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Methane 2.5% - O₂ 20.9% in N₂		MTGxxx

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

1.1. Product identifier

Trade name	Methane 2.5% - O ₂ 20.9% in N ₂
Chemical description	Methane 2.5% - O ₂ 20.9% in N ₂
CAS N°	-
CE N°	-
Index N°	-
Registration n°	-
Chemical formula	N ₂ , O ₂ , CH ₄

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	None

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]

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



GHS04

Signal word

Warning

Hazard statements

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

Contact with the liquid can cause burns and frostbite

SECTION 3: Composition/information on ingredients

3.1. Substances

Name	Product identifier	Concentration	Classification
Methane	(CAS-No.) 74-82-8 (EC-No.) 200-812-7 (EC Index-No.) 601-001-00-4 (Registration-No.) 01-2119474442-39	2.5%	Flam. Gas 1, H220 Press. Gas (Comp.), H280
Oxygen	(CAS-No.) 7782-44-7 (EC-No.) 231-956-9 (EC Index-No.) 008-001-00-8 (Registration-No.) --	20.9%	Ox. Gas 1, H270 Press. Gas (Comp.), H280
Nitrogen	(CAS-No.) 7727-37-9 (EC-No.) 231-783-9 (EC Index-No.) --- (Registration-No.) --	76.6%	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	The product itself does not burn. 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

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Avoid breathing vapours, spray mists or gases
Provide adequate ventilation

Methane 2.5% - O₂ 20.9% in N₂

MTGxxx

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 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
 Containers should not be subjected to temperatures above 50°C
 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
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
Oxygen	7782-44-7	TWA	-	No occupational exposure limit value
			-	
		OEL	-	
			-	

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Nitrogen	7727-37-9	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

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

Methane 2.5% - O₂ 20.9% in N₂

MTGxxx

• 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)	Non flammable
Explosive limits	Data not available
Vapour pressure [20°C]	Data not available
Vapour pressure [50°C]	Data not available
Vapour density	0.0012g/cm ³
Relative density, liquid (water=1)	Data not available
Relative density, gas (air=1)	0.9854
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	28.54 g/mol
Critical temperature [°C]	Data not available
Relative vapor density	Data not available


SECTION 10: Stability and reactivity

10.1. Reactivity

Data not available

10.2. Chemical stability

Stable under the recommended storage conditions

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10.3. Possibility of hazardous reactions

Data not available

10.4. Conditions to avoid

Data not available

10.5. Incompatible materials

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	Data not available
Skin corrosion/irritation	Data not available
Serious eye damage/irritation	Data not available
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

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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

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 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 05 Gases in pressure containers other than those mentioned in 16 05 04.

SECTION 14: Transport information

14.1. UN number

Transport par road/rail ADR / RID	Transport by sea IMDG	Transport by air IATA
1956	1956	1956

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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., (Nitrogen, Oxygen)	COMPRESSED GAS, N.O.S., (Nitrogen, Oxygen)	COMPRESSED GAS, N.O.S., (Nitrogen, Oxygen)

14.3. Transport hazard class(es)

Labelling



ADR/RID
IMDG
IATA

2.2 : Non-flammable, non-toxic gases

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

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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

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

H280 Contains gas under pressure; may explode if heated

Precautionary statements

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