## SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

### 1.1 Product identifier

| | |
|---|---|
| **Trade name** | BULLDOCK SC125 |
| **Product code (UVP)** | 00998575 |

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

| | |
|---|---|
| **Use** | Insecticide |

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

| | |
|---|---|
| **Supplier** | Bayer (Pty) Ltd.<br>27 Wrench Road, P.O. Box 143<br>1600 Isando<br>South Africa |
| **Telephone** | +27 (011) 921 5911 |
| **Telefax** | +27 (011) 921 5766 |
| **Responsible Department** | QHSE - Nigel, South Africa<br>+27 (011) 365 8675 (during business hours only) |

### 1.4 Emergency telephone no.

| | |
|---|---|
| **Emergency telephone no.** | +27 (0861) 555 777 (Western Cape Poisons Helpline) |
| **Global Incident Response Hotline (24h)** | +1 (760) 476 3964 (Company 3E for Bayer AG, Crop Science Division) |

## SECTION 2: HAZARDS IDENTIFICATION

### 2.1 Classification of the substance or mixture

**Classification in accordance with Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures, as amended.**

Acute toxicity: Category 4
H302 Harmful if swallowed.

Acute aquatic toxicity: Category 1
H400 Very toxic to aquatic life.

Chronic aquatic toxicity: Category 1
H410 Very toxic to aquatic life with long lasting effects.

### 2.2 Label elements

**Labelling in accordance with Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures, as amended.**

Hazard label for supply/use required.

**Hazardous components which must be listed on the label:**

- Beta-Cyfluthrin

**Signal word**: Warning

**Hazard statements**

| | |
|---|---|
| H302 | Harmful if swallowed. |
| H410 | Very toxic to aquatic life with long lasting effects. |
| EUH208 | Contains reaction mass of 5-chloro-2- methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3- one (3:1), 1,2-benzisothiazolin-3-one. May produce an allergic reaction. |
| EUH401 | To avoid risks to human health and the environment, comply with the instructions for use. |

**Precautionary statements**

| | |
|---|---|
| P280 | Wear protective gloves/ protective clothing/ eye protection/ face protection. |
| P301 + P312 | IF SWALLOWED: Call a POISON CENTER/doctor/physician if you feel unwell. |
| P391 | Collect spillage. |
| P501 | Dispose of contents/container in accordance with local regulation. |

**2.3 Other hazards**

Cutaneous sensations may occur, such as burning or stinging on the face and mucosae. However, these sensations cause no lesions and are of a transitory nature (max. 24 hours).

Beta-Cyfluthrin: This substance is not considered to be persistent, bioaccumulative and toxic (PBT). This substance is not considered to be very persistent and very bioaccumulative (vPvB).

| | |
|---|---|
| Ecological information: | The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher. |
| Toxicological information: | The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher. |

## SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

**3.2 Mixtures**

**Chemical nature**

Suspension concentrate (=flowable concentrate)(SC)
Beta-Cyfluthrin 125 g/l

**Hazardous components**

Hazard statements according to Regulation (EC) No. 1272/2008

| Name | CAS-No. / EC-No. / REACH Reg. No. | Classification REGULATION (EC) No 1272/2008 | Conc. [%] |
|---|---|---|---|
| Beta-Cyfluthrin | 1820573-27-0 | Acute Tox. 2, H300<br>Acute Tox. 2, H330 | 11,6 |

| | | | |
|---|---|---|---|
| | | Aquatic Acute 1, H400<br>Aquatic Chronic 1, H410 | |
| Alkylarylpolyglycol ether | 104376-75-2 | Aquatic Chronic 3, H412 | >= 1 – < 25 |
| reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1) | 55965-84-9 | Acute Tox. 3, H301<br>Acute Tox. 2, H310<br>Acute Tox. 2, H330<br>Skin Corr. 1C, H314<br>Eye Dam. 1, H318<br>Skin Sens. 1A, H317<br>Aquatic Acute 1, H400<br>Aquatic Chronic 1, H410 | >= 0,0002 – < 0,0015 |
| 1,2-Benzisothiazol-3(2H)-one | 2634-33-5<br>01-2120761540-60-0003 | | >= 0,005 – < 0,05 |
| Glycerine | 56-81-5<br>01-2119471987-18-XXXX | Not classified | >= 1 |
| Synthetic amorphous silica | 112926-00-8<br>01-2119379499-16-xxxx | Not classified | >= 1 |

**Further information**

| | | |
|---|---|---|
| Beta-Cyfluthrin | 1820573-27-0 | M-Factor: 10.000 (acute) |

For the full text of the H-Statements mentioned in this Section, see Section 16.

