

**BUFFALO 100 OD™**  
**MATERIAL SAFETY DATA SHEET**

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**SECTION 1 Chemical product and Company identification**

Product Name: Buffalo 100 OD™ (Imidacloprid + Beta-Cyfluthrin)

Chemical name:

i. Imidacloprid

*N*-[1-[(6-Chloro-3-pyridyl)methyl]-4,5-dihydroimidazol-2-yl]nitramide

ii. Beta-Cyfluthrin

Reaction mixture comprising the enantiomeric pair (*R*)- $\alpha$ -cyano-4-fluoro-3-phenoxybenzyl (1*S*,3*S*)-3-(2,2-dichlorovinyl)-2,2-dimethylcyclopropanecarboxylate and (*S*)- $\alpha$ -cyano-4-fluoro-3-phenoxybenzyl (1*R*,3*R*)-3-(2,2-dichlorovinyl)-2,2-dimethylcyclopropanecarboxylate in ratio 1:2 with the enantiomeric pair (*R*)- $\alpha$ -cyano-4-fluoro-3-phenoxybenzyl (1*S*,3*R*)-3-(2,2-dichlorovinyl)-2,2-dimethylcyclopropanecarboxylate and (*S*)- $\alpha$ -cyano-4-fluoro-3-phenoxybenzyl (1*R*,3*S*)-3-(2,2-dichlorovinyl)-2,2-dimethylcyclopropanecarboxylate

*or*

Reaction mixture comprising the enantiomeric pair (*R*)- $\alpha$ -cyano-4-fluoro-3-phenoxybenzyl (1*S*)-*cis*-3-(2,2-dichlorovinyl)-2,2-dimethylcyclopropanecarboxylate and (*S*)- $\alpha$ -cyano-4-fluoro-3-phenoxybenzyl (1*R*)-*cis*-3-(2,2-dichlorovinyl)-2,2-dimethylcyclopropanecarboxylate in ratio 1:2 with the enantiomeric pair (*R*)- $\alpha$ -cyano-4-fluoro-3-phenoxybenzyl (1*S*)-*trans*-3-(2,2-dichlorovinyl)-2,2-dimethylcyclopropanecarboxylate and (*S*)- $\alpha$ -cyano-4-fluoro-3-phenoxybenzyl (1*R*)-*trans*-3-(2,2-dichlorovinyl)-2,2-dimethylcyclopropanecarboxylate

Formula:

*Imidacloprid*: C<sub>9</sub>H<sub>10</sub>ClN<sub>5</sub>O<sub>2</sub> *and* *Beta-Cyfluthrin*: C<sub>22</sub>H<sub>18</sub>Cl<sub>2</sub>FNO<sub>3</sub>

Product Use: Commercial Herbicide

Supplier: SINERIA HOLLAND BV

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**SECTION 2 Composition/Information on Ingredients**

<u>Product Name</u>	<u>Concentration</u>	<u>CAS RN</u>
Imidacloprid	75 gr/lit	13826-41-3
Beta-Cyfluthrin	25 gr/lit	68359-37-5

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### SECTION 3 Hazards Identification

Emergency Overview: Caution! Harmful if absorbed through skin. Harmful if swallowed. Moderate eye irritation. Avoid contact with skin, eyes and clothing. Wash thoroughly with soap and water after handling.

Exposure routes: Skin Absorption, Eye contact, Ingestion

#### Immediate Effects

Eye: May cause mild irritation to eyes. Do not get in eyes.

Skin: Harmful if absorbed through skin. Avoid contact with skin and clothing. May cause light irritation.

Ingestion: Harmful if swallowed. Do not take internally.

Inhalation: Avoid contact or inhalation of spray mist. Chronic or Delayed

Long-Term: This product does not contain any ingredients designated by ARC, NTP, ACGIH or OSHA as probable or suspected human carcinogens.

Potential Environmental Effect: Extremely toxic to fish and aquatic invertebrates. Toxic to bees.

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### SECTION 4 First Aid Measures

Inhalation: Move to fresh air. When symptoms persist or in all cases of doubt seek medical advice.

