the supplier for more information on use
Uses advised against	For use by industrial or professional users only

1.3. Details of the supplier of the safety data sheet

Company identification	MULTIGAS Route de l'Industrie 102 CH-1564 Domdidier
Phone number	+41 (0) 26 676 94 94
E-mail address	info@multigas.ch

1.4. Emergency telephone numbers

145 (Toxicology Centre Zurich) or +41 (0) 44 251 51 51
+41 (0) 26 676 94 94 (Multigas)


SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

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



Flammable gas	H221
Gases under pressure : Compressed gas	H280

For the complete H-sentences texts mentioned in that chapter, refer to Section 16

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2.2. Label elements

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

Hazard pictograms	 
	GHS02 GHS04
Signal word	Danger
Hazard statements	
	H221 Flammable gas H280 Contains gas under pressure; may explode if heated
Precautionary statements	
	P410+403 Protect from solar radiation. Store in a well-ventilated place

2.3. Other hazards

Asphyxiant in high concentrations

SECTION 3: Composition/information on ingredients

3.1. Substances

Name	Product identifier	Concentration	Classification
Nitrogen	(CAS-No.) 7727-37-9 (EC-No.) 231-783-9 (EC Index-No.) --- (Registration-No.) --	92%	Press. Gas (Comp.), H280
Hydrogen	(CAS-No.) 1333-74-0 (EC-No.) 215-605-7 (EC Index-No.) 001-001-00-9 (Registration-No.) --	8%	Flam. Gas 1, H220 Press. Gas (Comp.), H280

For the complete H-sentences texts mentioned in that chapter, refer to Section 16

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

3.2. Mixtures

Not established

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SECTION 4: First aid measures

4.1. Description of first aid measures

General advices	See a doctor. Show this safety data sheet to the attending physician
In case of inhalation	In case of inhalation, remove the person from the contaminated area. In case of respiratory arrest, give artificial respiration. See a doctor
In case of skin contact	No adverse effects expected
In case of eyes contact	No adverse effects expected
In case of ingestion	Never give anything by mouth to an unconscious person. Rinse mouth with water. See a doctor

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
 Refer to section 11

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

Data not available

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	Water spray or water mist
Unsuitable extinguishing media	Do not use water jet

5.2. Special hazards arising from the substance or mixture

Specific hazards	Exposure to fire may cause containers to rupture/explode
Hazardous combustion products	None

5.3. Additional information

Wear self-contained breathing apparatus for firefighting, if necessary

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Avoid breathing vapours, spray mists or gases
 Provide adequate ventilation
 Evacuate the staff to safe place
 Personal protective equipment, see section 8

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6.2. Environmental precautions

-

6.3. Methods and material for containment and cleaning up

-

6.4. Reference to other sections

See also sections 8 and 13

SECTION 7: Handling and storage

7.1. Precautions for safe handling

See also sections 8 and 13

7.2. Conditions for safe storage, including any incompatibilities

Store in a cool place. Keep container tightly closed in a dry and well-ventilated place

Pressurized contents

7.3. Specific end use(s)


-

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Components with occupational exposure limits

Component	CAS N°	Exposure value type	Value	Source
Nitrogen	7727-37-9	TWA	-	No occupational exposure limit value
			-	
		OEL	-	
			-	
Hydrogen	1333-74-0	TWA	-	No occupational exposure limit value
			-	
		OEL	-	
			-	

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8.2. Exposure controls

8.2.1. Appropriate engineering controls

Provide adequate general and local exhaust ventilation
Oxygen detectors should be used when asphyxiating gases may be released

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

Eye/face protection	Wear safety glasses with side shields. Standard EN 166
Skin / hand protection	Wear protective gloves when handling gas cylinders Standard EN 388 - Protective gloves against mechanical risks Consider wearing anti-fire and anti-static electricity safety clothing Standard EN ISO 14116 - Materials with limited flame expansion Standard EN ISO 1149-5 - Protective clothing: Electrostatic properties
Respiratory protection	Self-contained breathing apparatus (SCBA) or positive pressure airline with mask are to be used in oxygen-deficient atmospheres. Standard EN 137 - Self-contained open-circuit compressed air breathing apparatus with full face mask

8.2.3. Environmental exposure controls

-

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	Colourless
Odour	Odorless
Odour threshold	Data not available
pH	Data not available
Melting point / Freezing point	Not applicable to gases and gas mixtures
Boiling point	It is not technically possible to determine the boiling point or boiling range of this mixture
Flash point	Data not available
Evaporation rate	Data not available
Flammability (solid, gas)	Flammable
Explosive limits	Lower explosion limit: calculated value 50% (v) Upper explosion limit: No test data or calculation method available
Vapour pressure [20°C]	Data not available

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Vapour pressure [50°C]	Data not available
Vapour density	0.0011 g/cm ³ at 20°C
Relative density, liquid (water=1)	Data not available
Relative density, gas (air=1)	0.8951
Water solubility	Data not available
Partition coefficient n-octanol/water (Log Kow)	Data not available
Auto-ignition temperature	Data not available
Decomposition temperature	Data not available
Viscosity	Data not available
Explosive properties	Data not available
Oxidising properties	Data not available

