



## Safety Data Sheet

according to UK REACH Regulation

### 112 Brake spray 400 ml AB

Revision date: 17.04.2020

Product code: 1101054

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

### 1.1. Product identifier

112 Brake spray 400 ml AB

### 1.2. Relevant identified uses of the substance or mixture and uses advised against

#### Use of the substance/mixture

Lubricant

### 1.3. Details of the supplier of the safety data sheet

#### Manufacturer

|               |                            |                                  |
|---------------|----------------------------|----------------------------------|
| Company name: | TUNAP GmbH & Co. KG        |                                  |
| Street:       | Bürgermeister-Seidl-Str. 2 |                                  |
| Place:        | D-82515 Wolfratshausen     |                                  |
| Telephone:    | + 49 (0) 8171/1600 - 0     | Telefax: + 49 (0) 8171/1600 - 40 |
| e-mail:       | sdb@tunap.com              |                                  |
| Internet:     | www.tunap.com              |                                  |

#### Supplier

|               |  |
|---------------|--|
| Company name: | TUNAP UK Limited                           |
| Street:       | Unit L4 Deacon Trading Estate, Morley Road |
| Place:        | GB Tonbridge, Kent. TN9 1RA                |
| Telephone:    | +44 (0)1732 365163                         |
| e-mail:       | sdb@tunap.com                              |
| Internet:     | www.tunap.co.uk                            |

**1.4. Emergency telephone number:** 111 NHS (National Health Service)

## SECTION 2: Hazards identification

### 2.1. Classification of the substance or mixture

#### GB CLP Regulation

Hazard categories:  
Aerosol: Aerosol 1  
Skin corrosion/irritation: Skin Irrit. 2  
Respiratory or skin sensitisation: Skin Sens. 1  
Specific target organ toxicity - single exposure: STOT SE 3  
Hazardous to the aquatic environment: Aquatic Chronic 3  
Hazard Statements:  
Extremely flammable aerosol.  
Pressurised container: May burst if heated.  
Causes skin irritation.  
May cause an allergic skin reaction.  
May cause drowsiness or dizziness.  
Harmful to aquatic life with long lasting effects.

### 2.2. Label elements

#### GB CLP Regulation

#### Hazard components for labelling

Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, < 5% n-hexane  
Benzenesulfonic acid, mono-C16-24-alkyl derivs., calcium salts  
Benzenesulfonic acids, di-C10-14-alkyl derivatives, calcium salts  
(R)-p-mentha-1,8-diene

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**Signal word:** Danger**Pictograms:****Hazard statements**

|      |  |
|------|--|
| H222 | Extremely flammable aerosol.                       |
| H229 | Pressurised container: May burst if heated.        |
| H315 | Causes skin irritation.                            |
| H317 | May cause an allergic skin reaction.               |
| H336 | May cause drowsiness or dizziness.                 |
| H412 | Harmful to aquatic life with long lasting effects. |

**Precautionary statements**

|           |  |
|-----------|--|
| 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.  |
| P260      | Do not breathe spray.  |
| P280      | Wear eye protection.   |
| P262      | Do not get in eyes, on skin, or on clothing.   |
| P271      | Use only outdoors or in a well-ventilated area.  |
| P273      | Avoid release to the environment.  |
| P302+P352 | IF ON SKIN: Wash with plenty of Water and soap..   |
| P304+P340 | IF INHALED: Remove person to fresh air and keep comfortable for breathing.                     |
| P312      | Call a POISON CENTER/doctor if you feel unwell.  |
| P410+P412 | Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F.                   |
| P251      | Do not pierce or burn, even after use.   |