## SECTION 4: FIRST AID MEASURES

### 4.1 Description of first aid measures

**General advice** Move out of dangerous area. Place and transport victim in stable position (lying sideways). Remove contaminated clothing immediately and dispose of safely.

**Inhalation** Move to fresh air. Keep patient warm and at rest. Call a physician or poison control center immediately.

**Skin contact** Wash off thoroughly with plenty of soap and water, if available with polyethyleneglycol 400, subsequently rinse with water. Warm water may increase the subjective severity of the irritation/paresthesia. This is not a sign of systemic poisoning. In case of skin irritation, application of oils or lotions containing vitamin E may be considered. If symptoms persist, call a physician.

**Eye contact** Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Warm water may increase the subjective severity of the irritation/paresthesia. This is not a sign of systemic poisoning. Apply soothing eye drops, if needed anaesthetic eye drops. Get medical attention if irritation develops and persists.

**Ingestion** Rinse mouth. Do NOT induce vomiting. Do not leave victim unattended. Call a physician or poison control center immediately.

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

**Symptoms** Local:, Skin and eye paraesthesia which may be severe, Usually transient with resolution within 24 hours, Skin, eye and mucous membrane irritation, Cough, sneezing

Systemic:, discomfort in the chest, tachycardia, hypotension, Nausea, Abdominal pain, Diarrhoea, Vomiting, Blurred vision, Headache, Anorexia, Somnolence, Coma, Convulsions, Tremors, Prostration, Airway hyperreaction, Pulmonary oedema, Palpitation, Muscular fasciculation, Apathy, Dizziness

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

**Risks** This product contains a pyrethroid. Pyrethroid poisoning should not be confused with carbamate or organophosphate poisoning.

**Treatment** Systemic treatment: Initial treatment: symptomatic. Monitor: respiratory and cardiac functions. In case of ingestion gastric lavage should be considered in cases of significant ingestions only within the first 2 hours. However, the application of activated charcoal and sodium sulphate is always advisable. Keep respiratory tract clear. Oxygen or artificial respiration if needed. In case of convulsions, a benzodiazepine (e.g. diazepam) should be given according to standard regimens. If not effective, phenobarbital may be used. Contraindication: atropine. Contraindication: derivatives of adrenaline. There is no specific antidote. Recovery is spontaneous and without sequelae.

In case of skin irritation, application of oils or lotions containing vitamin E may be considered.

## SECTION 5: FIREFIGHTING MEASURES

**5.1 Extinguishing media**

**Suitable** Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

**Unsuitable** High volume water jet

**5.2 Special hazards arising from the substance or mixture** In the event of fire the following may be released:, Hydrogen chloride (HCl), Hydrogen cyanide (hydrocyanic acid), Hydrogen fluoride, Carbon monoxide (CO), Nitrogen oxides (NOx)

**5.3 Advice for firefighters**

**Special protective equipment for firefighters** In the event of fire and/or explosion do not breathe fumes. In the event of fire, wear self-contained breathing apparatus.

**Further information** Contain the spread of the fire-fighting media. Do not allow run-off from fire fighting to enter drains or water courses.

## SECTION 6: ACCIDENTAL RELEASE MEASURES

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

**Precautions** Avoid contact with spilled product or contaminated surfaces. Use personal protective equipment.

**6.2 Environmental precautions** Do not allow to get into surface water, drains and ground water.

**6.3 Methods and materials for containment and cleaning up**

| | |
|---|---|
| **Methods for cleaning up** | Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Clean contaminated floors and objects thoroughly, observing environmental regulations. Keep in suitable, closed containers for disposal. |
| **6.4 Reference to other sections** | Information regarding safe handling, see section 7.<br>Information regarding personal protective equipment, see section 8.<br>Information regarding waste disposal, see section 13. |

## SECTION 7: HANDLING AND STORAGE

**7.1 Precautions for safe handling**

| | |
|---|---|
| **Advice on safe handling** | Use only in area provided with appropriate exhaust ventilation. |
| **Advice on protection against fire and explosion** | No special precautions required. |
| **Hygiene measures** | Avoid contact with skin, eyes and clothing. Keep working clothes separately. Wash hands immediately after work, if necessary take a shower. Remove soiled clothing immediately and clean thoroughly before using again. Garments that cannot be cleaned must be destroyed (burnt). |

