

Safety Data Sheet

according to 1907/2006/EC, Article 31

Printing date: 09.12.2009

Revision: 09.12.2009

1 Identification of substance/preparation and of the company/undertaking:

- **Product details:**
- **Trade name:** **Twist-Universalgas (100ml)**
- **Application of the substance / the preparation** Gas for lighter
- **Supplier/Manufacturer:**
- **Distributor:**
Walter Twistel GmbH & Co. KG
Artur-Ladebeck-Straße 192
33647 Bielefeld
Germany
Tel.: +49-521 - 942 86 - 35
Fax: +49-521 - 942 86 - 38
- **Email competent person:** sonja.fischer@kft.de
- **Information department:** See supplier/manufacturer
- **Emergency information:** National Poisons Information Centre Tel.: +44 (0)870 6006266

2 Hazards identification

- **Hazard description:**



F+ Extremely flammable

- **Information pertaining to particular dangers for man and environment:**

R 12 Extremely flammable.

Pressurized container: protect from sunlight and do not expose to temperatures exceeding 50°C. Do not pierce or burn, even after use.

Do not spray on a naked flame or any incandescent material. Keep away from sources of ignition - No smoking.

100.0 % by mass of the contents are flammable

Keep out of the reach of children

- **Additional information:**

The vapours are very readily ignitable and form explosive mixtures with air which are heavier than air. Ignition by hot surfaces, sparks or open flames.

3 Composition/information on ingredients

- **Chemical characterization**

- **Description:** Mixture of hydrocarbons

- **Dangerous components:**

CAS: 75-28-5	isobutane	~ 95%
EINECS: 200-857-2	F+; R 12	
Index number: 601-004-01-8		
CAS: 106-97-8	butane, pure	~4%
EINECS: 203-448-7	F+; R 12	
Index number: 601-004-00-0		
CAS: 74-98-6	propane liquefied	~ 1%
EINECS: 200-827-9	F+; R 12	
Index number: 601-003-00-5		

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4 First aid measures

- **General information:** If symptoms persist or in case of doubt seek medical advice.
- **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- **After skin contact:**
Generally the product does not irritate the skin.
If symptoms persist consult a doctor.
- **After eye contact:**
Rinse opened eye for several minutes under running water.
If symptoms persist consult a doctor.
- **After swallowing:** Rather unlikely if used appropriately.
- **Information for doctor:**
- **The following symptoms may occur:**
Nausea
stupor
Headache
Frost bites
- **Treatment:** Symptomatic treatment

5 Fire fighting measures

- **Suitable extinguishing agents:**
Foam
Fire-extinguishing powder
Carbon dioxide (CO₂)
Sand
Use fire fighting measures that suit the environment.
- **For safety reasons unsuitable extinguishing agents:** Direct jet water
- **Special hazards caused by the material, its products of combustion or resulting gases:**
Vapors are heavier than air
After extinguishing vapours may rekindle.
Dangerous decomposition product see chapter 10: stability and reactivity
- **Protective equipment:** Wear self-contained respiratory protective device.
- **Additional information:**
Move containers from area if it can be done without risk.
Cool endangered receptacles with water spray.
Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.

6 Accidental release measures

- **Person-related safety precautions:**
Use respiratory protective device against the effects of fumes/dust/aerosol.
Do not smoke - keep ignition sources away
Avoid contact with eyes and skin.
- **Measures for environmental protection:** No special measures required.
- **Measures for cleaning/collecting:**
Allow to evaporate.
Ensure adequate ventilation.
- **Additional information:** See Section 7 for information on safe handling

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7 Handling and storage

- **Handling**
- **Information for safe handling:**
 - Open and handle receptacle with care.
 - Avoid contact with eyes and skin.
 - Use only in well ventilated areas.
- **Information about protection against explosions and fires:**



Keep ignition sources away - Do not smoke.

Protect against electrostatic charges
Fumes can combine with air to form an explosive mixture.

- **Storage**
- **Requirements to be met by storerooms and receptacles:**
 - Store in a cool location.
 - Store in well-ventilated area.
 - Pay attention to special rules for the storage of flammable liquids.
 - Observe national regulations for aerosols.
 - Observe national regulations for aerosols.
- **Information about storage in one common storage facility:**
 - Store away from foodstuffs.
 - Store away from feed.
 - do not store with strong oxidizers
 - do not store with oxygen bottles.
 - Store away from combustible materials
- **Further information about storage conditions:**
 - Keep receptacle tightly sealed.
 - Do not gas tight seal receptacle.
 - Store in cool, dry conditions in well sealed receptacles.
 - Store in a cool place. Heat will increase pressure and may lead to the receptacle bursting.
 - Protect from heat and direct sunlight.
- **Storage class 2A** Pressurized, liquified or under pressure dissolved gases

8 Exposure controls and personal protection

- **Additional information about design of technical systems:** No further data; see item 7.
- **Components with limit values that require monitoring at the workplace:**
 - 106-97-8 butane, pure**
 - WEL (Great Britain) Short-term value: 1810 mg/m³, 750 ppm
 - Long-term value: 1450 mg/m³, 600 ppm
 - Carc (if more than 0.1% of buta-1.3-diene)
 - OEL (Ireland) Short-term value: 1780 mg/m³, 750 ppm
 - Long-term value: 1430 mg/m³, 600 ppm
- **Additional information:** The lists that were valid during the creation were used as basis.
- **Personal protective equipment**
- **General protective and hygienic measures:**
 - The usual precautionary measures should be adhered to when handling chemicals.
 - Do not inhale gases / fumes / aerosols.
 - Wash hands before breaks and at the end of work.
- **Breathing equipment:**
 - Not necessary, if you follow the instructions for use.
 - In case of unintentional release of substance, exceeding the occupational exposure limit value:

