# SAFETY DATA SHEET



**RIEGLER Bio-Cut** 

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

### 1.1 Product identifier

| Product name | : RIEGLER Bio-Cut           |
|--------------|-----------------------------|
| UFI          | : CJS2-C0H8-000S-MACU       |
| Product code | : R3210/400 / ID-Nr. 114568 |
| Color        | : Colorless.                |

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

|                 | Identified uses |
|-----------------|-----------------|
| Aerosol product |                 |

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

RIEGLER & Co. KG Schützenstr. 27, D-72574 Bad Urach Phone : +49 (0) 7125/9497-0, Fax : +49 (0) 7125/9497-97 E-Mail : zedok@riegler.de Internet : www.riegler.de

| e-mail address of person | : Abtellung eDocumentation  |
|--------------------------|-----------------------------|
| responsible for this SDS | Phone : +49 (0) 7125/9497-0 |
| -                        | Fax : +49 (0) 7125/9497-97  |
|                          | zedok@riegler.de            |

#### 1.4 Emergency telephone number

Telephone number: Giftnotrufzentrale Bonn<br/>Phone : +49(0)228-19 240

## **SECTION 2: Hazards identification**

### 2.1 Classification of the substance or mixture

Product definition : Mixture

### Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Aerosol 1, H222, H229

The product is classified as hazardous according to Regulation (EC) 1272/2008 as amended. See Section 16 for the full text of the H statements declared above. See Section 11 for more detailed information on health effects and symptoms.

2.2 Label elements

Hazard pictograms



: Danger

Signal word Hazard statements

: H222, H229 - Extremely flammable aerosol. Pressurized container: may burst if heated.

**Precautionary statements** 

## **SECTION 2: Hazards identification**

| Prevention                                                                                                                                        | : | <ul> <li>P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.</li> <li>P211 - Do not spray on an open flame or other ignition source.</li> <li>P251 - Do not pierce or burn, even after use.</li> </ul> |
|---------------------------------------------------------------------------------------------------------------------------------------------------|---|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Response                                                                                                                                          | : | Not applicable.                                                                                                                                                                                                                                          |
| Storage                                                                                                                                           | : | P410 + P412 - Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F.                                                                                                                                                               |
| Disposal                                                                                                                                          | : | Not applicable.                                                                                                                                                                                                                                          |
| Supplemental label<br>elements                                                                                                                    | : | Not applicable.                                                                                                                                                                                                                                          |
| Annex XVII - Restrictions<br>on the manufacture,<br>placing on the market and<br>use of certain dangerous<br>substances, mixtures and<br>articles | : | Not applicable.                                                                                                                                                                                                                                          |
| 2.3 Other hazards                                                                                                                                 |   |                                                                                                                                                                                                                                                          |
| Product meets the criteria<br>for PBT or vPvB according<br>to Regulation (EC) No.                                                                 | : | This mixture does not contain any substances that are assessed to be a PBT or a vPvB.                                                                                                                                                                    |

Other hazards which do not result in classification

1907/2006, Annex XIII

: Aspiration hazard - Not applicable.

## **SECTION 3: Composition/information on ingredients**

| Product/ingredient name | Identifiers                                                                           | %         | Regulation (EC) No.<br>1272/2008 [CLP]                                        | Туре |
|-------------------------|---------------------------------------------------------------------------------------|-----------|-------------------------------------------------------------------------------|------|
| propane                 | REACH #:<br>01-2119486944-21<br>EC: 200-827-9<br>CAS: 74-98-6<br>Index: 601-003-00-5  | ≥10 - ≤25 | Flam. Gas 1A, H220<br>Press. Gas (Comp.),<br>H280                             | [2]  |
| butane                  | REACH #:<br>01-2119474691-32<br>EC: 203-448-7<br>CAS: 106-97-8<br>Index: 601-004-00-0 | ≥10 - ≤25 | Flam. Gas 1A, H220<br>Press. Gas (Comp.),<br>H280                             | [2]  |
|                         |                                                                                       |           | See Section 16 for<br>the full text of the H<br>statements declared<br>above. |      |

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment, are PBTs, vPvBs or Substances of equivalent concern, or have been assigned a workplace exposure limit and hence require reporting in this section.

