

SECTION 1: Identification of the substance/mixture and of the company/undertaking**1.1. Product identifier****TWIST GAS LIGHTER REFILL 100mL****1.2. Relevant identified uses of the substance or mixture and uses advised against****Use of the substance/mixture**

Refill gas for lighters

Uses advised against

Any non-intended use.

1.3. Details of the supplier of the safety data sheet

Company name:

Walter Twistel GmbH & Co. KG

Street:

Artur-Ladebeck-Str. 192

Place:

D-33647 Bielefeld

Telephone:

0521/94286-30

Responsible Department:

info@twistel.de

1.4. Emergency telephone number:

0049 (0)30 30686790 - Giftnotruf Berlin

SECTION 2: Hazards identification**2.1. Classification of the substance or mixture****Regulation (EC) No. 1272/2008**

Hazard categories:

Aerosol: Aerosol 1

Hazard Statements:

Extremely flammable aerosol.

Pressurised container: May burst if heated.

2.2. Label elements**Regulation (EC) No. 1272/2008****Signal word:**

Danger

Pictograms:**Hazard statements**

H222

Extremely flammable aerosol.

H229

Pressurised container: May burst if heated.

Precautionary statements

P102

Keep out of reach of children.

P210

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

P211

Do not spray on an open flame or other ignition source.

P251

Do not pierce or burn, even after use.

P410+P412

Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F.

P501

Dispose of contents/container to local/regional/national/international regulations.

Labelling of packages where the contents do not exceed 125 ml

Signal word: Danger

Pictograms:



Hazard statements

H222-H229

Precautionary statements

P102-P210-P211-P251-P410+P412

2.3. Other hazards

In case of insufficient ventilation and/or through use, explosive/highly flammable mixtures may develop. The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Hazardous components

| CAS No | Chemical name | | | Quantity |
|----------|--|--------------|----------|----------|
| | EC No | Index No | REACH No | |
| | GHS Classification | | | |
| 106-97-8 | butane | | | >50 % |
| | 203-448-7 | 601-004-00-0 | | |
| | Flam. Gas 1, Compressed gas; H220 H280 | | | |
| 74-98-6 | propane | | | 20-50 % |
| | 200-827-9 | 601-003-00-5 | | |
| | Flam. Gas 1, Compressed gas; H220 H280 | | | |
| 75-28-5 | isobutane | | | <1 % |
| | 200-857-2 | 601-004-00-0 | | |
| | Flam. Gas 1, Compressed gas; H220 H280 | | | |

Full text of H and EUH statements: see section 16.

Further Information

Product does not contain listed SVHC substances > 0,1 % according to Regulation (EC) No. 1907/2006 Article 59 (REACH)

SECTION 4: First aid measures

4.1. Description of first aid measures

General information

In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).

After inhalation

In case of accident by inhalation: remove casualty to fresh air and keep at rest. In case of respiratory tract irritation, consult a physician.

After contact with skin

After contact with skin, wash immediately with plenty of water and soap. In case of skin irritation, seek medical treatment.

After contact with eyes

Rinse immediately carefully and thoroughly with eye-bath or water. In case of troubles or persistent symptoms, consult an ophthalmologist.

After ingestion

If swallowed, immediately drink: Water. Never give anything by mouth to an unconscious person or a person with cramps. Do NOT induce vomiting. Caution if victim vomits: Risk of aspiration! Call a physician immediately.

4.2. Most important symptoms and effects, both acute and delayed

No information available.

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

Treat symptomatically.

SECTION 5: Firefighting measures**5.1. Extinguishing media****Suitable extinguishing media**

Foam. Carbon dioxide. Extinguishing powder.

Unsuitable extinguishing media

High power water jet.

5.2. Special hazards arising from the substance or mixture

Combustible. Vapours may form explosive mixtures with air. Can be released in case of fire: Carbon dioxide (CO₂). Carbon monoxide

5.3. Advice for firefighters

In case of fire: Wear self-contained breathing apparatus.

Additional information

Use water spray jet to protect personnel and to cool endangered containers. Suppress gases/vapours/mists with water spray jet. Contaminated fire-fighting water must be collected separately. Do not allow to enter into surface water or drains. In case of fire and/or explosion do not breathe fumes.

SECTION 6: Accidental release measures**6.1. Personal precautions, protective equipment and emergency procedures**

Ventilate affected area. Remove all sources of ignition. Do not breathe gas/fumes/vapour/spray. Avoid contact with skin, eyes and clothes. Wear personal protection equipment (refer to section 8). Use a positive-pressure air-supplied respirator if there is any potential for an uncontrolled release, exposure levels are not known, or any other circumstances where air-purifying respirators may not provide adequate protection.

