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

1.1. Product identifier
JG 600

1.2. Relevant identified uses of the substance or mixture and uses advised against
Use of the substance/mixture
Preservative agent

1.3. Details of the supplier of the safety data sheet
Company name: AESCULAP AG
Street: Am AESCULAP-Platz
Place: D-78532 Tuttlingen/Donau
Telephone: +49 (0) 74 61 95-0
Telefax: +49 (0) 74 61 95-2600
Responsible Department: Responsible for the safety data sheet: sds@gbk-ingelheim.de

1.4. Emergency telephone number:
INTERNATIONAL: +49 - (0) 6132 - 84463, GBK GmbH (24h - 7d/w - 365d/a)
England and Wales: NHS Direct - 0845 4647; Scotland: NHS 24 - 08454 24 24 24

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture according to 1272/2008/EC
Hazard categories:
Aerosol: Aerosol 1
Hazard Statements:
Extremely flammable aerosol.
Pressurised container: May burst if heated.

2.2. Label elements
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.

2.3. Other hazards
In use, may form flammable/explosive vapour-air mixture.

SECTION 3: Composition/information on ingredients

3.2. Mixtures
Chemical characterization
Aerosol with preparation of special oil
Hazardous components

<table>
<thead>
<tr>
<th>CAS No</th>
<th>Chemical name</th>
<th>EC No</th>
<th>Index No</th>
<th>Classification according to Regulation (EC) No. 1272/2008 [CLP]</th>
<th>REACH No</th>
</tr>
</thead>
<tbody>
<tr>
<td>106-97-8</td>
<td>Butane</td>
<td></td>
<td></td>
<td>Flam. Gas 1; H220</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>203-448-7</td>
<td>601-004-00-0</td>
<td>01-2119474691-32</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>&lt; 100 %</td>
<td></td>
</tr>
</tbody>
</table>

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

SECTION 4: First aid measures

4.1. Description of first aid measures

General information
Remove contaminated soaked clothing immediately.
Take away from danger area and lay down affected person.

After inhalation
Ensure of fresh air.
In the event of symptoms refer for medical treatment.

After contact with skin
Wash with water and soap as a precaution.
Consult a doctor if skin irritation persists.

After contact with eyes
Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.
If eye irritation persists, consult a specialist.

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

Attention. Beware, danger of aspiration.
Inhalation of high vapour concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting.
Inhalation of vapours in high concentration can cause narcotic effects.
Rapid evaporation of the liquid may cause frostbite.
May cause eye/skin irritation.

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

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media
Foam, carbon dioxide (CO2), dry chemical, water-spray.

Unsuitable extinguishing media
Full water jet.

5.2. Special hazards arising from the substance or mixture
Fire may produce:
Carbon monoxide and carbon dioxide

5.3. Advice for firefighters
Use breathing apparatus with independent air supply.
Protective suit.

Additional information
Cool containers at risk with water spray jet. Heating will cause pressure rise with risk of bursting.
Vapours are heavier than air and spread along ground.
The vapour/air mixture is explosive, even in empty, uncleaned receptacles.
Fire residues and contaminated firefighting water must be disposed of in accordance with the local regulations.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures
Ensure adequate ventilation.
Remove all sources of ignition.
Avoid contact with skin, eyes and clothing.

6.2. Environmental precautions
Do not discharge product unmonitored into the environment.

6.3. Methods and material for containment and cleaning up
Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder).
Shovel into suitable container for disposal.

6.4. Reference to other sections
Observe protective instructions (see Sections 7 and 8).
Information for disposal see section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling
Advice on safe handling
Ensure adequate ventilation.
Avoid contact with skin, eyes and clothing.
Do not breathe aerosol

Advice on protection against fire and explosion
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. Keep out of the reach of children. Without adequate ventilation formation of explosive mixtures may be possible.

7.2. Conditions for safe storage, including any incompatibilities
Requirements for storage rooms and vessels
Keep containers tightly closed in a cool, well-ventilated place.

Advice on storage compatibility
Incompatible with oxidizing agents.

Further information on storage conditions
Keep away from food and drink.