**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**

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**Hazardous components**

| CAS No       | Chemical name   | Quantity     |                  |             |
|--------------|---|--------------|------------------|-------------|
|              | EC No   | Index No     | REACH No         |             |
|              | Classification (GB CLP Regulation)  |              |                  |             |
| 75-28-5      | isobutane   |              |                  | 25 - < 50 % |
|              | 200-857-2   | 601-004-00-0 | 01-2119485395-27 |             |
|              | Flam. Gas 1, Liquefied gas; H220 H280   |              |                  |             |
| 92128-66-0   | Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, < 5% n-hexane                                      |              |                  | 0 - < 7 %   |
|              | 921-024-6   |              | 01-2119475514-35 |             |
|              | Flam. Liq. 2, Skin Irrit. 2, STOT SE 3, Asp. Tox. 1, Aquatic Chronic 2; H225 H315 H336 H304 H411        |              |                  |             |
| 74-98-6      | propane   |              |                  | 5 - < 10 %  |
|              | 200-827-9   | 601-003-00-5 | 01-2119486944-21 |             |
|              | Flam. Gas 1, Liquefied gas; H220 H280   |              |                  |             |
| 64742-49-0   | Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics  |              |                  | 0 - < 7 %   |
|              | 927-510-4   |              | 01-2119475515-33 |             |
|              | Flam. Liq. 2, Skin Irrit. 2, STOT SE 3, Asp. Tox. 1, Aquatic Chronic 2; H225 H315 H336 H304 H411        |              |                  |             |
| 106-97-8     | butane  |              |                  | 1 - < 3 %   |
|              | 203-448-7   | 601-004-00-0 | 01-2119474691-32 |             |
|              | Flam. Gas 1, Liquefied gas; H220 H280   |              |                  |             |
| 5989-27-5    | (R)-p-mentha-1,8-diene  |              |                  | 0.1 - < 1 % |
|              | 227-813-5   |              | 01-2119529223-47 |             |
|              | Flam. Liq. 3, Skin Irrit. 2, Skin Sens. 1, Aquatic Acute 1, Aquatic Chronic 1; H226 H315 H317 H400 H410 |              |                  |             |
| 68584-23-6   | Benzenesulfonic acid, C10-16-alkyl derivs., calcium salts   |              |                  | 0.1 - < 1 % |
|              | 271-529-4   |              | 01-2119492627-25 |             |
|              | Eye Irrit. 2; H319  |              |                  |             |
| 70024-69-0   | Benzenesulfonic acid, mono-C16-24-alkyl derivs., calcium salts  |              |                  | 0.1 - < 1 % |
|              | 274-263-7   |              | 01-2119492616-28 |             |
|              | Skin Sens. 1B; H317   |              |                  |             |
| 1471316-72-9 | Benzenesulfonic acids, di-C10-14-alkyl derivatives, calcium salts                                       |              |                  | 0.1 - < 1 % |
|              | 939-603-7   |              | 01-2119978241-36 |             |
|              | Skin Sens. 1B; H317   |              |                  |             |

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

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**Specific Conc. Limits, M-factors and ATE**

| CAS No       | EC No     | Chemical name   | Quantity    |
|--------------|-----------|---|-------------|
|              |           | Specific Conc. Limits, M-factors and ATE  |             |
| 92128-66-0   | 921-024-6 | Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, < 5% n-hexane  | 0 - <7 %    |
|              |           | inhalation: LC50 = > 25,2 mg/l (vapours); dermal: LD50 = > 2800 - 3100 mg/kg; oral: LD50 = > 5000 mg/kg                               |             |
| 64742-49-0   | 927-510-4 | Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics  | 0 - <7 %    |
|              |           | inhalation: LC50 = > 23,3 mg/l (vapours); dermal: LD50 = > 2800 - 3100 mg/kg; oral: LD50 = 5500 mg/kg                                 |             |
| 106-97-8     | 203-448-7 | butane  | 1 - < 3 %   |
|              |           | inhalation: LC50 = 658 ppm (gases)  |             |
| 5989-27-5    | 227-813-5 | (R)-p-mentha-1,8-diene  | 0.1 - < 1 % |
|              |           | dermal: LD50 = > 2000 mg/kg; oral: LD50 = > 2000 mg/kg  |             |
| 68584-23-6   | 271-529-4 | Benzenesulfonic acid, C10-16-alkyl derivs., calcium salts   | 0.1 - < 1 % |
|              |           | inhalation: LC50 = >5 mg/l (dusts or mists); dermal: LD50 = >5000 mg/kg; oral: LD50 = >5000 mg/kg                                     |             |
| 70024-69-0   | 274-263-7 | Benzenesulfonic acid, mono-C16-24-alkyl derivs., calcium salts  | 0.1 - < 1 % |
|              |           | inhalation: LC50 = >5 mg/l (dusts or mists); dermal: LD50 = > 4000 mg/kg; oral: LD50 = > 16000 mg/kg Skin Sens. 1B; H317: >= 10 - 100 |             |
| 1471316-72-9 | 939-603-7 | Benzenesulfonic acids, di-C10-14-alkyl derivatives, calcium salts   | 0.1 - < 1 % |
|              |           | dermal: LD50 = > 2000 mg/kg; oral: LD50 = > 10000 - < 20000 mg/kg Skin Sens. 1B; H317: >= 10 - 100                                    |             |

**SECTION 4: First aid measures****4.1. Description of first aid measures****General information**

First aider: Pay attention to self-protection! Remove persons to safety. Never give anything by mouth to an unconscious person or a person with cramps.

**After inhalation**

Remove person to fresh air and keep comfortable for breathing. In all cases of doubt, or when symptoms persist, seek medical advice.

**After contact with skin**

Wash with plenty of water and soap. Take off immediately all contaminated clothing and wash it before reuse. In all cases of doubt, or when symptoms persist, seek medical advice.

**After contact with eyes**

Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. In case of troubles or persistent symptoms, consult an ophthalmologist.

**After ingestion**

Do NOT induce vomiting. Observe risk of aspiration if vomiting occurs. Call a physician in any case!

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

Headache, nausea, dizziness, fatigue, skin irritation

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

Treat symptomatically.

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



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#### Suitable extinguishing media

Water fog. Foam. Carbon dioxide (CO<sub>2</sub>). Extinguishing powder.

