

Safety Data Sheet

according to 1907/2006/EC, Article 31

Printing date: 10.07.2009

Revision: 07.07.2009

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

- **Product details:**
- **Trade name:** **KOMET Gas für Feuerzeuge (200ml)**
- **Application of the substance / the preparation** Gas for lighter
- **Supplier/Manufacturer:**
- **Distributor:**
Fessmann & Hecker GmbH & Co. KG
Wiesenstr. 13
79669 Zell i. W.
Germany
Tel.: + 49-7625 - 9253-0
Fax: +49-7625 - 9253-14
- **Email competent person:** sonja.fischer@kft.de
- **Information department:** See supplier/manufacturer
- **Emergency information:** Giftinformationszentrale Göttingen Tel.: +49-551-19240

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

- **GHS label elements**

**Danger**

H222 - Extremely flammable aerosol.

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

- **Prevention:**

P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

P260 Do not breathe dust/fume/gas/mist/vapours/spray.

P271 Use only outdoors or in a well-ventilated area.

P273 Avoid release to the environment.

- **Storage:**

P410+P412 Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F.

- **Disposal:**

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

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- **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 EINECS: 200-857-2 Index number: 601-004-01-8	isobutane F+; R 12 Danger: flame 2.2/1 Warning: gas cylinder 2.5/C	ca. 95%
CAS: 106-97-8 EINECS: 203-448-7 Index number: 601-004-00-0	butane, pure F+; R 12 Danger: flame 2.2/1 Warning: gas cylinder 2.5/C	ca. 4%
CAS: 74-98-6 EINECS: 200-827-9 Index number: 601-003-00-5	propane liquefied F+; R 12 Danger: flame 2.2/1 Warning: gas cylinder 2.5/C	ca. 1%

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

Daze

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 reignite.

Dangerous decomposition product see chapter 10: stability and reactivity

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- **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
-

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 2B** pressurized gas containers

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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

74-98-6 propane liquefied

OEL (Ireland) Asphx

· **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:

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: Aerosol
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

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- **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.
Carbon monoxide and carbon dioxide
Nitrogen oxides (NO_x)
Sulphur oxides (SO_x)
organic pyrolyzates

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
- **Ecotoxic 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)

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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 5F Gases.
- **Danger code (Kemler):** 23
- **UN-Number:** 1950
- **Packaging group:** -
- **Label:** 2.1
- **Description of goods:** 1950 AEROSOLS
- **Limited quantities (LQ)** LQ2
- **Transport category** 2
- **Tunnel restriction code** D
- **Remarks:** Limited Quantity: 1 kg inner packing, 30 kg packaging unit

- Maritime transport IMDG:



- **IMDG Class:** 2.1
- **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
- **UN/ID Number:** 1950
- **Label:** 2.1
- **Packaging group:** -
- **Proper shipping name:** AEROSOLS
- **Remarks:** Packing Instructions:
For Limited Quantities: Y203(Max Net Qty/Pkg: 30 kg G)
Passenger and Cargo Aircraft: 203 (Max Net Qty/Pkg: 75 kg)
Cargo Aircraft only: 203 (Max Net Qty/Pkg: 150 kg)
- **UN "Model Regulation":** UN1950, AEROSOLS, 2.1

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 · **Transport/Additional information:** Protect from heat!

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.

16 Keep away from sources of ignition - No smoking.

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.

 · **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**

 · **Technical guidance (air):**

 · **Class Share in %**

 · **NK** **99.9**

 · **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:**

KFT Chemieservice GmbH

Im Leuschnerpark, 3 D-64347 Griesheim

Postfach 1451 D-64345 Griesheim

Tel.: +49 6155 86829-0 Fax: +49 6155 86829-25

 · **Contact:** Dr. Sonja Fischer

 · **Abbreviations and acronyms:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

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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

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

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