7.3. Specific end use(s)
Preservative agent

SECTION 8: Exposure controls/personal protection

8.1. Control parameters
Exposure limits (EH40)

<table>
<thead>
<tr>
<th>CAS No</th>
<th>Substance</th>
<th>ppm</th>
<th>mg/m³</th>
<th>fibres/ml</th>
<th>Category</th>
<th>Origin</th>
</tr>
</thead>
<tbody>
<tr>
<td>106-97-8</td>
<td>Butane</td>
<td>600</td>
<td>1450</td>
<td></td>
<td>TWA (8 h)</td>
<td>WEL</td>
</tr>
<tr>
<td></td>
<td></td>
<td>750</td>
<td>1810</td>
<td></td>
<td>STEL (15 min)</td>
<td>WEL</td>
</tr>
</tbody>
</table>

8.2. Exposure controls
Appropriate engineering controls
Ensure adequate ventilation, especially in confined areas.

Protective and hygiene measures
Do not breathe aerosol
Wash hands before breaks and at the end of workday.
When using do not eat, drink or smoke.
Take off immediately all contaminated clothing.

**Eye/face protection**
If used properly, no need to wear eye protection.
Avoid contact with the eyes.

**Hand protection**
If used properly, protective gloves are normally not required.
Avoid contact with the skin.

**Respiratory protection**
No personal respiratory protective equipment normally required.
In case of insufficient ventilation wear suitable respiratory equipment (gas filter type AX) (EN 14387).

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### SECTION 9: Physical and chemical properties

#### 9.1. Information on basic physical and chemical properties

- **Physical state:** Aerosol
- **Colour:** White
- **Odour:** Hydrocarbon-like

**Changes in the physical state**

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Melting point</td>
<td>- 138 °C</td>
</tr>
<tr>
<td>Initial boiling point and boiling range</td>
<td>- 0,5 °C</td>
</tr>
<tr>
<td>Flash point</td>
<td>- 60 °C</td>
</tr>
<tr>
<td>Lower explosion limits</td>
<td>1,4 vol. %</td>
</tr>
<tr>
<td>Upper explosion limits</td>
<td>9,4 vol. %</td>
</tr>
<tr>
<td>Ignition temperature</td>
<td>365 °C</td>
</tr>
<tr>
<td>Vapour pressure</td>
<td>2800 hPa</td>
</tr>
<tr>
<td>Density (at 20 °C)</td>
<td>0,60 g/cm³</td>
</tr>
<tr>
<td>Water solubility (at 20 °C)</td>
<td>Immiscible</td>
</tr>
</tbody>
</table>

*) Butane

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### SECTION 10: Stability and reactivity

#### 10.1. Reactivity
No decomposition if stored and applied as directed.

#### 10.2. Chemical stability
Stable under normal conditions.

#### 10.3. Possibility of hazardous reactions
Reactions with oxidizing agents.

#### 10.4. Conditions to avoid
Fire or intense heat may cause violent rupture of packages.

#### 10.5. Incompatible materials
Strong oxidizing agents

#### 10.6. Hazardous decomposition products
Carbon monoxide and carbon dioxide

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### SECTION 11: Toxicological information

#### 11.1. Information on toxicological effects

**Acute toxicity**
Based on available data, the classification criteria are not met.
No toxicological data available.
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.

STOT-single exposure
Based on available data, the classification criteria are not met.

Severe effects after repeated or prolonged exposure
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.

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

Additional information on tests
Classification in compliance with the assessment procedure specified in the Regulation (EC) no 1272/2008.

Practical experience
Inhalation of high vapour concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting.
Inhalation of vapours in high concentration can cause narcotic effects.
Rapid evaporation of the liquid may cause frostbite.
May cause eye/skin irritation.
May cause irritation of the mucous membranes.

SECTION 12: Ecological information

12.1. Toxicity
Ecological data are not available.

12.2. Persistence and degradability
No data available.

12.3. Bioaccumulative potential
No data available.

12.4. Mobility in soil
No data available.

12.5. Results of PBT and vPvB assessment
According to Regulation (EC) No 1907/2006 (REACH) none of the substances, contained in this product are a PBT / vPvB substance.

12.6. Other adverse effects
Low hazard to waters.

Further information
Do not flush into surface water or sanitary sewer system.
Ecological injuries are not known or expected under normal use.

SECTION 13: Disposal considerations

13.1. Waste treatment methods
Advice on disposal
Can be incinerated, when in compliance with local regulations.
Where possible recycling is preferred to disposal.