#### Unsuitable extinguishing media

Full water jet

#### 5.2. Special hazards arising from the substance or mixture

Incomplete combustion and thermolysis gases of different toxicity can occur. In the case of hydrocarbonaceous products such as CO, CO<sub>2</sub>, aldehydes and soot. These can be very dangerous if they are inhaled in high concentrations or in enclosed spaces.

#### 5.3. Advice for firefighters

In case of fire and/or explosion do not breathe fumes. Move undamaged containers from immediate hazard area if it can be done safely. In case of fire: Wear self-contained breathing apparatus.

#### Additional information

Danger of bursting container.

### SECTION 6: Accidental release measures

#### 6.1. Personal precautions, protective equipment and emergency procedures

##### General advice

Wear breathing apparatus if exposed to vapours/dusts/aerosols. Remove all sources of ignition. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.  
Wear personal protection equipment.

#### 6.2. Environmental precautions

Do not allow to enter into surface water or drains. Prevent spread over a wide area (e.g. by containment or oil barriers). Ensure all waste water is collected and treated via a waste water treatment plant.

#### 6.3. Methods and material for containment and cleaning up

##### Other information

Absorb with liquid-binding material (sand, diatomaceous earth, acid- or universal binding agents). Clean contaminated articles and floor according to the environmental legislation.

#### 6.4. Reference to other sections

Safe handling: see section 7  
Personal protection equipment: see section 8  
Disposal: see section 13

### SECTION 7: Handling and storage

#### 7.1. Precautions for safe handling

##### Advice on safe handling

Observe instructions for use.  
Dust must be exhausted directly at the point of origin. Vapours/aerosols must be exhausted directly at the point of origin. If local exhaust ventilation is not possible or not sufficient, the entire working area should be ventilated by technical means.  
When using do not eat, drink, smoke, sniff.  
Wear personal protection equipment (refer to section 8).  
In case of insufficient ventilation and/or through use, explosive/highly flammable mixtures may develop.

##### Advice on protection against fire and explosion

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

##### Advice on general occupational hygiene

Avoid exposure. Wear suitable protective clothing. Draw up and observe skin protection programme.

##### Further information on handling

Avoid contact with skin and eyes.

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**7.2. Conditions for safe storage, including any incompatibilities****Requirements for storage rooms and vessels**

Keep container tightly closed. Observe legal regulations and provisions.

**Hints on joint storage**

Do not store together with: Oxidizing agents. Pyrophoric or self-heating substances. Food and feedingstuffs.

**Further information on storage conditions**

Protect from frost. Protect from direct sunlight. Store in a cool dry place. Observe legal regulations and provisions.

**7.3. Specific end use(s)**

No information available.

**SECTION 8: Exposure controls/personal protection****8.1. Control parameters****Exposure limits (EH40)**

| CAS No     | Substance                    | ppm | mg/m <sup>3</sup> | fibres/ml | Category      | Origin |
|------------|------------------------------|-----|-------------------|-----------|---------------|--------|
| 106-97-8   | Butane                       | 600 | 1450              |           | TWA (8 h)     | WEL    |
|            |                              | 750 | 1810              |           | STEL (15 min) | WEL    |
| 14807-96-6 | Talc respirable dust         | -   | 1                 |           | TWA (8 h)     | WEL    |
| 13463-67-7 | Titanium dioxide, respirable | -   | 4                 |           | TWA (8 h)     | WEL    |