6.2. Environmental precautions

Do not allow to enter into surface water or drains. Explosion hazard. Eliminate leaks immediately. Prevent spread over a wide area (e.g. by containment or oil barriers). In case of gas escape or of entry into waterways, soil or drains, inform the responsible authorities.

6.3. Methods and material for containment and cleaning up

Absorb with liquid-binding material (e.g. sand, diatomaceous earth, acid- or universal binding agents). Treat the recovered material as prescribed in the section on waste disposal. Clean contaminated objects and areas thoroughly observing environmental regulations.

6.4. Reference to other sections

Safe handling: see section 7
Disposal: see section 13

SECTION 7: Handling and storage**7.1. Precautions for safe handling****Advice on safe handling**

Use only in well-ventilated areas. Take precautionary measures against static discharges. Do not spray on naked flames or any incandescent material. Due to danger of explosion, prevent leakage of vapours into cellars, flues and ditches.

Wear suitable protective clothing. (See section 8.)

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Advice on protection against fire and explosion

Keep away from sources of ignition. - No smoking. Heating causes rise in pressure with risk of bursting.

Further information on handling

General protection and hygiene measures: refer to chapter 8

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

Keep container tightly closed in a cool, well-ventilated place. Keep away from sources of ignition. - No smoking. Provide adequate ventilation.

Hints on joint storage

Do not store together with: Explosives. Flammable solids. Pyrophoric liquids and solids. Self-heating substances and mixtures. Substances and mixtures which, in contact with water, emit flammable gases. Oxidizing liquids. Oxidizing solids. Self-reactive substances and mixtures. Organic peroxides. Radioactive substances. Infectious substances.

Further information on storage conditions

Recommended storage temperature: 10-30°C. Do not store at temperatures over: 50°C

Note: Storage requirements for flammable aerosols.

7.3. Specific end use(s)

See section 1.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Exposure limits (EH40)

| CAS No | Substance | ppm | mg/m ³ | fibres/ml | Category | Origin |
|----------|-----------|-----|-------------------|-----------|---------------|--------|
| 106-97-8 | Butane | 600 | 1450 | | TWA (8 h) | WEL |
| | | 750 | 1810 | | STEL (15 min) | WEL |

8.2. Exposure controls



Appropriate engineering controls

If local exhaust ventilation is not possible or not sufficient, the entire working area should be ventilated by technical means.

Protective and hygiene measures

Always close containers tightly after the removal of product.

When using do not eat, drink, smoke, sniff.

Wash hands before breaks and after work.

Eye/face protection

Wear safety glasses; chemical goggles (if splashing is possible).

Hand protection

In case of prolonged or frequently repeated skin contact: Wear suitable gloves.

Suitable material:

Butyl rubber. (0,5 mm)

Breakthrough time >480 min

penetration time (maximum wearing period): >160 min

The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard

EN 374 derived from it.

Check leak tightness/impermeability prior to use. In the case of wanting to use the gloves again, clean them before taking off and air them well.

Skin protection

Protective clothing.

Minimum standard for preventive measures while handling with working materials are specified in the TRGS 500.

Respiratory protection

With correct and proper use, and under normal conditions, breathing protection is not required.

Respiratory protection necessary at:

exceeding exposure limit values

Insufficient ventilation.

Suitable respiratory protective equipment: Protective respiration apparatus not using surrounding air (breathing apparatus) (DIN EN 133).

Use only respiratory protection equipment with CE-symbol including four digit test number.

Environmental exposure controls

Do not allow uncontrolled discharge of product into the environment.

SECTION 9: Physical and chemical properties**9.1. Information on basic physical and chemical properties**

| | | |
|-----------------|----------------|----------------|
| Physical state: | Aerosol | |
| Colour: | not determined | |
| Odour: | characteristic | |
| pH-Value: | | not determined |

Changes in the physical state

| | | |
|--|--|----------------|
| Melting point: | | not determined |
| Initial boiling point and boiling range: | | not determined |
| Sublimation point: | | not determined |
| Softening point: | | not determined |
| Flash point: | | <21 °C |

Flammability

| | | |
|------|--|----------------|
| Gas: | | not determined |
|------|--|----------------|

Explosive properties

In case of insufficient ventilation and/or through use, explosive/highly flammable mixtures may develop.

