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

Product Identifier

<table>
<thead>
<tr>
<th>Product name</th>
<th>Singvac 3 year Single Shot Bivalent Botulinum Vaccine for Cattle</th>
</tr>
</thead>
<tbody>
<tr>
<td>Synonyms</td>
<td>APVMA No.: 54861</td>
</tr>
<tr>
<td>Other means of identification</td>
<td>Not Available</td>
</tr>
</tbody>
</table>

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

| Relevant identified uses | Use according to manufacturer's directions.                        |

Details of the supplier of the safety data sheet

<table>
<thead>
<tr>
<th>Registered company name</th>
<th>Virbac (Australia) Pty Limited</th>
</tr>
</thead>
<tbody>
<tr>
<td>Address</td>
<td>361 Horsley Road Milperra NSW 2214 Australia</td>
</tr>
<tr>
<td>Telephone</td>
<td>1800 242 100</td>
</tr>
<tr>
<td>Fax</td>
<td>+61 2 9772 9773</td>
</tr>
<tr>
<td>Website</td>
<td><a href="http://www.virbac.com.au">www.virbac.com.au</a></td>
</tr>
<tr>
<td>Email</td>
<td><a href="mailto:au_customerservice@virbac.com.au">au_customerservice@virbac.com.au</a></td>
</tr>
</tbody>
</table>

Emergency telephone number

<table>
<thead>
<tr>
<th>Association / Organisation</th>
<th>Poisons Information Centre</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emergency telephone numbers</td>
<td>13 11 26</td>
</tr>
<tr>
<td>Other emergency telephone numbers</td>
<td>Not Available</td>
</tr>
</tbody>
</table>

SECTION 2 HAZARDS IDENTIFICATION

Classification of the substance or mixture

<table>
<thead>
<tr>
<th>Poisons Schedule</th>
<th>Not Applicable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Classification</td>
<td>Not Applicable</td>
</tr>
</tbody>
</table>

Label elements

| Hazard pictogram(s) | Not Applicable |

Hazard statement(s)

Not Applicable

Precautionary statement(s) Prevention

Not Applicable

Precautionary statement(s) Response

Not Applicable

Precautionary statement(s) Storage

Not Applicable

Precautionary statement(s) Disposal

Not Applicable

SECTION 3 COMPOSITION / INFORMATION ON INGREDIENTS

Substances

See section below for composition of Mixtures

Mixtures

Continued...
SECTION 4 FIRST AID MEASURES

Description of first aid measures

**Eye Contact**
- If this product comes in contact with the eyes:
  - Wash out immediately with fresh running water.
  - Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids.
  - Seek medical attention without delay; if pain persists or recurs seek medical attention.
  - Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.

**Skin Contact**
- If skin contact occurs:
  - Immediately remove all contaminated clothing, including footwear.
  - Flush skin and hair with running water (and soap if available).
  - Seek medical attention in event of irritation.
- Take Care to Avoid Self-Injection. Accidental self-administration may result in local bruising, pain and swelling. In the event of self-administration, seek medical attention and show the package leaflet or the label, to the Medical Practitioner.

**Inhalation**
- If fumes or combustion products are inhaled remove from contaminated area.
- Lay patient down. Keep warm and rested.
- Prostheses such as false teeth, which may block airway, should be removed, where possible, prior to initiating first aid procedures.
- Apply artificial respiration if not breathing, preferably with a demand valve resuscitator, bag-valve mask device, or pocket mask as trained. Perform CPR if necessary.
- Transport to hospital, or doctor, without delay.

**Ingestion**
- If swallowed do NOT induce vomiting.
- If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain open airway and prevent aspiration.
- Observe the patient carefully.
- Never give liquid to a person showing signs of being sleepy or with reduced awareness; i.e. becoming unconscious.
- Give water to rinse out mouth, then provide liquid slowly and as much as casualty can comfortably drink.
- Seek medical advice.

Indication of any immediate medical attention and special treatment needed
- Treat symptomatically.

SECTION 5 FIREFIGHTING MEASURES

Extinguishing media
- There is no restriction on the type of extinguisher which may be used.
- Use extinguishing media suitable for surrounding area.