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**DNEL/DMEL values**

| CAS No                   | Substance  | Exposure route | Effect   | Value                    |
|--------------------------|--|----------------|----------|--------------------------|
| 92128-66-0               | Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, < 5% n-hexane |                |          |                          |
| Worker DNEL, long-term   |  | inhalation     | systemic | 2035 mg/m <sup>3</sup>   |
| Worker DNEL, long-term   |  | dermal         | systemic | 773 mg/kg bw/day         |
| Consumer DNEL, long-term |  | inhalation     | systemic | 608 mg/m <sup>3</sup>    |
| Consumer DNEL, long-term |  | dermal         | systemic | 699 mg/kg bw/day         |
| Consumer DNEL, long-term |  | oral           | systemic | 699 mg/kg bw/day         |
| 64742-49-0               | Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics                   |                |          |                          |
| Worker DNEL, long-term   |  | inhalation     | systemic | 2085 mg/m <sup>3</sup>   |
| Worker DNEL, long-term   |  | dermal         | systemic | 300 mg/kg bw/day         |
| Consumer DNEL, long-term |  | inhalation     | systemic | 447 mg/m <sup>3</sup>    |
| Consumer DNEL, long-term |  | dermal         | systemic | 149 mg/kg bw/day         |
| Consumer DNEL, long-term |  | oral           | systemic | 149 mg/kg bw/day         |
| 70024-69-0               | Benzenesulfonic acid, mono-C16-24-alkyl derivs., calcium salts     |                |          |                          |
| Worker DNEL, long-term   |  | inhalation     | systemic | 11,75 mg/m <sup>3</sup>  |
| Worker DNEL, long-term   |  | dermal         | systemic | 3,33 mg/kg bw/day        |
| Worker DNEL, long-term   |  | dermal         | local    | 1,03 mg/cm <sup>2</sup>  |
| Consumer DNEL, long-term |  | inhalation     | systemic | 2,9 mg/m <sup>3</sup>    |
| Consumer DNEL, long-term |  | dermal         | systemic | 1,667 mg/kg bw/day       |
| Consumer DNEL, long-term |  | dermal         | local    | 0,513 mg/cm <sup>2</sup> |
| Consumer DNEL, long-term |  | oral           | systemic | 0,833 mg/kg bw/day       |
| 1471316-72-9             | Benzenesulfonic acids, di-C10-14-alkyl derivatives, calcium salts  |                |          |                          |
| Worker DNEL, long-term   |  | inhalation     | systemic | 35,26 mg/m <sup>3</sup>  |
| Worker DNEL, long-term   |  | dermal         | systemic | 25 mg/kg bw/day          |
| Worker DNEL, acute       |  | dermal         | local    | 1,04 mg/cm <sup>2</sup>  |
| Consumer DNEL, long-term |  | inhalation     | systemic | 8,7 mg/m <sup>3</sup>    |
| Consumer DNEL, long-term |  | dermal         | systemic | 12,5 mg/kg bw/day        |
| Consumer DNEL, acute     |  | dermal         | local    | 0,518 mg/cm <sup>2</sup> |
| Consumer DNEL, long-term |  | oral           | systemic | 2,5 mg/kg bw/day         |

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**PNEC values**

| CAS No   | Substance  | Value           |
|--|--|-----------------|
| Environmental compartment  |  |                 |
| 70024-69-0   | Benzenesulfonic acid, mono-C16-24-alkyl derivs., calcium salts |                 |
| Freshwater   |  | 1 mg/l          |
| Freshwater (intermittent releases)   |  | 10 mg/l         |
| Marine water   |  | 1 mg/l          |
| Freshwater sediment  |  | 226000000 mg/kg |
| Marine sediment  |  | 226000000 mg/kg |
| Secondary poisoning  |  | 16,667 mg/kg    |
| Micro-organisms in sewage treatment plants (STP)                               |  | 1000 mg/l       |
| Soil   |  | 271000000 mg/kg |
| 1471316-72-9 Benzenesulfonic acids, di-C10-14-alkyl derivatives, calcium salts |  |                 |
| Freshwater   |  | 0,1 mg/l        |
| Freshwater (intermittent releases)   |  | 1 mg/l          |
| Marine water   |  | 0,1 mg/l        |
| Freshwater sediment  |  | 45211 mg/kg     |
| Marine sediment  |  | 45211 mg/kg     |
| Micro-organisms in sewage treatment plants (STP)                               |  | 1000 mg/l       |
| Soil   |  | 36739,74 mg/kg  |

**Additional advice on limit values**

- a no restriction
- b End of exposure or end of shift
- c at long-term exposure:
- d before next shift

- blood (B)
- Urine (U)

**8.2. Exposure controls****Appropriate engineering controls**

If handled uncovered, arrangements with local exhaust ventilation have to be used.

**Individual protection measures, such as personal protective equipment****Eye/face protection**

Suitable eye protection: Tightly sealed safety glasses.  
EN 166

**Hand protection**

Protect skin by using skin protective cream. When handling with chemical substances, protective gloves must be worn with the CE-label including the four control digits. The quality of the protective gloves resistant to chemicals must be chosen as a function of the specific working place concentration and quantity of hazardous substances.  
Suitable material: NBR (Nitrile rubber) Breakthrough time: 480min  
Thickness of the glove material 0,45 mm  
EN ISO 374

**Skin protection**

Wear suitable protective clothing. Take off immediately all contaminated clothing and wash it before reuse.



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**Respiratory protection**

Wear breathing apparatus if exposed to vapours/dusts/aerosols.  
When exceeding the relevant workplace exposure limits, note the following:  
Suitable respiratory protective equipment: Combination filter device (DIN EN 141)..  
Filtering device with filter or ventilator filtering device of type: AX  
Observe the wear time limits as specified by the manufacturer.  
Observe legal regulations and provisions.

**Environmental exposure controls**

Observe legal regulations and provisions.

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

Physical state: Aerosol  
Colour: grey  
Odour: characteristic

**Test method****Changes in the physical state**

Melting point/freezing point: not determined  
Boiling point or initial boiling point and boiling range: -40 °C  
Flash point: -80 °C

**Flammability**

Solid/liquid: not applicable  
Gas: not applicable  
Lower explosion limits: 1,1 vol. %  
Upper explosion limits: 9,4 vol. %

**Self-ignition temperature**

Solid: not applicable  
Gas: not applicable  
Decomposition temperature: not determined  
pH-Value (at 20 °C): not determined DIN 19268

Water solubility: The study does not need to be conducted because the substance is known to be insoluble in water.