Waste disposal number of waste from residues/unused products
150111 WASTE PACKAGING; ABSORBENTS, WIPING CLOTHS, FILTER MATERIALS AND PROTECTIVE CLOTHING NOT OTHERWISE SPECIFIED; packaging (including separately collected municipal packaging waste); metallic packaging containing a dangerous solid porous matrix (for example asbestos), including empty pressure containers
Classified as hazardous waste.
Contaminated packaging
Offer empty spray cans to an established disposal company.

SECTION 14: Transport information

Land transport (ADR/RID)
14.1. UN number: UN 1950
14.2. UN proper shipping name: AEROSOLS
14.3. Transport hazard class(es): 2
14.4. Packing group: -
Hazard label: 2.1

Classification code: 5F
Limited quantity: 1 L / 30 kg
Exempted quantity: E0
Transport category: 2
Tunnel restriction code: D

Inland waterways transport (ADN)
14.1. UN number: UN 1950
14.2. UN proper shipping name: AEROSOLS
14.3. Transport hazard class(es): 2
14.4. Packing group: -
Hazard label: 2.1

Classification code: 5F
Limited quantity: 1 L / 30 kg
Exempted quantity: E0

Marine transport (IMDG)
14.1. UN number: UN 1950
14.2. UN proper shipping name: AEROSOLS
14.3. Transport hazard class(es): 2.1
14.4. Packing group: -
Hazard label: 2.1

Marine pollutant: No
Limited quantity: 1 L / 30 kg
Exempted quantity: E0
EmS: F-D, S-U

Air transport (ICAO)
14.1. UN number: UN 1950
14.2. UN proper shipping name: AEROSOLS
14.3. Transport hazard class(es): 2.1
14.4. Packing group: -
Hazard label: 2.1
Limited quantity Passenger: 30 kg G
Passenger LQ: Y203
Excepted quantity: E0
IATA-packing instructions - Passenger: 203
IATA-max. quantity - Passenger: 75 kg
IATA-packing instructions - Cargo: 203
IATA-max. quantity - Cargo: 150 kg

### 14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS: no

### 14.6. Special precautions for user

Handle in accordance with good industrial hygiene and safety practice.

### 14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

The transport takes place only in approved and appropriate packaging.

SECTION 15: Regulatory information

### 15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

**EU regulatory information**

2004/42/EC (VOC): 98 %

**National regulatory information**

Employment restrictions: Observe employment restrictions for young people. Observe employment restrictions for child bearing mothers and nursing.

Water contaminating class (D): 1 - slightly water contaminating

### 15.2. Chemical safety assessment

For this substance a chemical safety assessment has not been carried out.

SECTION 16: Other information

**Abbreviations and acronyms**

ADR = Accord européen relatif au transport international des marchandises Dangereuses par Route
RID = Règlement concernant le transport international ferroviaire de marchandises dangereuses
ADN = Accord européen relatif au transport international des marchandises dangereuses par voie de navigation intérieure
IMDG = International Maritime Code for Dangerous Goods
IATA/ICAO = International Air Transport Association / International Civil Aviation Organization
MARPOL = International Convention for the Prevention of Pollution from Ships
IBC-Code = International Code for the Construction and Equipment of Ships Carrying Dangerous Chemicals in Bulk
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
REACH = Registration, Evaluation, Authorization and Restriction of Chemicals
CAS = Chemical Abstract Service
EN = European norm
ISO = International Organization for Standardization
DIN = Deutsche Industrie Norm
PBT = Persistent Bioaccumulative and Toxic
vPvB = Very Persistent and very Bio-accumulative
LD = Lethal dose
LC = Lethal concentration
EC = Effect concentration
IC = Median immobilisation concentration or median inhibitory concentration

**Relevant H- and EUH-phrases (Number and full text)**

H220 Extremely flammable gas.
H222 Extremely flammable aerosol.
H229 Pressurised container: May burst if heated.
Further Information
Data of items 4 to 8, as well as 10 to 12, do partly not refer to the use and the regular employing of the product (in this sense consult information on use and on product), but to liberation of major amounts in case of accidents and irregularities.
The information describes exclusively the safety requirements for the product(s) and is based on the present level of our knowledge.
The delivery specifications are contained in the corresponding product sheet.
This data does not constitute a guarantee for the characteristics of the product(s) as defined by the legal warranty regulations.
(n.a. = not applicable; n.d. = not determined)

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