Special hazards arising from the substrate or mixture
- **Fire Incompatibility**
  - Avoid contamination with oxidising agents i.e. nitrates, oxidising acids, chlorine bleaches, pool chlorine etc. as ignition may result

Advice for firefighters
- **Fire Fighting**
  - Alert Fire Brigade and tell them location and nature of hazard.
  - Wear breathing apparatus plus protective gloves in the event of a fire.
  - Prevent, by any means available, spillage from entering drains or water courses.
  - Use fire fighting procedures suitable for surrounding area.
  - **DO NOT** approach containers suspected to be hot.
  - Cool fire exposed containers with water spray from a protected location.
  - If safe to do so, remove containers from path of fire.
  - Equipment should be thoroughly decontaminated after use.

- **Fire/Explosion Hazard**
  - Non combustible.
  - Not considered a significant fire risk, however containers may burn.
  - May emit poisonous fumes.
  - May emit corrosive fumes.

HAZCHEM
- Not Applicable

SECTION 6 ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures
- See section 8

Environmental precautions
- See section 12

Methods and material for containment and cleaning up
- **Minor Spills**
  - Clean up all spills immediately.
  - Avoid breathing vapours and contact with skin and eyes.
Control personal contact with the substance, by using protective equipment.

> Contain and absorb spill with sand, earth, inert material or vermiculite.
> Wipe up.
> Place in a suitable, labelled container for waste disposal.

Moderate hazard.

> Clear area of personnel and move upwind.
> Alert Fire Brigade and tell them location and nature of hazard.
> Wear breathing apparatus plus protective gloves.
> Prevent, by any means available, spillage from entering drains or water course.
> Stop leak if safe to do so.

Place in a suitable, labelled container for recycling.

Neutralise/decontaminate residue (see Section 13 for specific agent).

Collect solid residues and seal in labelled drums for disposal.

Wash area and prevent runoff into drains.

If contamination of drains or waterways occurs, advise emergency services.

Personal Protective Equipment advice is contained in Section 8 of the SDS.

SECTION 7 HANDLING AND STORAGE

Precautions for safe handling

> Avoid all personal contact, including inhalation.
> Wear protective clothing when risk of exposure occurs.
> Use in a well-ventilated area.
> Avoid contact with moisture.
> Avoid contact with incompatible materials.
> When handling, DO NOT eat, drink or smoke.
> Keep containers securely sealed when not in use.
> Avoid physical damage to containers.
> Always wash hands with soap and water after handling.
> Work clothes should be laundered separately. Launder contaminated clothing before re-use.
> Use good occupational work practice.
> Observe manufacturer's storage and handling recommendations contained within this SDS.
> Atmosphere should be regularly checked against established exposure standards to ensure safe working conditions are maintained.

Conditions for safe storage, including any incompatibilities

Suitable container

> Lined metal can, lined metal pail/ can.
> Plastic pail.
> Polyliner drum.
> Packing as recommended by manufacturer.
> Check all containers are clearly labelled and free from leaks.

Storage incompatibility

WARNING: Avoid or control reaction with peroxides. All transition metal peroxides should be considered as potentially explosive. For example transition metal complexes of allyl hydroperoxides may decompose explosively.

> The pi-complexes formed between chromium(0), vanadium(0) and other transition metals (haloarene-metal complexes) and mono- or poly-fluorobenzene show extreme sensitivity to heat and are explosive.
> Avoid reaction with borohydrides or cyanoborohydrides
> Avoid reaction with mild steel, galvanised steel / zinc producing hydrogen gas which may form an explosive mixture with air.
> Avoid reaction with oxidising agents
> Avoid strong acids, bases.

SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION

Control parameters

INGREDIENT DATA

Not Available

EMERGENCY LIMITS

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Material name</th>
<th>TEEL-1</th>
<th>TEEL-2</th>
<th>TEEL-3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Singvac 3 year Single Shot Bivalent Botulinum Vaccine for Cattle</td>
<td>Not Available</td>
<td>Not Available</td>
<td>Not Available</td>
<td>Not Available</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Original IDLH</th>
<th>Revised IDLH</th>
</tr>
</thead>
<tbody>
<tr>
<td>clostridium botulinum (type C toxoid)</td>
<td>Not Available</td>
<td>Not Available</td>
</tr>
<tr>
<td>clostridium botulinum (type D toxoid)</td>
<td>Not Available</td>
<td>Not Available</td>
</tr>
<tr>
<td>sodium ethylmercuric thiosalicylate</td>
<td>Not Available</td>
<td>Not Available</td>
</tr>
</tbody>
</table>

Continued...
Exposure controls

Engineering controls are used to remove a hazard or place a barrier between the worker and the hazard. Well-designed engineering controls can be highly effective in protecting workers and will typically be independent of worker interactions to provide this high level of protection.