<u>Type</u>

[1] Substance classified with a health or environmental hazard

- [2] Substance with a workplace exposure limit
- [3] Substance meets the criteria for PBT according to Regulation (EC) No. 1907/2006, Annex XIII
- [4] Substance meets the criteria for vPvB according to Regulation (EC) No. 1907/2006, Annex XIII
- [5] Substance of equivalent concern
- [6] Additional disclosure due to company policy

Occupational exposure limits, if available, are listed in Section 8.

# SECTION 4: First aid measures

| 4.1 Description of first aid r | neasures                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|--------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Eye contact                    | : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention if irritation occurs.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Inhalation                     | : Remove victim to fresh air and keep at rest in a position comfortable for breathing.<br>If not breathing, if breathing is irregular or if respiratory arrest occurs, provide<br>artificial respiration or oxygen by trained personnel. It may be dangerous to the<br>person providing aid to give mouth-to-mouth resuscitation. Get medical attention if<br>adverse health effects persist or are severe. If unconscious, place in recovery<br>position and get medical attention immediately. Maintain an open airway. Loosen<br>tight clothing such as a collar, tie, belt or waistband.                                                                                                                                         |
| Skin contact                   | <ul> <li>Flush contaminated skin with plenty of water. Remove contaminated clothing and<br/>shoes. Get medical attention if symptoms occur. Wash clothing before reuse.<br/>Clean shoes thoroughly before reuse.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Ingestion                      | : Wash out mouth with water. Remove dentures if any. If material has been<br>swallowed and the exposed person is conscious, give small quantities of water to<br>drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not<br>induce vomiting unless directed to do so by medical personnel. If vomiting occurs,<br>the head should be kept low so that vomit does not enter the lungs. Get medical<br>attention if adverse health effects persist or are severe. Never give anything by<br>mouth to an unconscious person. If unconscious, place in recovery position and get<br>medical attention immediately. Maintain an open airway. Loosen tight clothing such<br>as a collar, tie, belt or waistband. |
| Protection of first-aiders     | : No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |

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

### **Over-exposure signs/symptoms**

| Eye contact  | : Adverse symptoms may include the following:<br>irritation<br>redness                    |
|--------------|-------------------------------------------------------------------------------------------|
| Inhalation   | : Adverse symptoms may include the following:<br>respiratory tract irritation<br>coughing |
| Skin contact | : No specific data.                                                                       |
| Ingestion    | : No specific data.                                                                       |

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

| Notes to physician  | <ul> <li>Treat symptomatically. Contact poison treatment specialist immediately if large<br/>quantities have been ingested or inhaled.</li> </ul> |
|---------------------|---------------------------------------------------------------------------------------------------------------------------------------------------|
| Specific treatments | : No specific treatment.                                                                                                                          |

# **SECTION 5: Firefighting measures**

| 5.1 Extinguishing media<br>Suitable extinguishing<br>media | : Use an extinguishing agent suitable for the surrounding fire. |
|------------------------------------------------------------|-----------------------------------------------------------------|
| Unsuitable extinguishing media                             | : None known.                                                   |

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

| Hazards from the     | : Extremely flammable aerosol. Runoff to sewer may create fire or explosion hazard.      |
|----------------------|------------------------------------------------------------------------------------------|
| substance or mixture | In a fire or if heated, a pressure increase will occur and the container may burst, with |
|                      | the risk of a subsequent explosion. Gas may accumulate in low or confined areas          |
|                      | or travel a considerable distance to a source of ignition and flash back, causing fire   |
|                      | or explosion. Bursting aerosol containers may be propelled from a fire at high speed.    |

