1. **Identification of the Product and of the Company.**

1.1 **Commercial Product Names:**
- B401
- CERTAN

1.2 **Company name:**
VITA-SWARM S.A.S.
2, côte de la Jonchère, F-78380 Bougival
Tel: +33 (0)1 30 82 29 89
Fax: +33 (0)1 30 82 27 77

1.3 **Emergency Telephone Number:** +33 (0)1 30 82 29 89

2. **Composition / Information on Ingredients**

Chemical characterisation of the preparation:

- **Description:** Aqueous suspension of B.t. subsp. aizawai spores and protein crystals
- **Chemical Class:** Protein crystal
- **Formulation Type:** Liquid suspension concentrate
- **Sector:** BIOLOGICAL INSECTICIDE

- **Contains:** Protein crystals of *Bacillus thurigiensis* subsp. *azawai*
- **Content:** 1.5%
- **CAS-Reg. No.:** 68038-71-1 (Bacillus thuringiensis non-hazardous)
- **EC-label:** None
- **Hazardous ingredients:** None

3. **Hazards Identification**

- **Most important hazards:** harmful if swallowed

  Keep out of the reach of children

  Avoid inhalation and contact with skin or eyes
4. **First Aid Measures**

4.1 After contact with the eyes:
Rinse eyes thoroughly with plenty of water.

4.2 After contact with the skin:
Rinse eyes thoroughly with plenty of water.

4.3 After inhalation:
Remove from exposure.

4.4 After ingestion:
Rinse mouth and throat with clear clean water.

4.5 Symptoms:
None known to exist. If irritation persists get medical attention.

4.6 Note to physician:
No specific antidote, treat symptomatically.

5. **Fire Fighting Measures**

5.1 Extinguishing media:
Suitable agents: all.

5.2 Special advice in case of fire:
None.

5.3 Fire and Explosion Hazards:
None.

5.4 HMIS Rating
Health = 0
Flammability = 0
Reactivity = 0

6. **Accidental Release Measures**

Avoid inhalation, skin and eye contact.
7. Handling and Storage

7.1. Handling:
No specific measure.

7.2. Storage:
Technical protective measures: None
Maximum storage temperature: 30°C
Shelf-life in unopened containers: at least 2 years (if stored at max. 25°C)
                                      at least 5 years (if stored at max. 5°C)

8. Exposure Controls and Personal Protection

Personal protective equipment: No specific equipment.

9. Physical and Chemical Properties

9.1. Form: suspension concentrate
9.2. Colour: light brown
9.3. Odour: pungent, bacterial odour
9.4. Change in physical state:
  Melting point: not applicable
  Boiling point: not applicable
9.5. Flash point: not applicable
9.6. Ignition temperature: not applicable
9.7. Explosion limits: not applicable
9.8. Density: 1.07 ± 0.03 kg/l (18°C)
Trade Name: B401 / CERTAN

9.9 Vapour pressure: not applicable
9.10 Viscosity: 55 mPa.S (20°C)
9.11 pH value (in H₂O): 4.0 ± 1.0 (in 10% solution)

10. Stability and Reactivity
10.1 Stability: Stable. Chemically not reactive
10.2 Reactivity: Non reactive
10.3 Incompatibility with other materials: Not known to be incompatible with any packing material
10.4 Hazardous Polymerisation: Will not occur
10.5 Hazardous decomposition products: No hazardous combustion or decomposition products are known

11. Toxicological Information

LD₅₀ acute oral: not determined
LD₅₀ acute dermal: not determined

Irritation:
Skin: not determined
Eyes: not determined

Sensitisation:
Skin: not determined

Similar biological products have shown low toxicity and are not classified as "hazardous" in the EEC classification system.
12. Ecological Information

Product readily biodegradable.

Studies on non-target animals have been performed without identifying any organisms at risk. The following species have been included in the testing: mammals (rats, rabbits), freshwater aquatic invertebrate (*Daphnia magna*, rainbow trout), birds (Mallard, Bobwhite quail). Studies on non-target insects are presently ongoing (however, studies on similar biological products have not identified any organisms at risk. Not toxic to honeybees).

13. Disposal Considerations

Do not contaminate water when disposing of equipment and washwater or disposal of waste.

Local regulations should be adhered to.

14. Transportation Information

<table>
<thead>
<tr>
<th>Regulations</th>
<th>Class</th>
<th>UN-No.</th>
<th>PGr.</th>
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<td>RID/ADR:</td>
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<td>ICAO/IATA-DGR:</td>
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<tr>
<td>UN:</td>
<td>not classified</td>
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</tbody>
</table>

15. Regulatory Information

Assessment by SWARM S.A. according to EEC Directives:

S2 Keep out of the reach of children
S3 Keep in a cool place
S13 Keep away from food, drink, and animal feedstuffs
S20/21 When using do not eat, drink or smoke