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

1.1. Product identifier

Trade name	Azote 25% - Méthane 8% - Argon 4% - in H2
Chemical description	Azote 25% - Méthane 8% - Argon 4% - in H2
CAS N°	-
CE N°	-
Index N°	-
Registration n°	-
Chemical formula	N ₂ , CH ₄ , Ar, H ₂

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

Relevant identified uses	Industrial and professional Test or calibration gas Laboratory use Chemical reaction/synthesis 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 gases, category 1A	H220
Gases under pressure: Liquefied 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

H220 Extremely flammable gas
H280 Contains gas under pressure; may explode if heated

Precautionary statements

P210 Keep away from heat/sparks/open flames/hot surfaces. — No smoking
P377 Leaking gas fire: Do not extinguish, unless leak can be stopped safely
P381 Eliminate all ignition sources if safe to do so
P410+403 Protect from solar radiation. Store in a well-ventilated place

2.3. Other hazards

Contact with the liquid can cause burns and frostbite

SECTION 3: Composition/information on ingredients

3.1. Substances

Name	Product identifier	Concentration	Classification
Hydrogen	(CAS-No.) 1333-74-0 (EC-No.) 215-605-7 (EC Index-No.) 001-001-00-9 (Registration-No.) --	63%	Flam. Gas 1, H220 Press. Gas (Comp.), H280
Nitrogen	(CAS-No.) 7727-37-9 (EC-No.) 231-783-9 (EC Index-No.) --- (Registration-No.) --	25%	Press. Gas (Comp.), H280
Methane	(CAS-No.) 74-82-8 (EC-No.) 200-812-7 (EC Index-No.) 601-001-00-4 (Registration-No.) 01-2119474442-39	8%	Flam. Gas 1, H220 Press. Gas (Comp.), H280
Argon	(CAS-No.) 7440-37-1 (EC-No.) 231-147-0 (EC Index-No.) --- (Registration-No.)--	4%	Press. Gas (Comp.), H280

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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

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	In the event of direct contact with the eyes, consult a doctor
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	All known extinguishing agents can be used
Unsuitable extinguishing media	Do not use water jet

5.2. Special hazards arising from the substance or mixture

Specific hazards	In the event of fire or excessive heat, dangerous decomposition products may be formed. Exposure to fire can cause containers to rupture and explode
Hazardous combustion products	In the event of fire, thermal decomposition may lead to the following toxic and/or corrosive fumes: carbon oxides

5.3. Additional information

Closed containers can be cooled with water spray

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SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Avoid breathing vapours, spray mists or gases
 Provide adequate ventilation
 Beware of gas that accumulates in explosive concentrations
 Evacuate the staff to safe place
 Personal protective equipment, see section 8

6.2. Environmental precautions

Trying to stop the leak

6.3. Methods and material for containment and cleaning up

Keep the area evacuated and clear of all sources of ignition until all spilled liquid has evaporated (frost-free ground)

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 2.2

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
 Containers should not be subjected to temperatures above 50°C
 Pressurized contents

7.3. Specific end use(s)

None

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SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Components with occupational exposure limits

Component	CAS N°	Exposure value type	Value	Source
Hydrogen	1333-74-0	TWA	-	No occupational exposure limit value
			-	
		OEL	-	
			-	
Nitrogen	7727-37-9	TWA	-	No occupational exposure limit value
			-	
		OEL	-	
			-	
Methane	74-82-8	TWA	10'000 ppm	SUVA: Limit values of exposure to workstations
			6'700 mg/m ³	
		OEL	-	SUVA: Limit values of exposure to workstations
			-	
Argon	7440-37-1	TWA	-	No occupational exposure limit value
			-	
		OEL	-	
			-	

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

Handling with gloves

The protective gloves selected must meet the specifications of EU Directive 89/686/EEC and the EN 374 standard derived from it.