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| SECTION 5: Firefighting measures               |                                                                                                                                                                                                                                                                                                                                                           |  |
|------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| Hazardous combustion products                  | : Decomposition products may include the following materials:<br>carbon dioxide<br>carbon monoxide                                                                                                                                                                                                                                                        |  |
| 5.3 Advice for firefighters                    |                                                                                                                                                                                                                                                                                                                                                           |  |
| Special protective actions for fire-fighters   | : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.                                      |  |
| Special protective equipment for fire-fighters | : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents. |  |

### **SECTION 6: Accidental release measures**

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

| For non-emergency<br>personnel                                  | : | No action shall be taken involving any personal risk or without suitable training.<br>Evacuate surrounding areas. Keep unnecessary and unprotected personnel from<br>entering. In the case of aerosols being ruptured, care should be taken due to the<br>rapid escape of the pressurized contents and propellant. If a large number of<br>containers are ruptured, treat as a bulk material spillage according to the<br>instructions in the clean-up section. Do not touch or walk through spilled material.<br>Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid<br>breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator<br>when ventilation is inadequate. Put on appropriate personal protective equipment. |
|-----------------------------------------------------------------|---|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| For emergency responders                                        | : | If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| 6.2 Environmental precautions                                   | : | Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| 6.3 Methods and materials<br>for containment and<br>cleaning up | : | Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.                                                                                                                                                                                                                                                                                                                                                                                                                             |
| 6.4 Reference to other sections                                 | : | See Section 1 for emergency contact information.<br>See Section 8 for information on appropriate personal protective equipment.<br>See Section 13 for additional waste treatment information.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |

## **SECTION 7: Handling and storage**

The information in this section contains generic advice and guidance.

### 7.1 Precautions for safe handling

| Protective measures | : Put on appropriate personal protective equipment (see Section 8). Pressurized container: protect from sunlight and do not expose to temperatures exceeding 50°C. Do not pierce or burn, even after use. Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing gas. Avoid breathing vapor or mist. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Empty containers retain product residue and can be hazardous. |
|---------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|---------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

### **SECTION 7: Handling and storage**

| Advice on general    | : Eating, drinking and smoking should be prohibited in areas where this material is |
|----------------------|-------------------------------------------------------------------------------------|
| occupational hygiene | handled, stored and processed. Workers should wash hands and face before            |
|                      | eating, drinking and smoking. Remove contaminated clothing and protective           |
|                      | equipment before entering eating areas. See also Section 8 for additional           |
|                      | information on hygiene measures.                                                    |

### 7.2 Conditions for safe storage, including any incompatibilities

Store in accordance with local regulations. Store away from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Eliminate all ignition sources. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

### Seveso Directive - Reporting thresholds

#### Danger criteria

| • • | Notification and MAPP threshold | Safety report threshold |
|-----|---------------------------------|-------------------------|
| P3a | 150 tonne                       | 500 tonne               |

#### 7.3 Specific end use(s)

| Recommendations                      | : |
|--------------------------------------|---|
| Industrial sector specific solutions | : |

# **SECTION 8: Exposure controls/personal protection**

Not available. Not available.

The information in this section contains generic advice and guidance. Information is provided based on typical anticipated uses of the product. Additional measures might be required for bulk handling or other uses that could significantly increase worker exposure or environmental releases.

