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

1.1 Product identifier
- Product Name(s): BotVax® B Clostridium Botulinum Type B Toxoid
- Product Part Number(s): 200180, 200180-CAN, 200181
- Brand(s): NeogenVet®

1.2 Relevant identified uses of the substance or mixture and uses advised against
- Use of the substance/preparation: Injectable Clostridium Botulinum Type B toxoid for use in healthy horses.
- Uses advised against: For veterinary use only. Do not vaccinate food-producing animals within 21 days of slaughter.

1.3 Details of the supplier of the safety data sheet
- Name of Manufacturer: Neogen Corporation
- Address of Manufacturer: 1614 E. Kalamazoo St.
  Lansing, MI 48912 USA
- Telephone: 859/254-1221 • 800/525-2022
- Email: inform@neogen.com

1.4 Emergency telephone number
- Emergency Telephone: Chemtrec: 1 (800) 424-9300
  Outside USA and Canada: +1 (703) 527-3887

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture
Classification (29 CFR 1910.1200)
- Not classified as hazardous for supply
Classification (WHMIS 2015 HPR)
- Not classified as hazardous for supply

2.2 Label elements
- Signal Word: None
- Symbols: None
- Hazard phrases
  None
- Precautionary Phrases
  Sterile when unopened.
  Do not freeze.
  Not for human use.

2.3 Other hazards
- Keep out of reach of children.

SECTION 3: Composition/information on ingredients

3.1 Substances
3.2 Mixtures
This product is a mixture of the substances listed below with the addition of non-hazardous materials

<table>
<thead>
<tr>
<th>Chemical</th>
<th>Concentration</th>
<th>CAS No.</th>
<th>H-Statements</th>
<th>Symbols</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clostridium Botulinum Type B Toxoid</td>
<td>20-40%</td>
<td>n/a</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Aluminum phosphate</td>
<td>~50% (adsorbed)</td>
<td>7784-30-7</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Saline solution</td>
<td>q.s.</td>
<td>7647-14-5</td>
<td>None</td>
<td>None</td>
</tr>
</tbody>
</table>

Ingredients not precisely identified are proprietary or non-hazardous. Values are not product specifications.
- For full text of Hazard statements: see Section 16.
SECTION 4 First aid measures

4.1 Description of first aid measures
- General
  In case of doubt, or when symptoms persist, seek medical attention.
  In general, this product is not hazardous to humans or animals, but like any other chemical, it
  should be treated with care, respect, and common sense.
- Contact with skin
  Remove contaminated clothing.
  Wash affected area with plenty of soap and water.
  If skin irritation or rash occurs: Get medical advice/attention.
  Contaminated clothing should be laundered before reuse.
- Contact with eyes
  If substance has gotten into eyes, rinse with plenty of water for at least 15 minutes.
  Irrigate eyes thoroughly while lifting eyelids.
  Seek medical advice if necessary.
- Ingestion
  Rinse mouth with water (do not swallow).
  Never make an unconscious person vomit or drink fluids.
  If medical advice is needed, have product container or label at hand.
- Inhalation
  If breathing is difficult, remove person to fresh air and keep comfortable for breathing.
  Call a poison center or doctor/physician if you feel unwell.

4.2 Most important symptoms and effects, both acute and delayed
- The most important known symptoms are described in the labeling (see Section 2.2) and/or in
  Section 11.

4.3 Indication of any immediate medical attention and special treatment needed
- Transitory local reactions at the injection site such as heat and minor swelling may occur. In the
  event of anaphylactoid reactions, epinephrine is antidotal.

SECTION 5: Fire-fighting measures

5.1 Extinguishing media
- In case of fire: use water spray, foam, carbon dioxide or dry agent for extinction.

5.2 Special hazards arising from the substance or mixture
- Smoke from fires is toxic. Take precautions to protect personnel from exposure.
- See Section 10.

5.3 Advice for firefighters
- Keep container(s) exposed to fire cool, by spraying with water.
- Wear chemical protection suit and positive-pressure breathing apparatus, if necessary.
- Wear protective clothing as per Section 8.