Full contact

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Material: Nitrile rubber or PVC

Minimum thickness: 0.7 mm

Breakthrough time: 480 min

Splash contact

Material: Nitrile rubber or PVC

Minimum thickness: 0.4 mm

Breakthrough time: 60 min

Have appropriate chemical-resistant protective clothing ready for use in an emergency. Standard EN943-1

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 Data not available

Odour threshold Data not available

pH Data not available

Melting point / Freezing point Data not available

Boiling point Data not available

Flash point Data not available

Evaporation rate Data not available

Flammability (solid, gas) Extremely flammable

Explosive limits Data not available

Vapour pressure [20°C] Data not available

Vapour pressure [50°C] Data not available

Vapour density Data not available

Relative density, liquid (water=1) Data not available

Relative density, gas (air=1) Data not available

Water solubility Partially soluble in water

Partition coefficient Data not available

n-octanol/water (Log Kow)

Auto-ignition temperature Data not available

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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	Data not available
Critical temperature [°C]	Data not available
Relative vapor density	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

May form explosive mixture with air
May react violently with oxidising agents

10.4. Conditions to avoid

Keep away from heat/sparks/open flames/hot surfaces - No smoking

10.5. Incompatible materials

Air, 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

SECTION 11: Toxicological information

11.1. Chemical safety assessment

Acute toxicity	No toxicological effects expected with this product if exposure limit values are not exceeded
Skin corrosion/irritation	No adverse effects expected with this product

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Serious eye damage/irritation	No adverse effects expected with this product
Respiratory or skin sensitisation	No adverse effects expected with this product
Germ cell mutagenicity	No adverse effects expected with this product
Carcinogenicity	No adverse effects expected with this product
Reproductive toxicity	No adverse effects expected with this product
STOT-single exposure – Target organ(s)	No adverse effects expected with this product
STOT-repeated exposure	No adverse effects expected with this product
Aspiration hazard	Not applicable to gases and gas mixtures

11.2 Information on other hazards

The substance/mixture has no endocrine disrupting properties

SECTION 12: Ecological information

12.1. Toxicity

Assessment Classification criteria not met

12.2. Persistence and degradability

Data not available

12.3. Bioaccumulative potential

Data not available

12.4. Mobility in soil

Due to its high volatility, this product is unlikely to pollute soil or water

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

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
 Other adverse effects : No known effects with this product
 Effect on the ozone layer: No effect on the ozone layer

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Effect on global warming: Contains greenhouse gas(es). Global warming potential Components: Methane: 25

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 unused product in original cylinder to supplier
OMoD Code	16 05 04 Gases in pressurised containers (including halons) containing hazardous 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, N.O.S., (Hydrogen, Methane)	COMPRESSED GAS, FLAMMABLE, N.O.S. (Hydrogen, Methane)	COMPRESSED GAS, FLAMMABLE, N.O.S. (Hydrogen, Methane)

14.3. Transport hazard class(es)

Labelling




ADR/RID
IMDG
IATA

2.1 : Flammable gases

14.4. Packing group

ADR/RID
IMDG
IATA

Not determined

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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	<p>ADR : European Agreement concerning the International Carriage of Dangerous Goods by Road</p> <p>CAS : Chemical Abstract Service number (USA)</p> <p>CLP : Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008</p> <p>CSA : Chemical Safety Assessment</p> <p>EIGA : European Industrial Gases Association</p> <p>EINECS : European Inventory of Existing Commercial Chemical Substances</p> <p>EN : European Standard</p> <p>ATE : Acute Toxicity Estimate</p> <p>IATA : International Air Transport Association</p> <p>IMDG Code : International Maritime Dangerous Goods Code</p> <p>LC50 : Lethal Concentration to 50 % of a test population</p> <p>OMoD : Swiss Ordinance on the movement of waste</p> <p>PBT : Persistent, Bioaccumulative and Toxic</p> <p>PPE: Personal Protection Equipment</p> <p>REACH : Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006</p>

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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

H220 Extremely flammable gas
 H280 Contains gas under pressure; may explode if heated

Precautionary statements

P210 Keep away from heat/sparks/open flames/hot surfaces. — No smoking
 P377 Leaking gas fire: Do not extinguish, unless leak can be stopped safely
 P381 Eliminate all ignition sources if safe to do so
 P410+403 Protect from solar radiation. Store in a well-ventilated place

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