#### 8.1 Control parameters

#### **Occupational exposure limits**

| Product/ingredient name | Exposure limit values                                                    |
|-------------------------|--------------------------------------------------------------------------|
| propane                 | TRGS 900 OEL (Germany, 10/2020).<br>TWA: 1800 mg/m <sup>3</sup> 8 hours. |
|                         | PEAK: 7200 mg/m <sup>3</sup> 15 minutes.                                 |
|                         | TWA: 1000 ppm 8 hours.                                                   |
|                         | PEAK: 4000 ppm 15 minutes.                                               |
|                         | DFG MAC-values list (Germany, 8/2020).                                   |
|                         | TWA: 1000 ppm 8 hours.                                                   |
|                         | PEAK: 4000 ppm, 4 times per shift, 15 minutes.                           |
|                         | TWA: 1800 mg/m <sup>3</sup> 8 hours.                                     |
|                         | PEAK: 7200 mg/m³, 4 times per shift, 15 minutes.                         |
| butane                  | TRGS 900 OEL (Germany, 3/2020).                                          |
|                         | TWA: 2400 mg/m <sup>3</sup> 8 hours.                                     |
|                         | PEAK: 9600 mg/m <sup>3</sup> 15 minutes.                                 |
|                         | TWA: 1000 ppm 8 hours.                                                   |
|                         | PEAK: 4000 ppm 15 minutes.                                               |
|                         | DFG MAC-values list (Germany, 7/2019).                                   |
|                         | TWA: 1000 ppm 8 hours.                                                   |
|                         | PEAK: 4000 ppm, 4 times per shift, 15 minutes.                           |
|                         | TWA: 2400 mg/m <sup>3</sup> 8 hours.                                     |
|                         | PEAK: 9600 mg/m <sup>3</sup> , 4 times per shift, 15 minutes.            |

| <b>SECTION 8: Exposure</b>           | controls/personal protection                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|--------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Recommended monitoring<br>procedures | If this product contains ingredients with exposure limits, personal, workplace<br>atmosphere or biological monitoring may be required to determine the effectiveness<br>of the ventilation or other control measures and/or the necessity to use respiratory<br>protective equipment. Reference should be made to monitoring standards, such as<br>the following: European Standard EN 689 (Workplace atmospheres - Guidance for<br>the assessment of exposure by inhalation to chemical agents for comparison with<br>limit values and measurement strategy) European Standard EN 14042 (Workplace<br>atmospheres - Guide for the application and use of procedures for the assessment<br>of exposure to chemical and biological agents) European Standard EN 482<br>(Workplace atmospheres - General requirements for the performance of procedures<br>for the measurement of chemical agents) Reference to national guidance<br>documents for methods for the determination of hazardous substances will also be<br>required. |
| DNELs/DMELs                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| No DNELs/DMELs available             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| PNECs                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| No PNECs available.                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| 8.2 Exposure controls                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Appropriate engineering controls     | Use only with adequate ventilation. If user operations generate dust, fumes, gas,<br>vapor or mist, use process enclosures, local exhaust ventilation or other<br>engineering controls to keep worker exposure to airborne contaminants below any<br>recommended or statutory limits. The engineering controls also need to keep gas,<br>vapor or dust concentrations below any lower explosive limits. Use explosion-proof<br>ventilation equipment.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Individual protection measu          | —                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Hygiene measures                     | Wash hands, forearms and face thoroughly after handling chemical products,<br>before eating, smoking and using the lavatory and at the end of the working period.<br>Appropriate techniques should be used to remove potentially contaminated clothing<br>Wash contaminated clothing before reusing. Ensure that eyewash stations and<br>safety showers are close to the workstation location.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Eye/face protection                  | Safety eyewear complying with an approved standard should be used when a risk<br>assessment indicates this is necessary to avoid exposure to liquid splashes, mists,<br>gases or dusts. If contact is possible, the following protection should be worn,<br>unless the assessment indicates a higher degree of protection: safety glasses with<br>side-shields.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Skin protection                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Hand protection                      | Chemical-resistant, impervious gloves complying with an approved standard should<br>be worn at all times when handling chemical products if a risk assessment indicates<br>this is necessary. Considering the parameters specified by the glove manufacturer<br>check during use that the gloves are still retaining their protective properties. It<br>should be noted that the time to breakthrough for any glove material may be<br>different for different glove manufacturers. Recommended : 1 - 4 hours<br>(breakthrough time): nitrile rubber 4 - 8 hours (breakthrough time): Viton®/butyl<br>rubber                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Body protection                      | Personal protective equipment for the body should be selected based on the task<br>being performed and the risks involved and should be approved by a specialist<br>before handling this product. When there is a risk of ignition from static electricity,<br>wear anti-static protective clothing. For the greatest protection from static<br>discharges, clothing should include anti-static overalls, boots and gloves. Refer to<br>European Standard EN 1149 for further information on material and design<br>requirements and test methods.                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Other skin protection                | Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |

