

Material Safety Data Sheet

According to 91/155 EEC

Printing date 22.01.2004

Reviewed on 06.03.2003

• 1 Identification of the substance/preparation and of the

company/undertaking

○ Product details

○ Trade name: Twist Gas 100 ml

1020072

○ Article number: 521000

○ Application of the substance / the preparation Gas

○ Manufacturer/Supplier:

Eurofill B.V.

Postbus 2220

1500 GE Zaandam-The Netherlands

Tel:+31756812681 Fax:+3131756812600

○ Further information obtainable from: Research & Development

• 2 Composition/information on ingredients

○ Chemical characterization:

CAS No. Description

106-97-8 butane

○ Identification number(s)

○ EINECS Number: 203-448-7

○ EU Number: 601-004-00-0

• 3 Hazards identification

○ Hazard description: F+ Extremely flammable

○ Information concerning particular hazards for human and environment:

Warning! Pressurized container.

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. Buildup of explosive mixtures possible without sufficient ventilation.

• 4 First-aid measures

○ After inhalation:

Supply fresh air; consult doctor in case of complaints.

○ After skin contact: Generally the product does not irritate the skin.

- **After eye contact:**
Rinse opened eye for several minutes under running water.
- **After swallowing:**
Do not induce vomiting; call for medical help immediately.

• **5 Fire-fighting measures**

- **Suitable extinguishing agents:**
CO₂, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **For safety reasons unsuitable extinguishing agents:** Water with full jet
- **Protective equipment:** No special measures required.

• **6 Accidental release measures**

- **Person-related safety precautions:**
Wear protective equipment. Keep unprotected persons away.
- **Measures for environmental protection:** No special measures required.
- **Measures for cleaning/collecting:** Ensure adequate ventilation.

• **7 Handling and storage**

- **Handling:**
- **Information for safe handling:**
Ensure good ventilation/exhaustion at the workplace.
Open and handle receptacle with care.
- **Information about fire - and explosion protection:**
Do not spray onto a naked flame or any incandescent material.
Keep ignition sources away - Do not smoke.
Protect against electrostatic charges.
Pressurized container: protect from sunlight and do not expose to temperatures exceeding 50°C, i.e. electric lights. Do not pierce or burn, even after use.
- **Storage:**
- **Requirements to be met by storerooms and receptacles:**
Store in a cool location.
Observe official regulations on storing packagings with pressurized containers.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:**
Keep receptacle tightly sealed.
Do not seal receptacle gas tight.
Store in cool, dry conditions in well sealed receptacles.
Protect from heat and direct sunlight.

• **8 Exposure controls/personal protection**

- **Additional information about design of technical facilities:**
No further data; see item 7.

Ingredients with limit values that require monitoring at the

workplace:

106-97-8 butane

OES: Short-term value: 1810 mg/m³, 750 ppmLong-term value: 1450 mg/m³, 600 ppmo **Additional information:**

The lists valid during the making were used as basis.

o **Personal protective equipment:**o **General protective and hygienic measures:**

Wash hands before breaks and at the end of work.

Do not inhale gases / fumes / aerosols.

o **Respiratory protection:**

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.

Use suitable respiratory protective device in case of insufficient ventilation.

o **Protection of hands:**

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

o **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

o **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

o **Eye protection:** Tightly sealed goggleso **Body protection:** Use protective suit.• **9 Physical and chemical properties**o **General Information**o **Form:** Aerosolo **Colour:** Colourlesso **Odour:** Nearly odourless

o

Value/Range UnitMethodo **Change in condition**o **Melting point/Melting range:**

-138 ° C

o **Boiling point/Boiling range:**

0 ° C

o **Flash point:**

< 0 ° C

o **Ignition temperature:**

365 ° C

o **Danger of explosion:**

Product is not explosive. However, formation of explosive

air/vapour mixtures are possible.

- **Explosion limits:**
- **Lower:** 1.5 Vol %
- **Upper:** 8.5 Vol %
- **Vapour pressure:** at 20 ° C 2.1 bar.
- **Density:** at 20 ° C 0.5737 g/cm³
- **Solubility in / Miscibility with**
- **water:** at 20 ° C 0.061 g/l
- **Organic solvents:** 100.0 %

• **10 Stability and reactivity**

- **Thermal decomposition / conditions to be avoided:**
No decomposition if used according to specifications.
- **Dangerous reactions** No dangerous reactions known.
- **Dangerous decomposition products:**
No dangerous decomposition products known.

• **11 Toxicological information**

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

106-97-8 butane
Inhalative: LC50/4 h: 658 mg/l (rat)
- **Primary irritant effect:**
- **on the skin:** No irritant effect.
- **on the eye:** No irritating effect.
- **Sensitization:** No sensitizing effects known.

• **12 Ecological information**

- **General notes:** Generally not hazardous for water

• **13 Disposal considerations**

- **Product:**
- **Recommendation**
Must not be disposed together with household garbage. Do not allow product to reach sewage system.
- **European waste catalogue**
20 01 99: other fractions not otherwise specified
07 01 04: other organic solvents, washing liquids and mother liquors
15 01 04: metallic packaging
- **Uncleaned packaging:**
- **Recommendation:**
Disposal must be made according to official regulations.

• **14 Transport information**

- **Land transport ADR/RID (cross-border)**
- **ADR/RID class:** 2 5F Gases.
- **Danger code (Kemler):** 23
- **UN-Number:** 1950
- **Packaging group:** -
- **Hazard label** 2.1
- **Description of goods:** 1950 AEROSOLS

- **Maritime transport IMDG:**
- **IMDG Class:** 2
- **UN Number:** 1950
- **Label** 2.1
- **Packaging group:** -
- **EMS Number:** F-D, S-U
- **Marine pollutant:** No
- **Proper shipping name:** AEROSOLS

- **Air transport ICAO-TI and IATA-DGR:**
- **ICAO/IATA Class:** 2.1
- **UN/ID Number:** 1950
- **Label** 2.1
- **Packaging group:** -
- **Proper shipping name:** AEROSOLS, flammable

• **15 Regulatory information**

- **Labelling according to EU guidelines:**
The product has been classified and marked in accordance with EU Directives / Ordinance on Hazardous Materials.
- **Code letter and hazard designation of product:** F+ Extremely flammable
- **Risk phrases:** 12 Extremely flammable.
- **Safety phrases:**
2 Keep out of the reach of children.
23 Do not breathe fumes/aerosol.
46 If swallowed, seek medical advice immediately and show this container or label.
51 Use only in well-ventilated areas.
- **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. Buildup of explosive mixtures possible without sufficient ventilation.
- **National regulations:**

- **Technical instructions (air):**

Class Share in %

NK 50-100

- **Waterhazard class:** Generally not hazardous for water.

- **VOC-CH** 100.00 %

- **VOC-EU** 100.00 %

- **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.

- **Department issuing MSDS:** Research & Development

- **Contact:** Ing. J.H. Sleumer