The basic types of engineering controls are:

- Enclosure and/or isolation of emission source which keeps a selected hazard "physically" away from the worker and ventilation that strategically "adds" and "removes" air in the work environment. Ventilation can remove or dilute an air contaminant if designed properly. The design of a ventilation system must match the particular process and chemical or contaminant in use.
- Local exhaust ventilation usually required. If risk of overexposure exists, wear approved respirator. Correct fit is essential to obtain adequate protection. If narrow opening or high micro velocity, captured air may have to be exhausted to a distance. Simple theory shows that air velocity falls rapidly with distance away from the opening of a simple extraction pipe. Air velocity generally decreases with the square of distance from the contaminating source. The air velocity at the extraction point, for example, should be a minimum of 1-2 m/s (200-400 f/min) for extraction of solvents generated in a tank 2 meters distant from the extraction point. Other mechanical considerations, producing performance deficits within the extraction apparatus, make it essential that theoretical air velocities are multiplied by factors of 10 or more when extraction systems are installed or used.

Type of Contaminant: Air Speed:
- solvent, vapours, degreasing etc., evaporating from tank (in still air): 0.25-0.5 m/s (50-100 f/min.)
- aerosols, fumes from pouring operations, intermittent container filling, low speed conveyor transfers, welding, spray drift, plating acid fumes, pickling (released at low velocity into zone of active generation): 0.5-1.0 m/s (100-200 f/min.)
- direct spray, spray painting in shallow booths, drum filling, conveyor loading, crusher dusts, gas discharge (active generation into zone of rapid air motion): 1-2.5 m/s (200-500 f/min.)
- grinding, abrasive blasting, tumbling, high speed wheel generated dusts (released at high initial velocity into zone of very high rapid air motion): 2.5-10 m/s (500-2000 f/min.)

Within each range the appropriate value depends on:

<table>
<thead>
<tr>
<th>Lower end of the range</th>
<th>Upper end of the range</th>
</tr>
</thead>
<tbody>
<tr>
<td>1: Room air currents minimal or favourable to capture</td>
<td>1: Disturbing room air currents</td>
</tr>
<tr>
<td>2: Contaminants of low toxicity or of nuisance value only</td>
<td>2: Contaminants of high toxicity</td>
</tr>
<tr>
<td>3: Intermittent, low production</td>
<td>3: High production, heavy use</td>
</tr>
<tr>
<td>4: Large hood or large air mass in motion</td>
<td>4: Small hood-local control only</td>
</tr>
</tbody>
</table>

Personal protection

Eye and face protection

- Safety glasses with side shields.
- Chemical goggles.
- Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants. A written policy document, describing the wearing of lenses or restrictions on use, should be created for each workplace or task. This should include a review of lens adsorption and adsorption for the class of chemicals in use and an account of injury experience. Medical and first-aid personnel should be trained in their removal and suitable equipment should be readily available. In the event of chemical exposure, begin eye irrigation immediately and remove contact lens as soon as practicable. Lenses should be removed at the first signs of eye redness or irritation – lenses should be removed in a clean environment only after workers have washed hands thoroughly (CDC NIOSH Current Intelligence Bulletin 59). [AS/NZS 1336 or national equivalent]

Skin protection

See Hand protection below

Hands/feet protection

Select gloves tested to a relevant standard (e.g. Europe EN 374, US F739, AS/NZS 2161.1 or national equivalent). When prolonged or frequently repeated contact may occur, a glove with a protection class of 5 or higher (breakthrough time greater than 240 minutes according to EN 374, AS/NZS 2161.10.1 or national equivalent) is recommended. When only brief contact is expected, a glove with a protection class of 3 or higher (breakthrough time greater than 60 minutes according to EN 374, AS/NZS 2161.10.1 or national equivalent) is recommended.

- Some glove polymer types are less affected by movement and this should be taken into account when considering gloves for long-term use.
- Contaminated gloves should be replaced.