# **SECTION 8: Exposure controls/personal protection**

| Respiratory protection          | : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use. Recommended : organic vapor (Type AX) and particulate filter |
|---------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Environmental exposure controls | : Emissions from ventilation or work process equipment should be checked to<br>ensure they comply with the requirements of environmental protection legislation.<br>In some cases, fume scrubbers, filters or engineering modifications to the process<br>equipment will be necessary to reduce emissions to acceptable levels.         |

# **SECTION 9: Physical and chemical properties**

| l a | nd chemical properties      |
|-----|-----------------------------|
|     |                             |
| :   | Aerosol.                    |
| :   | Colorless.                  |
| :   | Characteristic.             |
| :   | Not available.              |
| :   | Lower: 0.6%                 |
| :   | Closed cup: Not applicable. |
| :   | >250°C (>482°F)             |
| :   | Not available.              |
| :   | Not applicable.             |
| :   | Not available.              |
| :   | Not available.              |
| :   | Not available.              |
| :   | Not applicable.             |
| 1   | 350 kPa (2625.2 mm Hg)      |
| :   | Not available.              |
| :   | Not available.              |
| :   | 0.72 g/cm <sup>3</sup>      |
| :   | Not available.              |
| 4   | Not available.              |
| :   | Not available.              |
|     |                             |
| :   | Not applicable.             |
| :   | Not available.              |
| :   | Not available.              |
| :   | 11.42 kJ/g                  |
|     |                             |
| :   | Spray                       |
|     |                             |

# **SECTION 10: Stability and reactivity**

| 10.1 Reactivity                            | : No specific test data related to reactivity available for this product or its ingredients.           |
|--------------------------------------------|--------------------------------------------------------------------------------------------------------|
| 10.2 Chemical stability                    | : The product is stable.                                                                               |
| 10.3 Possibility of<br>hazardous reactions | : Under normal conditions of storage and use, hazardous reactions will not occur.                      |
| 10.4 Conditions to avoid                   | : Avoid all possible sources of ignition (spark or flame).                                             |
| 10.5 Incompatible materials                | : No specific data.                                                                                    |
| 10.6 Hazardous<br>decomposition products   | : Under normal conditions of storage and use, hazardous decomposition products should not be produced. |

# **SECTION 11: Toxicological information**

| 11.1 Information on toxicolog  | ica          | al effects                               |
|--------------------------------|--------------|------------------------------------------|
| Acute toxicity                 |              |                                          |
| <b>Conclusion/Summary</b>      | :            | Not available.                           |
| Acute toxicity estimates       |              |                                          |
| Not available.                 |              |                                          |
| Irritation/Corrosion           |              |                                          |
| Conclusion/Summary             | :            | Not available.                           |
| Sensitization                  |              |                                          |
| <b>Conclusion/Summary</b>      | :            | Not available.                           |
| <u>Mutagenicity</u>            |              |                                          |
| <b>Conclusion/Summary</b>      | :            | Not available.                           |
| <b>Carcinogenicity</b>         |              |                                          |
| Conclusion/Summary             | :            | Not available.                           |
| Reproductive toxicity          |              |                                          |
| Conclusion/Summary             | :            | Not available.                           |
| <u>Teratogenicity</u>          |              |                                          |
| Conclusion/Summary             | :            | Not available.                           |
| Specific target organ toxicity | <u>' (</u>   | <u>single exposure)</u>                  |
| Not available.                 |              |                                          |
| Specific target organ toxicity | <u>' (</u> 1 | <u>repeated exposure)</u>                |
| Not available.                 |              |                                          |
| Aspiration hazard              |              |                                          |
| Not available.                 |              |                                          |
|                                |              |                                          |
| Information on the likely      |              | Not available.                           |
| routes of exposure             | •            |                                          |
| Potential acute health effects |              |                                          |
| Eye contact                    | :            | No known significant effects or critical |
| Inhalation                     | :            | No known significant effects or critical |
| Skin contact                   | :            | No known significant effects or critical |
| Ingestion                      | :            | No known significant effects or critical |
|                                |              |                                          |