**Solubility in other solvents**

not determined  
Partition coefficient n-octanol/water: not determined  
Vapour pressure: not determined  
Density (at 20 °C): 1,0856 g/cm<sup>3</sup> DIN 51757  
Relative vapour density: not determined

**9.2. Other information****Information with regard to physical hazard classes**

Oxidizing properties  
Not oxidising.

**Other safety characteristics**

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Solid content: not determined

Evaporation rate: not determined

**Further Information**

Data apply to technical substance: Relative density, Colour, Odour, Viscosity, pH.

**SECTION 10: Stability and reactivity****10.1. Reactivity**

Extremely flammable aerosol.

**10.2. Chemical stability**

The product is stable under storage at normal ambient temperatures.

**10.3. Possibility of hazardous reactions**

Do not expose to temperatures above 50 °C. Heating causes rise in pressure with risk of bursting.

**10.4. Conditions to avoid**

Keep away from sources of heat (e.g. hot surfaces), sparks and open flames. Vapours can form explosive mixtures with air. Take precautionary measures against static discharges.

**10.5. Incompatible materials**

Oxidizing agents. Pyrophoric or self-heating substances.

**10.6. Hazardous decomposition products**Incomplete combustion and thermolysis gases of different toxicity can occur. In the case of hydrocarbonaceous products such as CO, CO<sub>2</sub>, aldehydes and soot. These can be very dangerous if they are inhaled in high concentrations or in enclosed spaces.**Further information**

Do not mix with other chemicals.

**SECTION 11: Toxicological information****11.1. Information on hazard classes as defined in GB CLP Regulation****Toxicokinetics, metabolism and distribution**

There are no data available on the mixture itself.

**Acute toxicity**

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



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| CAS No       | Chemical name  |                              |           |                     |  |
|--------------|--|------------------------------|-----------|---------------------|--|
|              | Exposure route   | Dose                         | Species   | Source              | Method                                   |
| 92128-66-0   | Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, < 5% n-hexane |                              |           |                     |  |
|              | oral   | LD50 > 5000 mg/kg            | Rat       |                     |  |
|              | dermal   | LD50 > 2800 - 3100 mg/kg     | Rat       | Study report (1977) | The acute toxicity of SBP 100/140 was de |
|              | inhalation (4 h) vapour  | LC50 > 25,2 mg/l             | Rat       | Study report (1988) | Group of rats were exposed to test subst |
| 64742-49-0   | Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics                   |                              |           |                     |  |
|              | oral   | LD50 5500 mg/kg              | Rat       |                     |  |
|              | dermal   | LD50 > 2800 - 3100 mg/kg     | Rat       | Study report (1977) | The acute toxicity of SBP 100/140 was de |
|              | inhalation (4 h) vapour  | LC50 > 23,3 mg/l             | Rat       | Study report (1988) | OECD Guideline 403                       |
| 106-97-8     | butane   |                              |           |                     |  |
|              | inhalation (4 h) gas   | LC50 658 ppm                 | Rat       | GESTIS              |  |
| 5989-27-5    | (R)-p-mentha-1,8-diene   |                              |           |                     |  |
|              | oral   | LD50 > 2000 mg/kg            | Rat       | Study report (2010) | OECD Guideline 423                       |
|              | dermal   | LD50 > 2000 mg/kg            | Kaninchen | IUCLID              |  |
| 68584-23-6   | Benzenesulfonic acid, C10-16-alkyl derivs., calcium salts          |                              |           |                     |  |
|              | oral   | LD50 >5000 mg/kg             | Rat       |                     |  |
|              | dermal   | LD50 >5000 mg/kg             | Rat       |                     |  |
|              | inhalation (4 h) dust/mist   | LC50 >5 mg/l                 | Rat       |                     |  |
| 70024-69-0   | Benzenesulfonic acid, mono-C16-24-alkyl derivs., calcium salts     |                              |           |                     |  |
|              | oral   | LD50 > 16000 mg/kg           | Rat       | Study report (1981) | other: Section 772 .112-21 CFR 40        |
|              | dermal   | LD50 > 4000 mg/kg            | Rabbit    | Study report (1986) | other: 40 CFR, Section 163.81-2, Federal |
|              | inhalation (4 h) dust/mist   | LC50 >5 mg/l                 | Rat       |                     |  |
| 1471316-72-9 | Benzenesulfonic acids, di-C10-14-alkyl derivatives, calcium salts  |                              |           |                     |  |
|              | oral   | LD50 > 10000 - < 20000 mg/kg | Rat       | Study report (1972) | Adult albino male Sprague-Dawley rats we |
|              | dermal   | LD50 > 2000 mg/kg            | Rat       | Study report (1989) | OECD Guideline 402                       |

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**Irritation and corrosivity**

Causes skin irritation.

