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

1.1. Product identifier

Trade name	Dimethylamine
Chemical description	Dimethylamine
CAS N°	124-40-3
CE N°	204-697-4
Index N°	612-001-00-9
Registration n°	01-2119475495-2
Chemical formula	C ₂ H ₇ N

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

Relevant identified uses	Industrial and professional Test gas/Calibration gas Chemical reaction / Synthesis Laboratory use Contact supplier for more information on uses
Uses advised against	Consumer use not recommended

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]

Physical hazards	Flammable gases, Category 1	H220
	Gases under pressure : Liquefied gas	H280

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Skin corrosion/irritation, Category 2	H315
Serious eye damage/eye irritation, Category 1	H318
Acute toxicity (inhalation: gas) Category 4	H332
Specific target organ toxicity — Single exposure, Category 3, Respiratory tract irritation	H335
Chronic Toxicity to Aquatic Environments, Category 3	H412

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

2.2. Label elements

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

Hazard pictograms



GHS02 GHS04 GHS05 GHS07

Signal word


Danger

Hazard statements

H220	Extremely flammable gas
H280	Contains gas under pressure; may explode if heated
H315	Causes skin irritation
H318	Causes serious eye damage
H332	Harmful if inhaled
H335	May cause respiratory irritation
H412	Harmful to aquatic life with long lasting effects

Precautionary statements

P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking
P260	Do not breathe gas, vapours
P280	Wear protective gloves, protective clothing, eye protection, face protection
P302+P352	IF ON SKIN: Wash with plenty of soap and water
P304+P340+P315	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get immediate medical advice / attention
P305+P351+P338+P315	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get immediate medical advice / attention
P377	Leaking gas fire: Do not extinguish, unless leak can be stopped safely
P410+403	Protect from sunlight. Store in a well-ventilated place

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2.3. Other hazards

None

SECTION 3: Composition/information on ingredients

3.1. Substances

Name	Product identifier	Concentration	Classification
Dimethylamine	(CAS-No.) 124-40-3 (EC-No.) 204-697-4 (EC Index-No.) 612-001-00-9 (Registration-No.) 01-2119475495-27	<= 100%	Flam. Gas 1, H220 Press. Gas (Liq.), H280 Acute Tox. 4 (Inhalation: gas), H332 Skin Irrit. 2, H315 Eye Dam. 1, H318 STOT SE 3, H335 Aquatic chronic 3, H412

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 advice	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	Wash with soap and plenty of water. Take victim immediately to hospital. See a doctor
In case of eyes contact	Rinse thoroughly with plenty of water for at least 15 minutes and consult a doctor
In case of ingestion	Do NOT induce vomiting. 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

May cause severe chemical burns to cornea. Suitable first-aid treatment should be immediately available. Seek medical advice before using product

May cause irritation to skin

May cause irritation to the respiratory tract, sneezing, coughing, burning sensation of throat with constricting sensation of the larynx and difficulty in breathing

Refer to section 11

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

No data available

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media Water spray or water mist. Dry powder. Carbon dioxide. Foam

Unsuitable extinguishing media Do not use water jet to extinguish

5.2. Special hazards arising from the substance or mixture

Specific hazards In case of fire or excessive heat, hazardous combustion products may be produced

Exposure to fire may cause containers to rupture/explode

Hazardous combustion products In case of fire or excessive heat, hazardous combustion products may be produced such as : carbon monoxide, nitric oxide/nitrogen dioxide

5.3. Additional information

Cool endangered receptacles with water spray jet from a protected position

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 personnel to a safe place

Personal protective equipment, see section 8

6.2. Environmental precautions

Try to stop the leak

Decrease vapour by water spray in the form of fog or fine droplets

6.3. Methods and material for containment and cleaning up

Ensure adequate air ventilation

Keep area evacuated and free from ignition sources until any spilled liquid has evaporated (ground free from frost)

6.4. Reference to other sections

See also sections 8 and 13

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SECTION 7: Handling and storage

7.1. Precautions for safe handling

Avoid contact with skin and eyes
 Avoid breathing vapour or mist
 Keep away from sources of ignition - No smoking
 Take precautionary measures against static discharge
 For precautions, see section 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
 Content under pressure

7.3. Specific end use(s)

None

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Components with occupational exposure limits

Component	CAS N°	Exposure value type	Control parameter	Source
Dimethylamine	124-40-3	TWA	2 ppm	SUVA: Limit values of exposure to workstations
			4 mg/m ³	
		OEL	4 ppm	SUVA: Limit values of exposure to workstations
			8 mg/m ³	

8.2. Exposure controls

8.2.1. Appropriate engineering controls

Provide adequate general and local exhaust ventilation
 Gas detectors should be used when flammable / toxic gases / vapours are likely to be released