Date of issue/Date of revision

hazards. hazards. hazards. hazards.

# **SECTION 11: Toxicological information**

### Symptoms related to the physical, chemical and toxicological characteristics

| Eye contact  | : Adverse symptoms may include the following:<br>irritation<br>redness                    |
|--------------|-------------------------------------------------------------------------------------------|
| Inhalation   | : Adverse symptoms may include the following:<br>respiratory tract irritation<br>coughing |
| Skin contact | : No specific data.                                                                       |
| Ingestion    | : No specific data.                                                                       |

#### Delayed and immediate effects and also chronic effects from short and long term exposure

| <u>Short term exposure</u>       |                                                     |  |  |  |
|----------------------------------|-----------------------------------------------------|--|--|--|
| Potential immediate effects      | : Not available.                                    |  |  |  |
| Potential delayed effects        | : Not available.                                    |  |  |  |
| <u>Long term exposure</u>        |                                                     |  |  |  |
| Potential immediate effects      | : Not available.                                    |  |  |  |
| Potential delayed effects        | : Not available.                                    |  |  |  |
| Potential chronic health effects |                                                     |  |  |  |
| Not available.                   |                                                     |  |  |  |
| Conclusion/Summary               | : Not available.                                    |  |  |  |
| General                          | : No known significant effects or critical hazards. |  |  |  |
| Carcinogenicity                  | : No known significant effects or critical hazards. |  |  |  |
| Mutagenicity                     | : No known significant effects or critical hazards. |  |  |  |
| Teratogenicity                   | : No known significant effects or critical hazards. |  |  |  |
| Developmental effects            | : No known significant effects or critical hazards. |  |  |  |
| Fertility effects                | : No known significant effects or critical hazards. |  |  |  |

Other information : Not available.

# **SECTION 12: Ecological information**

| 12.1 Toxicity                                    |                  |
|--------------------------------------------------|------------------|
| Conclusion/Summary                               | : Not available. |
| 12.2 Persistence and deg                         | yradability      |
| Conclusion/Summary                               | : Not available. |
| <b>12.3 Bioaccumulative po</b><br>Not available. | tential          |
| 12.4 Mobility in soil                            |                  |
| Soil/water partition coefficient (Koc)           | : Not available. |
| Mobility                                         | : Not available. |

#### 12.5 Results of PBT and vPvB assessment

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

# **SECTION 12: Ecological information**

**12.6 Other adverse effects** : No known significant effects or critical hazards.

## **SECTION 13: Disposal considerations**

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

#### 13.1 Waste treatment methods

#### Product

Methods of disposal: The generation of waste should be avoided or minimized wherever possible.<br/>Disposal of this product, solutions and any by-products should at all times comply<br/>with the requirements of environmental protection and waste disposal legislation<br/>and any regional local authority requirements. Dispose of surplus and non-<br/>recyclable products via a licensed waste disposal contractor. Waste should not be<br/>disposed of untreated to the sewer unless fully compliant with the requirements of<br/>all authorities with jurisdiction.