For general applications, gloves with a thickness typically greater than 0.35 mm, are recommended.
It should be emphasised that glove thickness is not necessarily a good predictor of glove resistance to a specific chemical, as the permeation efficiency of the glove will be dependent on the exact composition of the glove material. Therefore, glove selection should also be based on consideration of the task requirements and knowledge of breakthrough times.

Glove thickness may also vary depending on the glove manufacturer, the glove type and the glove model. Therefore, the manufacturers' technical data should always be taken into account to ensure selection of the most appropriate glove for the task.

Note: Depending on the activity being conducted, gloves of varying thickness may be required for specific tasks. For example:
- Thinner gloves (down to 0.1 mm or less) may be required where a high degree of manual dexterity is needed. However, these gloves are only likely to give short duration protection and would normally be just for single use applications, then disposed of.
- Thicker gloves (up to 3 mm or more) may be required where there is a mechanical (as well as a chemical) risk i.e. where there is abrasion or puncture potential.

Gloves must only be worn on clean hands. After using gloves, hands should be washed and dried thoroughly. Application of a non-perfumed moisturiser is recommended.

**WARNING: Do NOT use latex or PVC gloves**

In 1997, a researcher (Dr. Karen E. Wetterhahn) died from organic mercury poisoning, resulting from a single exposure to dimethylmercury almost a year before.

Heavy metals and organic metal compounds, in particular, have posed special hazards in worker protection. At the time of diagnosis and before she lapsed into a vegetative state, Dr. Wetterhahn asked that her case be made known to others.

Permeation testing of the potential of transdermal exposure to dimethylmercury produced the following results*.

<table>
<thead>
<tr>
<th>Glove Material</th>
<th>Thickness in mm</th>
<th>Breakthrough Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nitrile</td>
<td>0.2</td>
<td>0.25 minutes</td>
</tr>
<tr>
<td>Neoprene</td>
<td>0.8</td>
<td>&lt;10 mins.</td>
</tr>
<tr>
<td>Butyl</td>
<td>0.33</td>
<td>&lt;15 mins.</td>
</tr>
<tr>
<td>Viton</td>
<td>0.28</td>
<td>&lt;15 mins.</td>
</tr>
<tr>
<td>Silver Shield</td>
<td>0.13</td>
<td>&gt;240 mins.</td>
</tr>
<tr>
<td>Silver Shield &amp;</td>
<td>Neoprene Pair</td>
<td></td>
</tr>
<tr>
<td></td>
<td>0.7</td>
<td>&gt;240 mins.</td>
</tr>
</tbody>
</table>

*Originally quoted as mil (one mil = 0.001 inches)

<table>
<thead>
<tr>
<th>Body protection</th>
<th>See Other protection below</th>
</tr>
</thead>
<tbody>
<tr>
<td>Other protection</td>
<td></td>
</tr>
<tr>
<td>Thermal hazards</td>
<td>Not Available</td>
</tr>
</tbody>
</table>

**Respiratory protection**

Type BE-P Filter of sufficient capacity. (AS/NZS 1716 & 1715, EN 143:2000 & 149:2001, ANSI Z88 or national equivalent)

Selection of the Class and Type of respirator will depend upon the level of breathing zone contaminant and the chemical nature of the contaminant. Protection Factors (defined as the ratio of contaminant outside and inside the mask) may also be important.

<table>
<thead>
<tr>
<th>Required minimum protection factor</th>
<th>Maximum gas/vapour concentration present in air p.p.m. (by volume)</th>
<th>Half-Face Respirator</th>
<th>Full-Face Respirator</th>
</tr>
</thead>
<tbody>
<tr>
<td>up to 10</td>
<td>1000</td>
<td>BE-AUS / Class 1 P2</td>
<td>-</td>
</tr>
<tr>
<td>up to 50</td>
<td>1000</td>
<td>-</td>
<td>BE-AUS / Class 1 P2</td>
</tr>
<tr>
<td>up to 50</td>
<td>5000</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>up to 10</td>
<td>10000</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>100+</td>
<td>10000</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

* - Continuous Flow ** - Continuous-flow or positive pressure demand
A(All classes) = Organic vapours, B AUS or B1 = Acid gasses, B2 = Acid gas or hydrogen cyanide(HCN), B3 = Acid gas or hydrogen cyanide(HCN), E = Sulfur dioxide(SO2), G = Agricultural chemicals, K = Ammonia(NH3), Hg = Mercury, NO = Oxides of nitrogen, MB = Methyl bromide, AX = Low boiling point organic compounds(below 65 degC)

* CPI - Chemwatch Performance Index
A: Best Selection
B: Satisfactory; may degrade after 4 hours continuous immersion
C. Poor to Dangerous Choice for other than short term immersion
NOTE: As a series of factors will influence the actual performance of the glove, a final selection must be based on detailed observation.