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

Eye/face protection

Wear goggles and a face shield when transfilling or breaking transfer connections. Standard EN 166

Skin / hand protection

Wear protective gloves when handling gas cylinders. Standard EN 388- Protective gloves against mechanical hazards
 Wear cold insulating gloves when transferring or disconnecting transfer lines Standard EN 511 -

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Insulating gloves against cold Wearing chemical resistant gloves Standard EN 374-Protective gloves against chemicals

For short-term use

Material: Nitrile rubber

Penetration time:> 120 min

Glove thickness: 0.7 mm

For long-term use

Material: Fluoroelastomer

Penetration time:> 480 min

Glove thickness: 0.7 mm

Have appropriate, chemical-resistant protective clothing ready for use in emergencies

Respiratory protection

When the risk assessment shows that the use of respirable respirators is appropriate, use a full face mask with EN 14387 multipurpose cartridge. If the mask is the only means of protection, use a full face respirator. Use NIOSH (US) or CEN (EU) tested and approved equipment

8.2.3. Environmental exposure controls

Avoid any spill or leak if it can be done safely

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 Odour can persist. Rotten fish

Odour threshold No data available

pH No data available

Melting point / Freezing point -93°C

Boiling point 7°C

Flash point -6.7°C (Closed cup)

Evaporation rate No data available

Flammability (solid, gas) Extremely flammable gas

Explosive limits 2.8 - 14.4%

Vapour pressure [20°C] 1.7 bar

Vapour pressure [50°C] 4.5 bar

Vapour density No data available

Relative density, liquid (water=1) 0.67

Relative density, gas (air=1) 1.5

Water solubility 3540 g/l

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Partition coefficient n-octanol/water (Log Kow)	-0.38
Auto-ignition temperature	402°C
Decomposition temperature	420°C
Viscosity	No data available
Explosive properties	No data available
Oxidising properties	No data available

9.2. Other information

Molar mass	45 g/mol
Critical temperature [°C]	164°C
Relative vapour density	Gas/vapour heavier than air. May accumulate in confined spaces, particularly at or below ground level

SECTION 10: Stability and reactivity
10.1. Reactivity

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

10.2. Chemical stability

Stable under recommended storage conditions

10.3. Possibility of hazardous reactions

Can form explosive mixture with air.
May react violently with oxidants

10.4. Conditions to avoid


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

10.5. Incompatible materials

Strong oxidisers
Reacts with water to form corrosive alkalis
May react violently with acids
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

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SECTION 11: Toxicological information

11.1. Chemical safety assessment

Acute toxicity	Harmful if inhaled
Skin corrosion/irritation	Causes skin irritation
Serious eye damage/irritation	Causes serious eye damage
Respiratory or skin sensitisation	No data available
Germ cell mutagenicity	No data available
Carcinogenicity	No data available
Reproductive toxicity	No data available
STOT-single exposure – Target organ(s)	May cause respiratory irritation. Irritation to the respiratory tract
STOT-repeated exposure	No data available
Ingestion hazard	No data available

SECTION 12: Ecological information

12.1. Toxicity

Assessment	Classification criteria are not met
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12.2. Persistence and degradability

No data available

12.3. Bioaccumulative potential

No data available

12.4. Mobility in soil

No data available

12.5. Results of PBT and vPvB assessment

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

12.6. Other adverse effects

May cause pH changes in aqueous ecological systems
Harmful to aquatic life, causes long-term adverse effects

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SECTION 13: Disposal considerations

13.1. Waste treatment methods

Product	<p>Must not be released into the atmosphere</p> <p>Burn in a chemical incinerator equipped with an afterburner and scrubber</p> <p>Return to the supplier the product not consumed in its original container</p>
Contaminated container	<p>Eliminate as unused product</p> <p>Contact the supplier if instructions are needed</p>
OMoD Code	<p>16 05 04</p> <p>Gases in pressure containers containing dangerous substances</p>

SECTION 14: Transport information

14.1. UN number

Transport par road/rail ADR / RID	Transport by sea IMDG	Transport by air IATA
1032	1032	1032

14.2. UN proper shipping name

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

14.3. Transport hazard class(es)

Labelling



ADR/RID
IMDG
IATA

2.1 : Flammable gases

14.4. Packing group

ADR/RID
IMDG
IATA

Not established

14.5. Environmental hazards

ADR/RID	None
IMDG	None
ICAO-TI / IATA-DGR	None

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14.6. Special precautions for user

No data 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

A CSA 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

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

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WGK: Water Hazards Class

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

Hazard statements

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P305+P351+P338+P315	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get immediate medical advice / attention
P377	Leaking gas fire: Do not extinguish, unless leak can be stopped safely
P410+403	Protect from sunlight. 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