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- Short term filter device:
Filter AX. (colour coding brown; DIN EN 141)
- **Protection of hands:** Not necessary, if you follow the instructions for use.
 - **Material of gloves:** -
 - **Penetration time of glove material:** -
 - **Eye protection:** Not necessary due to product form.
 - **Body protection:** Not required.
-

9 Physical and chemical properties:

· General Information

Form: Compressed liquefied gas
Colour: Colourless
Odour: Noticeable

· Change in condition:

Melting point/Melting range: not determined
Boiling point/Boiling range: not determined

- **Flash point:** -60°C
 - **Ignition temperature:** ~460°C (DIN 51794)
 - **Danger of explosion:** Product is not explosive. However, formation of explosive air/vapour mixtures are possible.
 - **Explosion limits:**
 - Lower:** ~1.4 Vol %
 - Upper:** ~9.3 Vol %
 - **Vapour pressure at 20°C:** 1.2 bar
 - **Density at 0°C:** 600 kg/m³
 - **Solubility in / Miscibility with Water:** almost insoluble
 - **Viscosity:**
 - dynamic at 0°C:** 0.2-0.12 mPas
-

10 Stability and reactivity

· **Thermal decomposition / conditions to be avoided:**

Keep away from heat and direct sunlight.
No decomposition if used and stored according to specifications.

· **Materials to be avoided:** Strong oxidants

· **Dangerous reactions:** Forms explosive gas mixture with air

· **Dangerous products of decomposition:**

In the case of fire or at high temperatures the formation of the following decomposition products is possible.

Nitrogen oxides (NO_x)
Sulphur oxides (SO_x)
organic pyrolyzates

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11 Toxicological information

- **Acute toxicity:**
- **LD/LC50 values that are relevant for classification:**

75-28-5 isobutane

Inhalative LC₅₀ 570000 ppm (rat)
15 min

106-97-8 butane, pure

Inhalative LC₅₀/4 h 658 mg/l (rat)

74-98-6 propane liquefied

Inhalative LC₅₀ >800000 ppm (Ratte)
15 min

- **Primary irritant effect:**
- **on the skin:** No irritating effect.
- **on the eye:** No irritating effect.
- **Sensitization:** No sensitizing effects known.
- **Additional toxicological information:**
Inhalation of high vapour concentrations may have a narcotic effect.
High concentration of this product in the breathable air can induce apnoea, coma and suffocation because of lack of oxygen.

12 Ecological information

- **Information about elimination (persistence and degradability):**
- **Other information:** Photochemical degradation of the product on the air.
- **Behaviour in environmental systems:**
- **Mobility and bioaccumulation potential:** Low mobility, water solubility negligible
- **Ecotoxicological effects:**
- **Aquatic toxicity:** Presently there are no ecotoxicological values available.
- **Remark:** The product is high-volatile.
- **General notes:**
Generally not hazardous for water.
According to appendix 4 of VwVwS dated 27.7.2005 (German regulation)

13 Disposal considerations

- **Product:**
- **Recommendation:** Disposal according to instructions of local authorities.
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

- **Land transport ADR/RID (cross-border)**



- **ADR/RID class:** 2 6F Gases.
- **Danger code (Kemler):** 23
- **UN-Number:** 1057
- **Packaging group:** -
- **Label:** 2.1

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- **Description of goods:** 1057 LIGHTER REFILLS
- **Limited quantities (LQ)** LQ0
- **Transport category** 2
- **Tunnel restriction code** D
- **Remarks:** Limited quantities: none
- **Maritime transport IMDG:**



- **IMDG Class:** 2.1
- **UN Number:** 1057
- **Label:** 2.1
- **Packaging group:** -
- **EMS Number:** F-D,S-U
- **Marine pollutant:** No
- **Proper shipping name:** LIGHTER REFILLS
- **Air transport ICAO-TI and IATA-DGR:**



- **ICAO/IATA Class:** 2
 - **UN/ID Number:** 1057
 - **Label:** 2.1
 - **Packaging group:** -
 - **Proper shipping name:** LIGHTER REFILLS
 - **Remarks:** Packing Instructions:
For Limited Quantities: -
Passenger and Cargo Aircraft: 201 (Max Net Qty/Pkg: 1 kg)
Cargo Aircraft only: 201 (Max Net Qty/Pkg: 15 kg)
-

15 Regulatory information:

- **Markings according to EC guidelines:**
The product has been classified and marked in accordance with EC Directives / Ordinance on Hazardous Materials
- **Code letter and hazard designation of product:**



F+ Extremely flammable

- **Risk phrases:**
12 Extremely flammable.
- **Safety phrases:**
9 Keep container in a well-ventilated place.
23 Do not breathe gas/fumes/vapour/spray (appropriate wording to be specified by the manufacturer).
29/56 Do not empty into drains, dispose of this material and its container at hazardous or special waste collection point.
46 If swallowed, seek medical advice immediately and show this container or label.
51 Use only in well-ventilated areas.

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· Special labelling of certain preparations:

Pressurized container: protect from sunlight and do not expose to temperatures exceeding 50°C. Do not pierce or burn, even after use.

Do not spray on a naked flame or any incandescent material. Keep away from sources of ignition - No smoking.

100.0 % by mass of the contents are flammable

Keep out of the reach of children

· National regulations**· Water hazard class:** Generally not hazardous for water.

16 Other information:

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· Relevant R-phrases:

12 Extremely flammable.

· Department issuing MSDS:

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