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

| | |
|---|---|
| **Requirements for storage areas and containers** | Store in original container. Keep containers tightly closed in a dry, cool and well-ventilated place. Store in a place accessible by authorized persons only. Keep away from direct sunlight. |
| **Advice on common storage** | Keep away from food, drink and animal feedingstuffs. |
| **Suitable materials** | HDPE (high density polyethylene) |
| **7.3 Specific end use(s)** | Refer to the label and/or leaflet. |

## SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

**8.1 Control parameters**

| Components | CAS-No. | Control parameters | Update | Basis |
|---|---|---|---|---|
| Beta-Cyfluthrin | 1820573-27-0 | 0,01 mg/m3 (TWA) | | OES BCS* |
| Glycerine | 56-81-5 | 10 mg/m3 (TWA) | 03 2021 | ZA REL |
| Glycerine (Respirable fraction.) | 56-81-5 | 5 mg/m3 (TWA) | 03 2021 | ZA REL |
| Synthetic amorphous silica | 112926-00-8 | 10 mg/m3 (TWA) | 03 2021 | ZA REL |
| Synthetic amorphous silica (Respirable fraction.) | 112926-00-8 | 5 mg/m3 (TWA) | 03 2021 | ZA REL |

*OES BCS: Internal Bayer AG, Crop Science Division "Occupational Exposure Standard"

**8.2 Exposure controls**

| | |
|---|---|
| **Respiratory protection** | Respiratory protection is not required under anticipated circumstances |

of exposure.
Respiratory protection should only be used to control residual risk of short duration activities, when all reasonably practicable steps have been taken to reduce exposure at source e.g. containment and/or local extract ventilation. Always follow respirator manufacturer's instructions regarding wearing and maintenance.

**Hand protection**

Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. Also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion, and the contact time.
Wash gloves when contaminated. Dispose of when contaminated inside, when perforated or when contamination on the outside cannot be removed. Wash hands frequently and always before eating, drinking, smoking or using the toilet.

| | |
|---|---|
| Material | Nitrile rubber |
| Rate of permeability | > 480 min |
| Glove thickness | > 0,4 mm |
| Protective index | Class 6 |
| Directive | Protective gloves complying with EN 374. |

**Eye protection**

Wear goggles (conforming to EN166, Field of Use = 5 or equivalent).

**Skin and body protection**

Wear standard coveralls and Category 3 Type 4 suit.
If there is a risk of significant exposure, consider a higher protective type suit.
Wear two layers of clothing wherever possible. Polyester/cotton or cotton overalls should be worn under chemical protection suit and should be professionally laundered frequently.
If chemical protection suit is splashed, sprayed or significantly contaminated, decontaminate as far as possible, then carefully remove and dispose of as advised by manufacturer.

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

### 9.1 Information on basic physical and chemical properties

| | |
|---|---|
| **Form** | suspension |
| **Colour** | white to beige |
| **Odour** | weak, characteristic |
| **Odour Threshold** | No data available |
| **pH** | 4,0 - 5,0 (100 %) (23 °C) |
| **Melting point/range** | No data available |
| **Boiling point/boiling range** | ca. 100 °C |
| **Flash point** | > 100 °C<br>No flash point - Determination conducted up to the boiling point. |
| **Flammability** | No data available |
| **Auto-ignition temperature** | No data available |
| **Thermal decomposition** | No data available |

| | |
|---|---|
| **Ignition temperature** | 430 °C |
| **Minimum ignition energy** | No data available |
| **Self-accelarating decomposition temperature (SADT)** | No data available |
| **Upper explosion limit** | No data available |
| **Lower explosion limit** | No data available |
| **Vapour pressure** | No data available |
| **Evaporation rate** | No data available |
| **Relative vapour density** | No data available |
| **Relative density** | No data available |
| **Density** | ca. 1,08 g/cm³ (20 °C) |
| **Water solubility** | miscible |
| **Partition coefficient: n-octanol/water** | Beta-Cyfluthrin: log Pow: 6,18 (22 °C) |
| **Viscosity, dynamic** | No data available |
| **Viscosity, kinematic** | No data available |
| **Oxidizing properties** | No oxidizing properties |
| **Explosivity** | Not explosive<br>92/69/EEC, A.14 / OECD 113 |
| **9.2 Other information** | Further safety related physical-chemical data are not known. |

## SECTION 10: STABILITY AND REACTIVITY

| | |
|---|---|
| **10.1 Reactivity** | Stable under normal conditions. |
| **10.2 Chemical stability** | Stable under recommended storage conditions. |
| **10.3 Possibility of hazardous reactions** | No hazardous reactions when stored and handled according to prescribed instructions. |
| **10.4 Conditions to avoid** | Extremes of temperature and direct sunlight. |
| **10.5 Incompatible materials** | Store only in the original container. |
| **10.6 Hazardous decomposition products** | No decomposition products expected under normal conditions of use. |