Skin contact: Take off contaminated clothing and shoes immediately. Wash off immediately with plenty of water for at least 15 minutes. Call a physician or poison control center immediately.

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. Get medical attention if irritation develops and persists.

Ingestion: Do NOT induce vomiting. Call a physician or poison control center immediately. Rinse mouth.

#### **Notes to physician 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, diarrhea, vomiting, dizziness, blurred vision, headache, anorexia, somnolence, coma, convulsions, tremors, prostration, airway hyper-reaction, pulmonary edema, palpitation, muscular fasciculation, apathy.

Treatment: Treat symptomatically. 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

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### SECTION 5 Fire Fighting Measures

Suitable extinguish media: Dry chemical, carbon dioxide, foam and water.

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**Fire fighting instructions:** As in any fire, wear self-contained breathing apparatus pressure-demand and full protection gear. Keep upwind. Isolate hazard area. Avoid inhalation of smoke and fumes. Use water or foam to reduce fumes. Do not touch spilled material. If possible, move containers from area. Use flooding amounts of water as a fog. Avoid breathing vapors; in the event of fire dangerous gases may evolve.

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

**General and disposal:** Use proper protective equipment to minimize personal exposure. Take all necessary action to prevent and to remedy the effects of the spill. Ensure that the disposal is in compliance with regulations.

**Personal precautions:** Avoid contact with spilled product or contaminated surfaces. Use personal protective equipment. When dealing with a spillage do not eat, drink or smoke.

**Environmental precautions:** Do not allow to get into surface water, drains and ground water. If the product contaminates rivers and lakes or drains inform respective authorities.

**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, labeled and closed containers for disposal.

**Additional advice:** Information regarding personal protective equipment; see section 8. Information regarding waste disposal; see section 13.

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

**Handling:** Avoid contact with eyes or clothing. Do not use near heat or open fire.

**Users Should:** Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet. Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing. Remove personal protective equipment immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

**Storage:** Store in a cool and dry place out of reach of children. Keep container tightly closed. Do not store or consume food, drink or tobacco in areas where they may become contaminated with this material.

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#### **SECTION 8 Exposure controls/Personal protection**

**Eye and face protections:** Safety glasses, splash goggles or face-shield.

**Skin protections:** Long-sleeved shirt and long pants, waterproof nitrile gloves and chemical-resistant footwear. Wash contaminated skin promptly. Launder contaminated clothing and clean protective equipment before reuse. Wash hand thoroughly after handling.

**Respiratory protection:** Ensure adequate ventilation. If not adequate, use a chemical cartridge-type respirator.

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## SECTION 9 Physical & Chemical properties

Appearance: White to yellow liquid

Odour: Characteristic

pH: ca 6.9

Density: 1.16 g/cm<sup>3</sup>

Water solubility: Miscible

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## SECTION 10 Stability & Reactivity

Stability: Stable under normal condition

Materials to avoid: Strong acids, Bases, Strong oxidizing agents

Hazardous decomposition products: Thermal decomposition can lead to release of Hydrogen chloride (HCl), Hydrogen cyanide (hydrocyanic acid), Hydrogen fluoride, Carbon monoxide Nitrogen oxides (NOx)

Hazardous reactions: No hazardous reactions when stored and handled according to prescribed instructions.

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## SECTION 11 Toxicological Information

### Potential health effects

Inhalation: Toxic by inhalation

Skin: May cause skin irritation

Eye: May cause eye irritation

Ingestion: Toxic if swallowed.

### Animal toxicity studies

Acute oral toxicity: LD50 (rat) > 1,044mg/kg (Test conducted with similar formulation)

Acute inhalation toxicity: LC50 (rat) > 2.03 mg/L Exposure time: 4 h (Determined in the form of a liquid aerosol. Highest attainable concentration. Test conducted with similar formulation.)

Acute dermal toxicity: LD50 (rat) > 2,000 mg/kg (Test conducted with similar formulation)

Skin irritation: Slight skin irritation (rabbit). The value mentioned relates to the active ingredient beta-cyfluthrin.