5.4 Hazardous Combustion Products
- May include carbon oxides.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures
- Spills should be cleaned up immediately to avoid slip and fall accidents and injuries.
- Wear protective clothing as per Section 8.
- Evacuate personnel not directly involved in spill clean-up.
- Shut off source of leak/release, if safe to do so.
- Shut down and/or remove equipment in spill area, if safe to do so.
- Wash thoroughly after dealing with spillage.

6.2 Environmental Precautions
- Do not allow to enter public sewers and watercourses.
- Avoid releasing to the environment.
SECTION 6: Accidental release measures (continued)

6.3 Methods and material for containment and cleaning up
- Absorb spillage in inert material and shovel up.
- Dike large spills as necessary.
- Place in sealable containers and label them.
- Ventilate the area and wash spill site after material pick-up is complete.
- Dispose of contaminated materials and wastes in accordance with local/national/international regulations.

6.4 Reference to other sections
- See Section 7 for storage. For disposal, see Section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling
- Do not breathe mist/vapors/fumes/spray.
- Avoid contact with eyes.
- Do not eat, drink, smoke, or apply cosmetics when using this product.
- Eyewash bottles should be available.
- Wash hands thoroughly after using this substance.

7.2 Conditions for safe storage, including any incompatibilities
- Store controlled temperature between 2-7°C (35-45°F).
- Shake well before use.
- Sterile when unopened.
- Use entire contents when opened.
- Keep out of reach of children.

7.3 Specific end use(s)
- Injectable *Clostridium Botulinum* Type B toxoid for use in healthy horses.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Components with workplace control parameters

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS No.</th>
<th>Value</th>
<th>Control Parameters</th>
<th>Basis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aluminum orthophosphate</td>
<td>7784-30-7</td>
<td>TWA</td>
<td>1 mg/m³</td>
<td>USA-ACGIH Threshold Limit Values (TLV)</td>
</tr>
</tbody>
</table>

Remarks:
- Lower respiratory tract irritation
- Pneumoconiosis
- Neurotoxicity

8.2 Exposure controls
- Eyewash bottles should be available.
- No respiratory protection is needed if ventilation/extraction is adequate, otherwise wear approved respiratory protection.
- Wear protective gloves to prevent prolonged or repeated skin contact.
- Wear safety glasses approved to standard for ANSI Z87, according to the concentration and amount of dangerous substance at the specific workplace.
- Wear suitable protective clothing in accordance with good industrial hygiene and safety practices in the event of prolonged exposure to bulk quantities.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties
- Appearance: Clear liquid
- Odor: Odorless
- pH: 5.3 – 5.7
- Melting Point/Range: Not applicable
- Boiling Point/Range: No information available
- Flashpoint: No information available
- Evaporation Rate: No information available
- Flammability: No information available
SECTION 9: Physical and chemical properties (continued)

- Vapor Pressure: No information available
- Vapor Density: No information available
- Specific Gravity: No information available
- Solubility in water: No information available
- Partition Coefficient (n-Octanol/Water): No information available
- Autoignition Temperature: Product is not self-igniting
- Viscosity: No information available
- Explosive Properties: Product does not present an explosion hazard
- Oxidizing Properties: Product is not classified as an oxidizer

9.2 Other information
- No information available

SECTION 10: Stability and reactivity

10.1 Reactivity
- No information available

10.2 Chemical stability
- Considered stable under normal conditions

10.3 Possibility of hazardous reactions
- No hazardous reactions known if used for its intended purpose.

10.4 Conditions to avoid
- Do not freeze.

10.5 Incompatible materials
- None known

10.6 Hazardous Decomposition Products
- None known

SECTION 11: Toxicological information

11.1 Information on toxicological effects
- No experimental test data available for mixture
- ATEmix = 4,000 mg/kg (oral)
  - Contact with skin
    May cause redness and irritation in sensitive individuals.
    Based on available data, the classification criteria are not met.
  - Contact with eyes
    May cause redness and irritation in sensitive individuals.
    Based on available data, the classification criteria are not met.
- Ingestion
  Product is not toxic, but may cause irritation of the throat and/or nausea in sensitive individuals.
  Based on available data, the classification criteria are not met.
- Inhalation
  Not a likely route of exposure. May cause irritation in sensitive individuals if inhaled.
  Based on available data, the classification criteria are not met.
- Carcinogenicity
  Not listed in the National Toxicology Program (NTP) 13th Report on Carcinogens.
  Not found to be a potential carcinogen in the International Agency for Research on Cancer (IARC) Monographs, Volumes 1-112.
  Not listed in OSHA standard 1910.1003 Carcinogens.
- Mutagenicity
  No information available
- Teratogenicity
  No information available
SECTION 12: Ecological information