#### Hazardous waste : The classification of the product may meet the criteria for a hazardous waste.

#### European waste catalogue (EWC)

| Waste code          | Waste designation                                                                                                                                                                                  |  |
|---------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| 16 05 04*           | gases in pressure containers (including halons) containing hazardous substances                                                                                                                    |  |
| Packaging           |                                                                                                                                                                                                    |  |
| Methods of disposal | : The generation of waste should be avoided or minimized wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. |  |
| Type of packaging   | European waste catalogue (EWC)                                                                                                                                                                     |  |
| 15 01 04            | metallic packaging                                                                                                                                                                                 |  |
| Special precautions | <ul> <li>This material and its container must be disposed of in a safe way. Empty containers<br/>or liners may retain some product residues. Do not puncture or incinerate container.</li> </ul>   |  |

### **SECTION 14: Transport information**

|                                    | -              |                       |                     |
|------------------------------------|----------------|-----------------------|---------------------|
|                                    | ADR/RID        | IMDG                  | ΙΑΤΑ                |
| 14.1 UN number                     | UN1950         | UN1950                | UN1950              |
| 14.2 UN proper shipping name       | AEROSOLS       | AEROSOLS              | Aerosols, flammable |
| 14.3 Transport<br>hazard class(es) | 2              | 2.1                   | 2.1                 |
| 14.4 Packing<br>group              | -              | -                     | -                   |
| 14.5<br>Environmental<br>hazards   | No.            | No.<br>Not available. | No.                 |
|                                    | Not available. |                       |                     |

Additional information

ADR/RID

: Limited quantity 1 L Special provisions 190, 327, 625, 344 Tunnel code (D) ADR Classification Code: 5F

# **SECTION 14: Transport information**

| •                                                         |                                                                                                                                                                                                                                                                                   |
|-----------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| IMDG                                                      | : <u>Emergency schedules</u> F-D, S-U<br><u>Special provisions</u> 63, 190, 277, 327, 344, 381, 959                                                                                                                                                                               |
| ΙΑΤΑ                                                      | : <u>Quantity limitation</u> Passenger and Cargo Aircraft: 75 kg. Packaging instructions: 203. Cargo Aircraft Only: 150 kg. Packaging instructions: 203. Limited Quantities - Passenger Aircraft: 30 kg. Packaging instructions: Y203. <u>Special provisions</u> A145, A167, A802 |
| 14.6 Special precautions for user                         | : <b>Transport within user's premises:</b> always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.                                                               |
| 14.7 Transport in bulk<br>according to IMO<br>instruments | : Not available.                                                                                                                                                                                                                                                                  |
|                                                           |                                                                                                                                                                                                                                                                                   |

## **SECTION 15: Regulatory information**

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture <u>EU Regulation (EC) No. 1907/2006 (REACH)</u>

Annex XIV - List of substances subject to authorization

### Annex XIV

None of the components are listed.

### Substances of very high concern

None of the components are listed.

Annex XVII - Restrictions : Not applicable. on the manufacture, placing on the market and use of certain

dangerous substances,

mixtures and articles

### **Restrictions on Manufacture, Marketing and Use**

| Product name                                                                                     | CAS #        | %       | Restriction |  |
|--------------------------------------------------------------------------------------------------|--------------|---------|-------------|--|
| butane                                                                                           | 106-97-8     | 10 - 15 | 28, 29      |  |
| Other EU regulations                                                                             |              |         |             |  |
| Industrial emissions : Not listed<br>(integrated pollution<br>prevention and control) -<br>Air   |              |         |             |  |
| Industrial emissions : Not listed<br>(integrated pollution<br>prevention and control) -<br>Water |              |         |             |  |
| Ozone depleting substances (1005/2009<br>Not listed.                                             | <u>9/EU)</u> |         |             |  |
| Prior Informed Consent (PIC) (649/2012<br>Not listed.                                            | <u>//EU)</u> |         |             |  |
| Persistent Organic Pollutants<br>Not listed.                                                     |              |         |             |  |

# Conforms to Regulation (EC) No. 1907/2006 (REACH), Annex II, as amended by Commission Regulation (EU) 2015/830 - Germany

RIEGLER Bio-Cut

### **SECTION 15: Regulatory information**

2

### Aerosol dispensers



Extremely flammable

#### Seveso Directive

This product is controlled under the Seveso Directive.