* Where the glove is to be used on a short term, casual or infrequent basis, factors such as "feel" or convenience (e.g. disposability), may dictate a choice of gloves which might otherwise be unsuitable following long-term or frequent use. A qualified practitioner should be consulted.

### SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

**Information on basic physical and chemical properties**

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Liquid</td>
</tr>
<tr>
<td>Odour</td>
<td>Not Available</td>
</tr>
<tr>
<td>Odour threshold</td>
<td>Not Available</td>
</tr>
<tr>
<td>pH (as supplied)</td>
<td>Not Available</td>
</tr>
<tr>
<td>Melting point / freezing point (°C)</td>
<td>Not Available</td>
</tr>
<tr>
<td>Initial boiling point and boiling range (°C)</td>
<td>Not Available</td>
</tr>
<tr>
<td>Flash point (°C)</td>
<td>Not Available</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>Not Available</td>
</tr>
<tr>
<td>Flammability</td>
<td>Not Available</td>
</tr>
<tr>
<td>Upper Explosive Limit (%)</td>
<td>Not Available</td>
</tr>
<tr>
<td>Lower Explosive Limit (%)</td>
<td>Not Available</td>
</tr>
<tr>
<td>Vapour pressure (kPa)</td>
<td>Not Available</td>
</tr>
<tr>
<td>Solubility in water (g/L)</td>
<td>Not Available</td>
</tr>
<tr>
<td>Vapour density (Air = 1)</td>
<td>Not Available</td>
</tr>
</tbody>
</table>

### SECTION 10 STABILITY AND REACTIVITY

**Reactivity**

- See section 7

**Chemical stability**

- Unstable in the presence of incompatible materials.
- Product is considered stable.
- Hazardous polymerisation will not occur.

**Possibility of hazardous reactions**

- See section 7

**Conditions to avoid**

- See section 7

**Incompatible materials**

- See section 7

**Hazardous decomposition products**

- See section 5

### SECTION 11 TOXICOLOGICAL INFORMATION

**Information on toxicological effects**

<table>
<thead>
<tr>
<th>Route of Exposure</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inhaled</td>
<td>The material has NOT been classified by EC Directives or other classification systems as &quot;harmful by inhalation&quot;. This is because of the lack of corroborating animal or human evidence. However, where the material may still be damaging to the health of the individual, following ingestion, especially where pre-existing organ damage (e.g. liver, kidney) is evident. Present data indicates harmful or toxic substances are generally based on doses producing mortality rather than those producing morbidity (disease, ill-health). Gastrointestinal tract discomfort may produce nausea and vomiting. In an occupational setting however, ingestion of insignificant quantities is not thought to be cause for concern.</td>
</tr>
<tr>
<td>Ingestion</td>
<td>The material has NOT been classified by EC Directives or other classification systems as &quot;harmful by ingestion&quot;. This is because of the lack of corroborating animal or human evidence. However, where the material may still be damaging to the health of the individual, following ingestion, especially where pre-existing organ damage (e.g. liver, kidney) is evident. Present data indicates harmful or toxic substances are generally based on doses producing mortality rather than those producing morbidity (disease, ill-health). Gastrointestinal tract discomfort may produce nausea and vomiting. In an occupational setting however, ingestion of insignificant quantities is not thought to be cause for concern.</td>
</tr>
<tr>
<td>Skin Contact</td>
<td>The material is not thought to produce adverse health effects or skin irritation following contact (as classified by EC Directives using animal models). Nevertheless, good hygiene practice requires that exposure be kept to a minimum and that suitable gloves be used in an occupational setting. Open cuts, abraded or irritated skin should not be exposed to this material. Entry into the blood-stream through, for example, cuts, abrasions, puncture wounds or lesions, may produce systemic injury with harmful effects. Examine the skin prior to the use of the material and ensure that any external damage is suitably protected.</td>
</tr>
<tr>
<td>Eye</td>
<td>Although the liquid is not thought to be an irritant (as classified by EC Directives), direct contact with the eye may produce transient discomfort characterised by tearing or conjunctival redness (as with windburn).</td>
</tr>
<tr>
<td>Chronic</td>
<td>On the basis, primarily, of animal experiments, concern has been expressed by at least one classification body that the material may produce carcinogenic or mutagenic effects; in respect of the available information, however, there presently exists inadequate data for making a satisfactory assessment. Limited evidence suggests that repeated or long-term occupational exposure may produce cumulative health effects involving organs or biochemical systems.</td>
</tr>
</tbody>
</table>