Skin irritation: No skin irritation (rabbit). The value mentioned relates to the active ingredient imidacloprid.

Eye irritation: Mild eye irritation (rabbit). The value mentioned relates to the active ingredient beta-cyfluthrin.



**Sensitisation:** Non-sensitizing (guinea pig). OECD Test Guideline 406, Magnusson & Kligman test. The value mentioned relates to the active ingredients beta-cyfluthrin.

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## SECTION 12 Ecological Information

### Toxicity to fish:

- LC<sub>50</sub> (*Oncorhynchus mykiss* (Rainbow trout)) 0,068 µg/L Exposure time: 96 h. The value mentioned relates to the active ingredient beta-cyfluthrin.
- LC<sub>50</sub> (*Oncorhynchus mykiss* (Rainbow trout)) 211 mg/L Exposure time: 96 h. The value mentioned relates to the active ingredient imidacloprid.

### Toxicity to aquatic invertebrates:

- EC50 (*Daphnia magna* (Water flea)) 0,29 µg/L Exposure time: 48 h. The value mentioned relates to the active ingredient beta-cyfluthrin.
- EC50 (*Daphnia magna* (Water flea)) 85 mg/L Exposure time: 48 h. The value mentioned relates to the active ingredient imidacloprid.
- LC50 (*Chironomus riparius* (non-biting midge)) 0.0552 mg/L Exposure time: 24 h. The value mentioned relates to the active ingredient imidacloprid.

### Toxicity to aquatic plants:

- LC50 (*Desmodemus subspicatus*) > 0.01 mg/L Growth rate Exposure time: 72 h. The value mentioned relates to the active ingredient beta-cyfluthrin. No acute toxicity was observed at its limit of water solubility.
- EC50 (*Desmodemus subspicatus*) > 10 mg/L Growth rate Exposure time: 72 h. The value mentioned relates to the active ingredient imidacloprid.

### Toxicity to other organisms:

- LD50 (*Coturnix japonica* (Japanese quail)) > 2,000 mg/kg The value mentioned relates to the active ingredient beta-cyfluthrin.

**Biodegradability:** Readily biodegradable. The value mentioned relates to the active ingredient beta-cyfluthrin.

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## SECTION 13 Disposal Considerations

Do not contaminate water, food, or feed by disposal. Empty containers should be triple rinsed into the spray tank during operation. Then offer for recycling or reconditioning or puncture and dispose of in a sanitary landfill or incinerating, or if allowed, by burning. If burned, stay out of smoke.

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## SECTION 14 Transport Information

### ADG

UN-Number: 3082

Class 9

Subsidiary Risk None Packaging Group III

Description of the goods ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.

(BETA-CYFLUTHRIN, IMIDACLOPRID SOLUTION)

Hazchem Code: 3Z

According to AU01, Environmentally Hazardous Substances in packagings, IBC or any other receptacle not exceeding 500 kg or 500 L are not subject to the ADG Code.

### IMDG

UN-Number: 3082

Class 9

Subsidiary Risk None Packaging Group III EmS F-A , S-F

Marine pollutant: YES

Description of the goods ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.

(BETA-CYFLUTHRIN, IMIDACLOPRID SOLUTION)

### IATA

UN-Number: 3082

Class: 9

Subsidiary Risk None Packaging Group III

Environm. Hazardous Mark YES

Description of the goods ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.

(BETA-CYFLUTHRIN, IMIDACLOPRID SOLUTION )

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## SECTION 15 Regulatory Information

Symbols: Xn Harmful, N Dangerous for the environment

R-phrases:

- R22: Harmful if swallowed.

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- R51/53: Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

S-phrases:

- S35: This material and its container must be disposed of in a safe way.
- S57: Use appropriate container to avoid environmental contamination.

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#### **SECTION 16 Other Information**

The information contained in the Material Safety Data Sheet is correct to the best of our knowledge at the date of issue. It is intended as a guide for the safe use, handling, disposal, storage and transportation and is not intended as a warranty or as a specification. The information relates only to the product specified and may not be suitable for use with other materials or in processes other than those specifically described herein.

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