#### Danger criteria

Category

P3a

#### National regulations

| Product/ingredient name | List name | Name on list                     | Classification   | Notes |
|-------------------------|-----------|----------------------------------|------------------|-------|
|                         |           | Propane<br>Butane (both isomers) | Listed<br>Listed | -     |

#### Storage class (TRGS 510) : 2B

### Hazardous incident ordinance

This product is controlled under the Germany Hazardous Incident Ordinance.

#### Danger criteria

| Category | Reference number |
|----------|------------------|
| P3a      | 1.2.3.1          |

# Hazard class for water : 1

**Technical instruction on** : TA-Luft Number 5.2.5: 30-60% air quality control

#### International regulations

#### Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

### **Montreal Protocol**

Not listed.

#### Stockholm Convention on Persistent Organic Pollutants

Not listed.

### Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

### **UNECE Aarhus Protocol on POPs and Heavy Metals**

Not listed.

| Inventory list |                                          |
|----------------|------------------------------------------|
| Australia      | : All components are listed or exempted. |
| Canada         | : All components are listed or exempted. |
| China          | : All components are listed or exempted. |
| Europe         | : All components are listed or exempted. |
| Japan          | : All components are listed or exempted. |
| New Zealand    | : All components are listed or exempted. |

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# SECTION 15: Regulatory information

| Philippines          | : All components are listed or exempted.                                           |
|----------------------|------------------------------------------------------------------------------------|
| Republic of Korea    | : All components are listed or exempted.                                           |
| Taiwan               | : Not determined.                                                                  |
| Turkey               | : Not determined.                                                                  |
| United States        | : All components are active or exempted.                                           |
| Viet Nam             | : All components are listed or exempted.                                           |
|                      |                                                                                    |
| 15.2 Chemical Safety | : This product contains substances for which Chemical Safety Assessments are still |
| Assessment           | required.                                                                          |

### **SECTION 16: Other information**

Indicates information that has changed from previously issued version.

|                   | 5 1 5                                                                         |
|-------------------|-------------------------------------------------------------------------------|
| Abbreviations and | : ATE = Acute Toxicity Estimate                                               |
| acronyms          | CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. |
|                   | 1272/2008]                                                                    |
|                   | DMEL = Derived Minimal Effect Level                                           |
|                   | DNEL = Derived No Effect Level                                                |
|                   | EUH statement = CLP-specific Hazard statement                                 |
|                   | N/A = Not available                                                           |
|                   | PBT = Persistent, Bioaccumulative and Toxic                                   |
|                   | PNEC = Predicted No Effect Concentration                                      |
|                   | RRN = REACH Registration Number                                               |
|                   | SGG = Segregation Group                                                       |
|                   | vPvB = Very Persistent and Very Bioaccumulative                               |
|                   |                                                                               |

### Procedure used to derive the classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

| Classification        | Justification         |  |
|-----------------------|-----------------------|--|
| Aerosol 1, H222, H229 | On basis of test data |  |

### Full text of abbreviated H statements

| H220                                   | Extremely flammable gas.                                                 |
|----------------------------------------|--------------------------------------------------------------------------|
| H222, H229                             | Extremely flammable aerosol. Pressurized container: may burst if heated. |
| H280                                   | Contains gas under pressure; may explode if heated.                      |
| Full text of classifications [CLP/GHS] |                                                                          |
| Aerosol 1                              | AEROSOLS - Category 1                                                    |
| Flam. Gas 1A                           | FLAMMABLE GASES - Category 1A                                            |
| Press. Gas (Comp.)                     | GASES UNDER PRESSURE - Compressed gas                                    |

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|------------------------|-------------|
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| revision               |             |
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|                        |             |

### Notice to reader

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Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.