**Singvac 3 year Single Shot Bivalent Botulinum Vaccine for Cattle**

<table>
<thead>
<tr>
<th>Effect</th>
<th>Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Toxicity</td>
<td>Not Available</td>
</tr>
<tr>
<td>Irritation</td>
<td>Not Available</td>
</tr>
</tbody>
</table>
**Singvac 3 year Single Shot Bivalent Botulinum Vaccine for Cattle**

### Sodium Ethylmercuric Thiosalicylate

<table>
<thead>
<tr>
<th>TOXICITY</th>
<th>IRRITATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oral (rat) LD50: 75 mg/kg</td>
<td>Eye (rabbit): 0.008 mg mild</td>
</tr>
</tbody>
</table>

**Legend:**
1. Value obtained from Europe ECHA Registered Substances - Acute toxicity
2. Value obtained from manufacturer’s SDS. Unless otherwise specified data extracted from RTECS - Register of Toxic Effect of chemical Substances

**Sodium Ethylmercuric Thiosalicylate**

The material may be irritating to the eye, with prolonged contact causing inflammation. Repeated or prolonged exposure to irritants may produce conjunctivitis.

**Acute Toxicity**

**Carcinogenicity**

**Skin Irritation/Corrosion**

**Serious Eye Damage/Irritation**

**Respiratory or Skin sensitisation**

**Mutagenicity**

Legend:
- Data available but does not fill the criteria for classification
- Data available to make classification
- Data Not Available to make classification

### SECTION 12 ECOLOGICAL INFORMATION

#### Toxicity

**Singvac 3 year Single Shot Bivalent Botulinum Vaccine for Cattle**

<table>
<thead>
<tr>
<th>ENDPOINT</th>
<th>TEST DURATION (HR)</th>
<th>SPECIES</th>
<th>VALUE</th>
<th>SOURCE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not Available</td>
<td>Not Available</td>
<td>Not Available</td>
<td>Not Available</td>
<td>Not Available</td>
</tr>
</tbody>
</table>

**Sodium Ethylmercuric Thiosalicylate**

<table>
<thead>
<tr>
<th>ENDPOINT</th>
<th>TEST DURATION (HR)</th>
<th>SPECIES</th>
<th>VALUE</th>
<th>SOURCE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not Available</td>
<td>Not Available</td>
<td>Not Available</td>
<td>Not Available</td>
<td>Not Available</td>
</tr>
</tbody>
</table>

**Legend:**

Extracted from 1. IUCLID Toxicity Data 2. Europe ECHA Registered Substances - Ecotoxicological Information - Aquatic Toxicity 3. EPIWIN Suite V3.12 (QSAR) - Aquatic Toxicity Data (Estimated) 4. US EPA, Ecotox database - Aquatic Toxicity Data 5. ECETOC Aquatic Hazard Assessment Data 6. NITE (Japan) - Bioconcentration Data 7. METI (Japan) - Bioconcentration Data 8. Vendor Data

DO NOT discharge into sewer or waterways.