## SECTION 11: TOXICOLOGICAL INFORMATION

**11.1 Information on hazard classes as defined in regulation (EC) No 1272/2008**

| | |
|---|---|
| **Acute oral toxicity** | LD50 (Rat) 960 mg/kg<br>Test conducted with a similar formulation. |
| **Acute inhalation toxicity** | LC50 (Rat) > 1,761 mg/l<br>Exposure time: 4 h<br>Determined in the form of a respirable aerosol.<br>Highest attainable concentration.<br>Test conducted with a similar formulation. |
| **Acute dermal toxicity** | LD50 (Rat) > 2.000 mg/kg<br>Test conducted with a similar formulation. |
| **Skin corrosion/irritation** | No skin irritation (Rabbit)<br>Test conducted with a similar formulation. |
| **Serious eye damage/eye irritation** | Slight irritant effect - does not require labelling. (Rabbit)<br>Test conducted with a similar formulation. |
| **Respiratory or skin sensitisation** | Skin: Non-sensitizing. (Guinea pig)<br>OECD Test Guideline 406, Buehler test<br>Test conducted with a similar formulation. |

**Assessment STOT Specific target organ toxicity – single exposure**

Beta-Cyfluthrin: Based on available data, the classification criteria are not met.

**Assessment STOT Specific target organ toxicity – repeated exposure**

The toxic effects of Beta-Cyfluthrin are related to transient neurobehavioral effects typical for pyrethroid neurotoxicity.

**Assessment mutagenicity**

Beta-Cyfluthrin was not mutagenic or genotoxic in a battery of in vitro and in vivo tests.

**Assessment carcinogenicity**

Beta-Cyfluthrin was not carcinogenic in lifetime feeding studies in rats and mice.

**Assessment toxicity to reproduction**

Beta-Cyfluthrin caused reproduction toxicity in a two-generation study in rats only at dose levels also toxic to the parent animals. The reproduction toxicity seen with Beta-Cyfluthrin is related to parental toxicity.

**Assessment developmental toxicity**

Beta-Cyfluthrin caused developmental toxicity only at dose levels toxic to the dams. The developmental effects seen with Beta-Cyfluthrin are related to maternal toxicity.

**Aspiration hazard**

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

**11.2 Information on other hazards**

**Endocrine disrupting properties**

| | |
|---|---|
| **Assessment** | The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher. |

## SECTION 12: ECOLOGICAL INFORMATION

### 12.1 Toxicity

| | |
|---|---|
| **Toxicity to fish** | LC50 (Oncorhynchus mykiss (rainbow trout)) 0,00176 mg/l<br>Exposure time: 96 h<br>Test conducted with a similar formulation. |
| **Toxicity to aquatic invertebrates** | EC50 (Daphnia magna (Water flea)) 0,0036 mg/l<br>Exposure time: 48 h<br>Test conducted with a similar formulation. |
| **Toxicity to aquatic plants** | IC50 (Desmodesmus subspicatus (green algae)) > 0,01 mg/l<br>Growth rate; Exposure time: 72 h<br>The value mentioned relates to the active ingredient.<br>No acute toxicity was observed at its limit of water solubility. |

### 12.2 Persistence and degradability

| | |
|---|---|
| **Biodegradability** | Beta-Cyfluthrin:<br>Not rapidly biodegradable |
| **Koc** | Beta-Cyfluthrin: Koc: 508 - 3179 |

### 12.3 Bioaccumulative potential

| | |
|---|---|
| **Bioaccumulation** | Beta-Cyfluthrin: Bioconcentration factor (BCF) 506<br>Does not bioaccumulate. |

### 12.4 Mobility in soil

| | |
|---|---|
| **Mobility in soil** | Beta-Cyfluthrin: Immobile in soil |

### 12.5 Results of PBT and vPvB assessment

| | |
|---|---|
| **PBT and vPvB assessment** | Beta-Cyfluthrin: This substance is not considered to be persistent, bioaccumulative and toxic (PBT). This substance is not considered to be very persistent and very bioaccumulative (vPvB). |

### 12.6 Endocrine disrupting properties

| | |
|---|---|
| **Assessment** | The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher. |

### 12.7 Other adverse effects

| | |
|---|---|
| **Additional ecological information** | No other effects to be mentioned. |

## SECTION 13: DISPOSAL CONSIDERATIONS

### 13.1 Waste treatment methods

| | |
|---|---|
| **Product** | In accordance with current regulations and, if necessary, after consultation with the site operator and/or with the responsible authority, the product may be taken to a waste disposal site or incineration plant. |
| **Contaminated packaging** | Triple rinse containers.<br>Do not re-use empty containers. |

Not completely emptied packagings should be disposed of as hazardous waste.