Serious eye damage/eye irritation: Based on available data, the classification criteria are not met.

**Sensitising effects**

May cause an allergic skin reaction. ((R)-p-mentha-1,8-diene; Benzenesulfonic acid, mono-C16-24-alkyl derivs., calcium salts; Benzenesulfonic acids, di-C10-14-alkyl derivatives, calcium salts)

**Carcinogenic/mutagenic/toxic effects for reproduction**

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

No indication of human carcinogenicity.

No indications of human germ cell mutagenicity exist.

No indications of human reproductive toxicity exist.

**STOT-single exposure**

May cause drowsiness or dizziness.

**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.

**Additional information on tests**

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

**SECTION 12: Ecological information****12.1. Toxicity**

Harmful to aquatic life with long lasting effects.



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| CAS No     | Chemical name  |               |           |         |                                 |  |
|------------|--|---------------|-----------|---------|---------------------------------|--|
|            | Aquatic toxicity   | Dose          | [h]   [d] | Species | Source                          | Method   |
| 75-28-5    | isobutane  |               |           |         |                                 |  |
|            | Acute fish toxicity  | LC50<br>mg/l  | 91,42     | 96 h    | Fish, no other information      | United States Environmental Protection A<br>The Ecosar class program has been develo |
|            | Acute algae toxicity   | ErC50<br>mg/l | 19,37     | 96 h    | Algae                           | USEPA OPPT Risk Assessment Division (200<br>Calculation using ECOSAR Program v1.00.  |
|            | Acute crustacea toxicity   | EC50<br>mg/l  | 69,43     | 48 h    | Daphnia sp.                     | USEPA OPPT Risk Assessment Division (200<br>Calculation using ECOSAR Program v1.00.  |
| 92128-66-0 | Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, < 5% n-hexane |               |           |         |                                 |  |
|            | Acute fish toxicity  | LC50<br>mg/l  | > 1-10    | 96 h    | Pimephales promelas             |  |
|            | Acute algae toxicity   | ErC50<br>mg/l | 10 - 30   | 72 h    | Pseudokirchneriella subcapitata | Study report (1995)<br>OECD Guideline 201  |
|            | Acute crustacea toxicity   | EC50<br>mg/l  | > 1-10    | 48 h    | Daphnia magna                   |  |
|            | Fish toxicity  | NOEC<br>mg/l  | 2,045     | 28 d    | Oncorhynchus mykiss             | CONCAWE, Brussels, Belgium (2010)<br>The aquatic toxicity was estimated by a         |
|            | Crustacea toxicity   | NOEC          | 1 mg/l    | 21 d    | Daphnia magna                   | SIDS Initial Assessment Report For SIAM<br>OECD Guideline 211                        |
| 74-98-6    | propane  |               |           |         |                                 |  |
|            | Acute fish toxicity  | LC50<br>mg/l  | 49,9      | 96 h    | Fish, no other information      | United States Environmental Protection A<br>The Ecosar class program has been develo |
|            | Acute algae toxicity   | ErC50<br>mg/l | 19,37     | 96 h    | Algae                           | USEPA OPPT Risk Assessment Division (200<br>Calculation using ECOSAR Program v1.00.  |
|            | Acute crustacea toxicity   | EC50<br>mg/l  | 69,43     | 48 h    | Daphnia sp.                     | USEPA OPPT Risk Assessment Division (200<br>Calculation using ECOSAR Program v1.00.  |
| 64742-49-0 | Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics                   |               |           |         |                                 |  |
|            | Acute fish toxicity  | LL50<br>mg/l  | > 13,4    | 96 h    | Oncorhynchus mykiss             | Study report (2004)<br>OECD Guideline 203  |
|            | Acute algae toxicity   | ErC50         | 12 mg/l   | 72 h    | Pseudokirchneriella subcapitata | SIDS Initial Assessment Report For SIAM<br>OECD Guideline 201                        |
|            | Acute crustacea toxicity   | EC50<br>mg/l  | >1 - 10   | 48 h    | Daphnia magna                   |  |
|            | Fish toxicity  | NOEC<br>mg/l  | 1,534     | 28 d    | Oncorhynchus mykiss             | CONCAWE, Brussels, Belgium (2010)<br>The aquatic toxicity was estimated by a         |
|            | Crustacea toxicity   | NOEC          | 1 mg/l    | 21 d    | Daphnia magna                   | SIDS Initial Assessment Report For SIAM<br>OECD Guideline 211                        |
| 106-97-8   | butane   |               |           |         |                                 |  |