9.2. Other information

Molar mass	25.92 g/mol
Critical temperature [°C]	Data not available

SECTION 10: Stability and reactivity
10.1. Reactivity

No danger of reactivity other than the effects described in the sections below

10.2. Chemical stability

Stable under the recommended storage conditions

10.3. Possibility of hazardous reactions

Data not available

10.4. Conditions to avoid


Heat, flames and sparks. Mixture with air and oxidising agents may be explosive

10.5. Incompatible materials

Oxygen; oxidants
For additional information on compatibility refer to ISO 11114 standard

10.6. Hazardous decomposition products

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

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Hazardous decomposition products are formed in the event of fire. Nitrogen oxides (NO_x)

SECTION 11: Toxicological information

11.1. Chemical safety assessment

Acute toxicity	Data not available
Skin corrosion/irritation	No adverse effects expected with this product
Serious eye damage/irritation	In the event of direct contact with the eyes, consult a doctor
Respiratory or skin sensitisation	Data not available
Germ cell mutagenicity	Data not available
Carcinogenicity	Data not available
Reproductive toxicity	Data not available
STOT-single exposure – Target organ(s)	Data not available
STOT-repeated exposure	Data not available
Aspiration hazard	Data not available

11.2 Information on other hazards

The substance/mixture has no endocrine disrupting properties

SECTION 12: Ecological information

12.1. Toxicity

Assessment	Data not available
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12.2. Persistence and degradability

Data not available

12.3. Bioaccumulative potential


Data not available

12.4. Mobility in soil

Data not available

12.5. Results of PBT and vPvB assessment

Data not available. The PBT / vPvB assessment is not available because the chemical safety assessment is not required / is not conducted

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12.6. Endocrine-disrupting properties

The substance/mixture has no endocrine disrupting properties

12.7. Other adverse effects

This product is not associated with any known ecological toxicological effects

Effect on the ozone layer

No known effect with this product

Ozone depletion potential

None

Effect on global warming

May contribute to the greenhouse effect when released in large quantities

Global warming potential:
hydrogen components

6

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Product

May be vented to atmosphere in a well-ventilated place

Do not discharge into any place where its accumulation could be dangerous

Contaminated container

Return the unused product to the supplier in its original container

OMoD Code

16 05 04

Gases in pressure containers (including halons) containing dangerous substances

SECTION 14: Transport information

14.1. UN number

Transport par road/rail ADR / RID	Transport by sea IMDG	Transport by air IATA
1954	1954	1954

14.2. UN proper shipping name

Transport par road/rail ADR / RID	Transport by sea IMDG	Transport by air IATA
COMPRESSED GAS, FLAMMABLE, N.O.S., (HYDROGEN, NITROGEN)	COMPRESSED GAS, FLAMMABLE, N.O.S., (HYDROGEN, NITROGEN)	COMPRESSED GAS, FLAMMABLE, N.O.S., (HYDROGEN, NITROGEN)

14.3. Transport hazard class(es)

Labelling



ADR/RID IMDG

2.1 : Flammable, non-toxic gases

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IATA

14.4. Packing group

ADR/RID
 IMDG
 IATA

-

14.5. Environmental hazards

ADR/RID No
 IMDG No
 ICAO-TI / IATA-DGR No

14.6. Special precautions for user

Data not available

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

Not applicable

SECTION 15: Regulatory information

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

This safety data sheet complies with the requirements of Regulation (CE) No. 1907/2006

15.2. Chemical safety assessment


No chemical safety assessment has been carried out

SECTION 16: Other information

Indication of changes Revised safety data sheet in accordance with commission regulation (EU) No 2015/830

Abbreviations and acronyms

- ADR : European Agreement concerning the International Carriage of Dangerous Goods by Road
- CAS : Chemical Abstract Service number (USA)
- CLP : Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008
- CSA : Chemical Safety Assessment
- EIGA : European Industrial Gases Association
- EINECS : European Inventory of Existing Commercial Chemical Substances
- EN : European Standard
- ATE : Acute Toxicity Estimate

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IATA :	International Air Transport Association
IMDG Code :	International Maritime Dangerous Goods Code
LC50 :	Lethal Concentration to 50 % of a test population
OMoD :	Swiss Ordinance on the movement of waste
PBT :	Persistent, Bioaccumulative and Toxic
PPE:	Personal Protection Equipment
REACH :	Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006
RID :	Regulations concerning the international carriage of dangerous goods by rail
RMM :	Risk Management Measures
STOT-SE :	Specific Target Organ Toxicity - Single Exposure
UN :	United Nations
vPvB :	Very Persistent and Very Bioaccumulative
WGK:	Water Hazards Class

Full text of H, EUH and P statements used in sections 2 and 3

Hazard statements

H221	Flammable gas
H280	Contains gas under pressure; may explode if heated

Precautionary statements

P410+403	Protect from solar radiation. Store in a well-ventilated place
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Disclaimer of liability

Details given in this document have been prepared based on the most available reliable documents and are believed to be correct at the time of going to press

They do not claim to be exhaustive and should be considered as a guide