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| Ethane | | MTG051A |

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

1.1. Product identifier

| | |
|----------------------|-------------------------------|
| Trade name | Ethane |
| Chemical description | Ethane |
| CAS N° | 74-84-0 |
| CE N° | 200-814-8 |
| Index N° | 601-002-00-X |
| Registration n° | 01-2119486765-21 |
| Chemical formula | C ₂ H ₆ |

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 : 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

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

Precautionary statements

| | |
|----------|---|
| P210 | Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking |
| P377 | Leaking gas fire: Do not extinguish, unless leak can be stopped safely |
| P381 | In case of leakage, eliminate all ignition sources |
| P410+403 | Protect from sunlight. Store in a well-ventilated place |

2.3. Other hazards

None

SECTION 3: Composition/information on ingredients

3.1. Substances

| Name | Product identifier | Concentration | Classification |
|--------|--|---------------|---|
| Ethane | (CAS-No.) 74-84-0 (EC-No.) 200-814-8 (EC Index-No.) 601-002-00-X (Registration-No.) 01-2119486765-21 | <= 100% | 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 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 | Adverse effects not expected from this product |
| In case of eyes contact | Adverse effects not expected from this product |
| 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

Refer to section 11

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

None

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 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 |

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
Beware of gas accumulating in explosive concentrations
Evacuate personnel to a safe place

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Personal protective equipment, see section 8

6.2. Environmental precautions

Try to stop the leak

6.3. Methods and material for containment and cleaning up

Ventilate the area
 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

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Avoid breathing gas
 Provide adequate ventilation
 Keep away from sources of ignition (including electrostatic charges)
 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 |
|-----------|---------|---------------------|-------------------------|--|
| Ethane | 74-84-0 | TWA | 10000 ppm | SUVA: Limit values of exposure to workstations |
| | | | 12500 mg/m ³ | |
| | | OEL | - | SUVA: Limit values of exposure to workstations |
| | | | - | |

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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 | Wearing chemical resistant gloves Standard EN 374-Protective gloves against chemicals For short-term use Material: Nitrile rubber Penetration time:> 60 min Glove thickness: 0.4 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

-

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 | No data available |
| Odour threshold | No data available |
| pH | No data available |
| Melting point / Freezing point | -183°C |
| Boiling point | -88.6°C |

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| | |
|--|-------------------------|
| Flash point | -135°C (Closed cup) |
| Evaporation rate | No data available |
| Flammability (solid, gas) | Extremely flammable gas |
| Explosive limits | 2.9 – 13% |
| Vapour pressure [20°C] | 37.8 bar |
| Vapour pressure [50°C] | No data available |
| Vapour density | No data available |
| Relative density, liquid (water=1) | 0.54 |
| Relative density, gas (air=1) | 1.04 |
| Water solubility | 61 mg/l |
| Partition coefficient n-octanol/water (Log Kow) | 1.81 |
| Auto-ignition temperature | 515°C |
| Decomposition temperature | No data available |
| Viscosity | No data available |
| Explosive properties | No data available |
| Oxidising properties | No data available |

9.2. Other information

| | |
|----------------------------------|---|
| Molar mass | 30 g/mol |
| Critical temperature [°C] | 32°C |
| Relative vapour density | Gas or vapor heavier than air. May accumulate in confined areas, especially in low points and basements |

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

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10.5. Incompatible materials

Strong oxidisers
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

SECTION 11: Toxicological information

11.1. Chemical safety assessment

| | |
|---|---|
| Acute toxicity | Toxicological effects not expected from this product if occupational exposure limit values are not exceeded |
| Skin corrosion/irritation | No data available |
| Serious eye damage/irritation | No data available |
| 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) | No data available |
| STOT-repeated exposure | No data available |
| Ingestion hazard | No data available |

SECTION 12: Ecological information

12.1. Toxicity

| | |
|-------------------|-------------------------------------|
| Assessment | Classification criteria are not met |
|-------------------|-------------------------------------|

12.2. Persistence and degradability

No data available

12.3. Bioaccumulative potential

No data available

12.4. Mobility in soil

No data available

| | | |
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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

No data available

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 |
|--------------------------------------|--------------------------|--------------------------|
| 1035 | 1035 | 1035 |

14.2. UN proper shipping name

| Transport par road/rail ADR / RID | Transport by sea IMDG | Transport by air IATA |
|--------------------------------------|--------------------------|--------------------------|
| Ethane | Ethane | Ethane |

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

| | | |
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14.5. Environmental hazards

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

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 | <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, hot surfaces, sparks, open flames and other ignition sources. No smoking
 P377 Leaking gas fire: Do not extinguish, unless leak can be stopped safely
 P381 In case of leakage, eliminate all ignition sources
 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