| | | |
|-------------------------|--|----------------|
| Lower explosion limits: | | not determined |
| Upper explosion limits: | | not determined |
| Ignition temperature: | | not determined |

Auto-ignition temperature

| | | |
|----------------------------|--|----------------|
| Gas: | | not determined |
| Decomposition temperature: | | not determined |

Oxidizing properties

none

| | | |
|-------------------|--|----------------|
| Vapour pressure: | | not determined |
| Vapour pressure: | | not determined |
| Density: | | not determined |
| Water solubility: | | not determined |

Solubility in other solvents

not determined

Viscosity / dynamic:

not determined

Viscosity / kinematic:

not determined

Flow time:

not determined

Vapour density:

not determined

Evaporation rate:

not determined

Solvent separation test:

not determined

Solvent content:

not determined

9.2. Other information

Solid content:

not determined

SECTION 10: Stability and reactivity

10.1. Reactivity

No information available.

10.2. Chemical stability

The product is stable under storage at normal ambient temperatures.

10.3. Possibility of hazardous reactions

Refer to chapter 10.5.

10.4. Conditions to avoid

Keep away from heat.

Ignition hazard.

Heating causes rise in pressure with risk of bursting.

10.5. Incompatible materials

Oxidizing agents, strong.

10.6. Hazardous decomposition products

In use, may form flammable/explosive vapour-air mixture. Can be released in case of fire: Carbon dioxide (CO₂), Carbon monoxide

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Toxicokinetics, metabolism and distribution

No information available.

Acute toxicity

Based on available data, the classification criteria are not met.

| CAS No | Chemical name | | | | |
|---------|----------------|------------------------------|---------|--------------|--------|
| | Exposure route | Dose | Species | Source | Method |
| 74-98-6 | propane | | | | |
| | inhalation gas | LC50 800000 (15 min) ppm | Rat | ECHA Dossier | |
| 75-28-5 | isobutane | | | | |
| | inhalation gas | LC50 520400 (120 min) ppm | Mouse. | ECHA Dossier | |

Irritation and corrosivity

Based on available data, the classification criteria are not met.

Sensitising effects

Based on available data, the classification criteria are not met.

Carcinogenic/mutagenic/toxic effects for reproduction

Based on available data, the classification criteria are not met.

STOT-single exposure

Based on available data, the classification criteria are not met.

STOT-repeated exposure

Based on available data, the classification criteria are not met.

Aspiration hazard

Based on available data, the classification criteria are not met.

Specific effects in experiment on an animal

No information available.

SECTION 12: Ecological information

12.1. Toxicity

The product has not been tested.

12.2. Persistence and degradability

The product has not been tested.

12.3. Bioaccumulative potential

Partition coefficient n-octanol/water

| CAS No | Chemical name | Log Pow |
|----------|---------------|---------|
| 106-97-8 | butane | 2,89 |
| 74-98-6 | propane | 2,36 |
| 75-28-5 | isobutane | 2,8 |

12.4. Mobility in soil

No information available.

12.5. Results of PBT and vPvB assessment

The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.

12.6. Other adverse effects

No information available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Advice on disposal

Dispose of waste according to applicable legislation.

Non-contaminated packages may be recycled.

According to EAKV, allocation of waste identity numbers/waste descriptions must be carried out in a specific way for every industry and process.

Control report for waste code/ waste marking according to EAKV:

Waste disposal number of waste from residues/unused products

160504 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; gases in pressure containers and discarded chemicals; gases in pressure containers (including halons) containing hazardous substances; hazardous waste

Waste disposal number of used product

160504 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; gases in pressure containers and discarded chemicals; gases in pressure containers (including halons) containing hazardous substances; hazardous waste

Waste disposal number of contaminated packaging

150110 WASTE PACKAGING; ABSORBENTS, WIPING CLOTHS, FILTER MATERIALS AND PROTECTIVE CLOTHING NOT OTHERWISE SPECIFIED; packaging (including separately collected municipal packaging waste); packaging containing residues of or contaminated by hazardous substances; hazardous waste

Contaminated packaging

Handle contaminated packages in the same way as the substance itself.