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|              |   |                |         |      |   |  |  |
|--------------|---|----------------|---------|------|---|--|--|
|              | Acute fish toxicity   | LC50<br>mg/l   | 49,9    | 96 h | Fish, no other information                          | United States Environmental Protection A | The Ecosar class program has been developo |
|              | Acute algae toxicity  | ErC50<br>mg/l  | 19,37   | 96 h | Algae   | USEPA OPPT Risk Assessment Division (200 | Calculation using ECOSAR Program v1.00.    |
|              | Acute crustacea toxicity  | EC50<br>mg/l   | 69,43   | 48 h | Daphnia sp.   | USEPA OPPT Risk Assessment Division (200 | Calculation using ECOSAR Program v1.00.    |
| 5989-27-5    | (R)-p-mentha-1,8-diene  |                |         |      |   |  |  |
|              | Acute fish toxicity   | LC50<br>mg/l   | 0,72    | 96 h | Pimephales promelas                                 | Study report (1990)                      | OECD Guideline 203                         |
|              | Acute algae toxicity  | ErC50<br>mg/l  | 0,32    | 72 h | Pseudokirchneriella subcapitata                     | Study report (2013)                      | OECD Guideline 201                         |
|              | Acute crustacea toxicity  | EC50<br>mg/l   | 0,307   | 48 h | Daphnia magna                                       | Study report (2013)                      | OECD Guideline 202                         |
|              | Fish toxicity   | NOEC<br>mg/l   | 0,37    | 8 d  | Pimephales promelas                                 | Study report (2015)                      | OECD Guideline 212                         |
|              | Crustacea toxicity  | NOEC<br>mg/l   | 0,08    | 21 d | Daphnia magna                                       | Study report (2016)                      | OECD Guideline 211                         |
|              | Acute bacteria toxicity   | (EC50<br>mg/l) | 209     | 3 h  | activated sludge of a predominantly domestic sewage | Study report (2010)                      | OECD Guideline 209                         |
| 68584-23-6   | Benzenesulfonic acid, C10-16-alkyl derivs., calcium salts         |                |         |      |   |  |  |
|              | Acute fish toxicity   | LC50<br>mg/l   | >10000  | 96 h | Oncorhynchus mykiss (Rainbow trout)                 |  |  |
|              | Acute algae toxicity  | ErC50<br>mg/l  | >1000   | 96 h | Scenedesmus subspicatus                             |  |  |
|              | Acute crustacea toxicity  | EC50<br>mg/l   | >1000   | 48 h | Daphnia magna                                       |  |  |
| 70024-69-0   | Benzenesulfonic acid, mono-C16-24-alkyl derivs., calcium salts    |                |         |      |   |  |  |
|              | Acute fish toxicity   | LC50<br>mg/l   | >10000  | 96 h | Oncorhynchus mykiss (Rainbow trout)                 |  |  |
|              | Acute algae toxicity  | ErC50<br>mg/l  | > 1000  | 72 h | Pseudokirchneriella subcapitata                     | REACH Registration Dossier               | EPA OTS 797.1050                           |
|              | Acute crustacea toxicity  | EC50<br>mg/l   | > 1000  | 48 h | Daphnia magna                                       | REACH Registration Dossier               | EPA OTS 797.1300                           |
|              | Acute bacteria toxicity   | (EC50<br>mg/l) | > 10000 | 3 h  | activated sludge of a predominantly domestic sewage | REACH Registration Dossier               | OECD Guideline 209                         |
| 1471316-72-9 | Benzenesulfonic acids, di-C10-14-alkyl derivatives, calcium salts |                |         |      |   |  |  |
|              | Acute fish toxicity   | LC50<br>mg/l   | > 100   | 96 h | Oncorhynchus mykiss (Rainbow trout)                 |  |  |
|              | Acute algae toxicity  | ErC50<br>mg/l  | > 1000  | 72 h | Pseudokirchneriella subcapitata                     | Study report (1994)                      | EPA OTS 797.1050                           |
|              | Acute crustacea toxicity  | EC50<br>mg/l   | > 1000  | 48 h | Daphnia magna                                       | Study report (1993)                      | EPA OTS 797.1300                           |

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|  |                         |                     |     |   |                     |                    |
|--|-------------------------|---------------------|-----|---|---------------------|--------------------|
|  | Acute bacteria toxicity | (EC50 > 10000 mg/l) | 3 h | activated sludge of a predominantly domestic sewage | Study report (1994) | OECD Guideline 209 |
|--|-------------------------|---------------------|-----|---|---------------------|--------------------|

**12.2. Persistence and degradability**

The product has not been tested.

| CAS No     | Chemical name  | Value | d  | Source |
|------------|--|-------|----|--------|
|            | Method   |       |    |        |
|            | Evaluation   |       |    |        |
| 92128-66-0 | Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, < 5% n-hexane |       |    |        |
|            | OECD Guideline 301 F   | 98%   | 28 |        |
|            | Easily biodegradable (concerning to the criteria of the OECD)      |       |    |        |

**12.3. Bioaccumulative potential**

The product has not been tested.