12.1 Toxicity

Sodium chloride

Toxicity to fish
LC₅₀ – Lepomis macrochirus (Bluegill) – 5840 mg/L-96h

Toxicity to daphnia and other aquatic invertebrates
NOEC = 1500 mg/L-7d
EC₅₀ – Daphnia magna (Water flea) – 1661 mg/L-48h

12.1 Persistence and degradability
- No information available

12.2 Bioaccumulation Potential
- No information available

12.3 Mobility in soil
- No information available

12.5 Other Adverse Effects
- To the best of our knowledge, the properties of this material have not been fully evaluated.
- On available data, substance is not harmful to the environment.

SECTION 13: Disposal considerations

13.1 Waste treatment methods
- Disposal should be in accordance with local, regional, national, and/or international regulations.
- Do not discharge into drains or the environment, dispose to an authorized waste collection point.
- Do not reuse empty containers.

SECTION 14: Transport information

14.1 UN Number
- Not classified as hazardous for transport

14.2 UN Proper Shipping Name
- Not applicable

14.3 Transport hazard class(es)
- Not applicable

14.4 Packing group
- Not applicable

14.5 Environmental hazards
- Not a marine pollutant

14.6 Special precautions for user
- None

14.7 Domestic Surface Transport (US DOT)
- Proper Shipping Name: Not applicable
- DOT UN No.: Not applicable
- DOT Hazard Class: Not applicable
- DOT Packing Group: Not applicable

14.8 International Road/Rail (ADR/RID)
- Proper Shipping Name: Not applicable
- ADR UN No.: Not applicable
- ADR Hazard Class: Not applicable
- ADR Packing Group: Not applicable
- Tunnel Code: Not applicable

14.9 Ocean/Sea (IMO/IMDG)
- Proper Shipping Name: Not applicable
- IMDG UN No.: Not applicable
- IMDG Hazard Class: Not applicable
- IMDG Packing Group: Not applicable
SECTION 14: Transport information (continued)

14.10 Air (ICAO/IATA)
- Proper Shipping Name: Not applicable
- ICAO UN No.: Not applicable
- ICAO Hazard Class: Not applicable
- ICAO Packing Group: Not applicable

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
- The labeling requirements of the Virus-Serum-Toxin Act (VSTA) differ from the classification criteria and hazard information required for safety data sheets and for workplace labels under the OSHA Hazard Communication Standard 29 CFR 1910.1200. Following is the hazard information as required on the vaccine label:
  FOR VETERINARY USE ONLY
  U.S. Vet. Lic. No. 302

15.2 United States Regulatory Information

SARA 302 Components
No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Components
The material does not contain any chemical components with known CAS numbers that exceed the threshold (de minimis) reporting levels established by SARA Title III, Section 313.

SARA 311/312
No SARA Hazards

Toxic Substance Control Act (TSCA)
This product is exempt from TSCA under Section 3(2)(B)(vi) when used for pharmaceutical application.

California Prop 65
WARNING: This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.

15.3 Canadian Regulatory Information
- This product has been classified in accordance with the hazard criteria of the Hazardous Products Regulations (HPR). The labelling may differ subject to the requirements under the jurisdiction of the Center for Veterinary Biologics.
- WHMIS Classification: Exempt
- Inventory Status
  Domestic Substances List (DSL)  Listed
  Non-Domestic Substances List (NDSL)  Not listed

SECTION 16: Other information

Document Number: SDS-0065, BotVax® B
Date of Preparation: June 7, 2016
Revision: Rev. 0
Replaces: New issue

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