## SECTION 14: TRANSPORT INFORMATION

**SANS 10231**

| | |
|---|---|
| 14.1 UN number | **3082** |
| 14.2 Proper shipping name | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (BETA-CYFLUTHRIN SOLUTION) |
| 14.3 Transport hazard class(es) | 9 |
| 14.4 Packaging Group | III |
| 14.5 Environm. Hazardous Mark | YES |

**IMDG**

| | |
|---|---|
| 14.1 UN number | **3082** |
| 14.2 Proper shipping name | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (BETA-CYFLUTHRIN SOLUTION) |
| 14.3 Transport hazard class(es) | 9 |
| 14.4 Packaging Group | III |
| 14.5 Marine pollutant | YES |

**IATA**

| | |
|---|---|
| 14.1 UN number | **3082** |
| 14.2 Proper shipping name | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (BETA-CYFLUTHRIN SOLUTION ) |
| 14.3 Transport hazard class(es) | 9 |
| 14.4 Packaging Group | III |
| 14.5 Environm. Hazardous Mark | YES |

**14.6 Special precautions for user**
See sections 6 to 8 of this Safety Data Sheet.

**14.7 Transport in bulk according to IMO instruments**
No transport in bulk according to the IBC Code.

## SECTION 15: REGULATORY INFORMATION

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

**Further information**

WHO-classification: II (Moderately hazardous)

## SECTION 16: OTHER INFORMATION

**Text of the hazard statements mentioned in Section 3**

| | |
|---|---|
| H300 | Fatal if swallowed. |
| H301 | Toxic if swallowed. |

| | |
|---|---|
| H310 | Fatal in contact with skin. |
| H314 | Causes severe skin burns and eye damage. |
| H317 | May cause an allergic skin reaction. |
| H318 | Causes serious eye damage. |
| H330 | Fatal if inhaled. |
| H400 | Very toxic to aquatic life. |
| H410 | Very toxic to aquatic life with long lasting effects. |
| H412 | Harmful to aquatic life with long lasting effects. |

**Abbreviations and acronyms**

| | |
|---|---|
| ADN | European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways |
| ADR | European Agreement concerning the International Carriage of Dangerous Goods by Road |
| ATE | Acute toxicity estimate |
| CAS-Nr. | Chemical Abstracts Service number |
| Conc. | Concentration |
| EC-No. | European community number |
| ECx | Effective concentration to x % |
| EINECS | European inventory of existing commercial substances |
| ELINCS | European list of notified chemical substances |
| EN | European Standard |
| EU | European Union |
| IATA | International Air Transport Association |
| IBC | International Code for the Construction and Equipment of Ships Carrying Dangerous Chemicals in Bulk (IBC Code) |
| ICx | Inhibition concentration to x % |
| IMDG | International Maritime Dangerous Goods |
| LCx | Lethal concentration to x % |
| LDx | Lethal dose to x % |
| LOEC/LOEL | Lowest observed effect concentration/level |
| MARPOL | MARPOL: International Convention for the prevention of marine pollution from ships |
| N.O.S. | Not otherwise specified |
| NOEC/NOEL | No observed effect concentration/level |
| OECD | Organization for Economic Co-operation and Development |
| RID | Regulations concerning the International Carriage of Dangerous Goods by Rail |
| TWA | Time weighted average |
| UN | United Nations |
| WHO | World health organisation |

The information contained within this Safety Data Sheet is in accordance with the guidelines established by Regulation (EU) 1907/2006 and Regulation (EU) 2020/878 amending Regulation (EU) No 1907/2006 and any subsequent amendments. This data sheet complements the user's instructions, but does not replace them. The information it contains is based on the knowledge available about the product concerned at the time it was compiled. Users are further reminded of the possible risks of using a product for purposes other than those for which it was intended. The required information complies with current EEC legislation. Addressees are requested to observe any additional national requirements.

**Reason for Revision:** The following sections have been revised: Section 3: Composition / Information on Ingredients. Section 5: Fire Fighting Measures. Section 7: Handling and Storage. Section 13. Disposal considerations.

Changes since the last version are highlighted in the margin. This version replaces all previous versions.