**Partition coefficient n-octanol/water**

| CAS No       | Chemical name  | Log Pow   |
|--------------|--|-----------|
| 75-28-5      | isobutane  | 1,09      |
| 92128-66-0   | Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, < 5% n-hexane | 3,4 - 5,2 |
| 74-98-6      | propane  | 1,09      |
| 106-97-8     | butane   | 1,09      |
| 5989-27-5    | (R)-p-mentha-1,8-diene   | 4,38      |
| 70024-69-0   | Benzenesulfonic acid, mono-C16-24-alkyl derivs., calcium salts     | 18,05     |
| 1471316-72-9 | Benzenesulfonic acids, di-C10-14-alkyl derivatives, calcium salts  | > 6,91    |

**BCF**

| CAS No       | Chemical name   | BCF   | Species                      | Source               |
|--------------|---|-------|------------------------------|----------------------|
| 5989-27-5    | (R)-p-mentha-1,8-diene  | 908,5 |                              | Other company data ( |
| 1471316-72-9 | Benzenesulfonic acids, di-C10-14-alkyl derivatives, calcium salts | 70,8  | Fish, not further specified. | Study report (2013)  |

**12.4. Mobility in soil**

The product has not been tested.

**12.5. Results of PBT and vPvB assessment**

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

The product has not been tested.

**12.6. Endocrine disrupting properties**

This product does not contain a substance that has endocrine disrupting properties with respect to non-target organisms as no components meets the criteria.

**12.7. Other adverse effects**

No information available.

**Further information**

Do not allow to enter into surface water or drains. Do not allow to enter into soil/subsoil.

**SECTION 13: Disposal considerations****13.1. Waste treatment methods****Disposal recommendations**

Do not allow to enter into surface water or drains. Dispose of waste according to applicable legislation.

**List of Wastes Code - residues/unused products**

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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

**List of Wastes Code - 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

**List of Wastes Code - contaminated packaging**

150104 WASTE PACKAGING; ABSORBENTS, WIPING CLOTHS, FILTER MATERIALS AND PROTECTIVE CLOTHING NOT OTHERWISE SPECIFIED; packaging (including separately collected municipal packaging waste); metallic packaging

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

**14.1. UN number or ID 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  
Special Provisions: 190 327 344 625  
Limited quantity: 1 L  
Excepted quantity: E0  
Transport category: 2  
Tunnel restriction code: D

**Inland waterways transport (ADN)**

**14.1. UN number or ID 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  
Special Provisions: 190 327 344 625  
Limited quantity: 1 L  
Excepted quantity: E0

**Marine transport (IMDG)**

**14.1. UN number or ID 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  
Special Provisions: 63, 190, 277, 327, 344, 381,959  
Limited quantity: 1000 mL  
Excepted quantity: E0  
EmS: F-D, S-U

**Air transport (ICAO-TI/IATA-DGR)**

**14.1. UN number or ID number:** UN 1950  
**14.2. UN proper shipping name:** AEROSOLS, flammable  
**14.3. Transport hazard class(es):** 2.1  
**14.4. Packing group:** -





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|  |                |
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| Hazard label:                          | 2.1            |
| Special Provisions:                    | A145 A167 A802 |
| 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

No information available.

#### 14.7. Maritime transport in bulk according to IMO instruments

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 3, Entry 28, Entry 40, Entry 75

2010/75/EU (VOC): No information available.

2004/42/EC (VOC): No information available.

##### Additional information

Safety Data Sheet according to Regulation (EC) No. 1907/2006 (REACH)  
Aerosol Directive (75/324/)

##### National regulatory information

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

Water hazard class (D): 2 - obviously hazardous to water

### SECTION 16: Other information

#### Changes

This data sheet contains changes from the previous version in section(s): 2,3,6,9,11.

#### 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)

IATA: International Air Transport Association

IMDG: International Maritime Code for Dangerous Goods

GHS: Globally Harmonized System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

DNEL/DMEL: Derived No Effect Level / Derived Minimal Effect Level

WEL (UK): Workplace Exposure Limits

TWA (EC): Time-Weighted Average

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ATE: Acute Toxicity Estimate  
STEL (EC) Short Term Exposure Limit  
LC50: Lethal Concentration  
EC50: half maximal Effective Concentration  
ErC50: means EC50 in terms of reduction of growth rate

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**Relevant H and EUH statements (number and full text)**

|      |   |
|------|---|
| H220 | Extremely flammable gas.                              |
| H222 | Extremely flammable aerosol.                          |
| H225 | Highly flammable liquid and vapour.                   |
| H226 | Flammable liquid and vapour.                          |
| H229 | Pressurised container: May burst if heated.           |
| H280 | Contains gas under pressure; may explode if heated.   |
| H304 | May be fatal if swallowed and enters airways.         |
| H315 | Causes skin irritation.                               |
| H317 | May cause an allergic skin reaction.                  |
| H319 | Causes serious eye irritation.                        |
| H336 | May cause drowsiness or dizziness.                    |
| H400 | Very toxic to aquatic life.                           |
| H410 | Very toxic to aquatic life with long lasting effects. |
| H411 | Toxic to aquatic life with long lasting effects.      |
| H412 | Harmful to aquatic life with long lasting effects.    |

**Further Information**

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.

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