SECTION 14: Transport information**Land transport (ADR/RID)**

14.1. UN number: UN 1057
14.2. UN proper shipping name: LIGHTER REFILLS
14.3. Transport hazard class(es): 2
14.4. Packing group: -
Hazard label: 2.1



Classification code: 6F
Special Provisions: 201 654 658
Limited quantity: 0
Excepted quantity: E0
Transport category: 2
Tunnel restriction code: D

Inland waterways transport (ADN)

14.1. UN number: UN 1057
14.2. UN proper shipping name: LIGHTER REFILLS
14.3. Transport hazard class(es): 2
14.4. Packing group: -
Hazard label: 2.1



Classification code: 6F
Special Provisions: 201 654 658
Limited quantity: 0
Excepted quantity: E0

Marine transport (IMDG)

14.1. UN number: UN 1057
14.2. UN proper shipping name: LIGHTER REFILLS
14.3. Transport hazard class(es): 2.1
14.4. Packing group: -
Hazard label: 2.1



Marine pollutant: NO
Special Provisions: 201

Limited quantity: 0
Excepted quantity: E0
EmS: F-D, S-U

Air transport (ICAO-TI/IATA-DGR)

14.1. UN number: UN 1057
14.2. UN proper shipping name: LIGHTER REFILLS
14.3. Transport hazard class(es): 2.1
14.4. Packing group: -
Hazard label: 2.1



Special Provisions: A802
Limited quantity Passenger: Forbidden
Passenger LQ: Forbidden
Excepted quantity: E0
IATA-packing instructions - Passenger: 201
IATA-max. quantity - Passenger: 1 kg
IATA-packing instructions - Cargo: 201
IATA-max. quantity - Cargo: 15 kg

14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS: no

14.6. Special precautions for user

Refer to section 6-8

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****EU regulatory information**

Restrictions on use (REACH, annex XVII):

Entry 29: butane; isobutane

2010/75/EU (VOC): 100 %
2004/42/EC (VOC): not determined
Information according to 2012/18/EU (SEVESO III): P3a FLAMMABLE AEROSOLS

Additional information

Aerosol directive (75/324/EEC)

REACH 1907/2006 Appendix XVII, No (mixture): 3, 40

The mixture is classified as hazardous according to regulation (EC) No 1272/2008 [CLP].

National regulatory information

Employment restrictions: Observe restrictions to employment for juvenils according to the 'juvenile work protection guideline' (94/33/EC).

Water contaminating class (D): - - not water contaminating

15.2. Chemical safety assessment

For the following substances of this mixture a chemical safety assessment has been carried out:

SECTION 16: Other information

Changes

Rev. 1.0; Initial release: 16.07.2019

Abbreviations and acronyms

ADR: Accord européen sur le transport des marchandises dangereuses par Route
 AwSV: Verordnung über Anlagen zum Umgang mit wassergefährdenden Stoffen
 CAS Chemical Abstracts Service
 DNEL: Derived No Effect Level
 IARC: INTERNATIONAL AGENCY FOR RESEARCH ON CANCER
 IMDG: International Maritime Code for Dangerous Goods
 IATA: International Air Transport Association
 IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)
 ICAO: International Civil Aviation Organization
 ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO)
 GHS: Globally Harmonized System of Classification and Labelling of Chemicals
 GefStoffV: Gefahrstoffverordnung (Ordinance on Hazardous Substances, Germany)
 LOAEL: Lowest observed adverse effect level
 LOAEC: Lowest observed adverse effect concentration
 LC50: Lethal concentration, 50 percent
 LD50: Lethal dose, 50 percent
 NOAEL: No observed adverse effect level
 NOAEC: No observed adverse effect level
 NTP: National Toxicology Program
 N/A: not applicable
 OSHA: Occupational Safety and Health Administration
 PNEC: predicted no effect concentration
 PBT: Persistent bioaccumulative toxic
 RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
 SARA: Superfund Amendments and Reauthorization Act
 SVHC: substance of very high concern
 TRGS Technische Regeln fuerGefahrstoffe
 TSCA: Toxic Substances Control Act
 VOC: Volatile Organic Compounds
 VwVwS: Verwaltungsvorschrift wassergefaehrdender Stoffe
 WGK: Wassergefaehrdungsklasse

Classification for mixtures and used evaluation method according to Regulation (EC) No. 1272/2008 [CLP]

| Classification | Classification procedure |
|----------------------|--------------------------|
| Aerosol 1; H222-H229 | On basis of test data |

Relevant H and EUH statements (number and full text)

H220 Extremely flammable gas.
 H222 Extremely flammable aerosol.
 H229 Pressurised container: May burst if heated.
 H280 Contains gas under pressure; may explode if heated.

Further Information

Classification according EC regulation 1272/2008 (CLP): - Classification procedure:
 Health hazards: Calculation method.
 Environmental hazards: Calculation method.
 Physical hazards: On basis of test data and / or calculated and / or estimated.

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product

named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material.

(The data for the hazardous ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)