### Persistance and degradability

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Persistence: Water/Soil</th>
<th>Persistence: Air</th>
</tr>
</thead>
<tbody>
<tr>
<td>No Data available for all ingredients</td>
<td>No Data available for all ingredients</td>
<td></td>
</tr>
</tbody>
</table>

### Bioaccumulative potential

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Bioaccumulation</th>
</tr>
</thead>
<tbody>
<tr>
<td>No Data available for all ingredients</td>
<td></td>
</tr>
</tbody>
</table>

### Mobility in soil

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Mobility</th>
</tr>
</thead>
<tbody>
<tr>
<td>No Data available for all ingredients</td>
<td></td>
</tr>
</tbody>
</table>

### SECTION 13 DISPOSAL CONSIDERATIONS

#### Waste treatment methods

- DO NOT allow wash water from cleaning or process equipment to enter drains.
- It may be necessary to collect all wash water for treatment before disposal.
- In all cases disposal to sewer may be subject to local laws and regulations and these should be considered first.
- Where in doubt contact the responsible authority.
- Recycle wherever possible.
- Consult manufacturer for recycling options or consult local or regional waste management authority for disposal if no suitable treatment or disposal facility can be identified.
- Decontaminate empty containers. Observe all label safeguards until containers are cleaned and destroyed.
- Containers may still present a chemical hazard/ danger when empty.
- Return to supplier for reuse/ recycling if possible.

Otherwise:
- If container can not be cleaned sufficiently well to ensure that residuals do not remain or if the container cannot be used to store the same product, then puncture containers, to prevent re-use, and bury at an authorised landfill.
- Where possible retain label warnings and SDS and observe all notices pertaining to the product.
SECTION 14 TRANSPORT INFORMATION

Labels Required

<table>
<thead>
<tr>
<th>Marine Pollutant</th>
<th>NO</th>
</tr>
</thead>
<tbody>
<tr>
<td>HAZCHEM</td>
<td>Not Applicable</td>
</tr>
</tbody>
</table>

Land transport (ADG): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

Air transport (ICAO-IATA / DGR): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

Sea transport (IMDG-Code / GGVSee): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

Transport in bulk according to Annex II of MARPOL and the IBC code

Not Applicable

SECTION 15 REGULATORY INFORMATION

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

SODIUM ETHYLMERCURIC THIOSALICYLATE(54-64-8) IS FOUND ON THE FOLLOWING REGULATORY LISTS

Australia Inventory of Chemical Substances (AICS)

<table>
<thead>
<tr>
<th>National Inventory</th>
<th>Status</th>
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<tbody>
<tr>
<td>Australia - AICS</td>
<td>Y</td>
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<tr>
<td>Canada - DSL</td>
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</tr>
<tr>
<td>Canada - NDSL</td>
<td>N</td>
</tr>
<tr>
<td>China - IECSC</td>
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</tr>
<tr>
<td>Europe - EINEC / ELINCS / NLP</td>
<td>Y</td>
</tr>
<tr>
<td>Japan - ENCS</td>
<td>N</td>
</tr>
<tr>
<td>Korea - KECI</td>
<td>Y</td>
</tr>
<tr>
<td>New Zealand - NZIoC</td>
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<tr>
<td>Philippines - PICCS</td>
<td>Y</td>
</tr>
<tr>
<td>USA - TSCA</td>
<td>Y</td>
</tr>
</tbody>
</table>

Legend:

Y = All ingredients are on the inventory
N = Not determined or one or more ingredients are not on the inventory and are not exempt from listing(see specific ingredients in brackets)

SECTION 16 OTHER INFORMATION

Other information

Classification of the preparation and its individual components has drawn on official and authoritative sources as well as independent review by the Chemwatch Classification Committee using available literature references.

The SDS is a Hazard Communication tool and should be used to assist in the Risk Assessment. Many factors determine whether the reported Hazards are Risks in the workplace or other settings. Risks may be determined by reference to Exposures Scenarios. Scale of use, frequency of use and current or available engineering controls must be considered.

Definitions and abbreviations

PC – TWA: Permissible Concentration-Time Weighted Average
PC – STEL: Permissible Concentration-Short Term Exposure Limit
IARC: International Agency for Research on Cancer
ACGIH: American Conference of Governmental Industrial Hygienists
STEL: Short Term Exposure Limit
TEEL: Temporary Emergency Exposure Limit,
IDLH: Immediately Dangerous to Life or Health Concentrations
OSF: Odour Safety Factor
NOEL: No Observed Adverse Effect Level
LOEL: Lowest Observed Adverse Effect Level
TLV: Threshold Limit Value
LOD: Limit Of Detection
OTV: Odour Threshold Value
BCF: BioConcentration Factor
BEI: Biological Exposure Index

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